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HOUSING IN KISUMU TOWN: A GEOGRAPHICAL STUDY
OF DEMAND, SUPPLY AND POLICY.

BY

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A thesis submitted in part fulfilment for the
degree of Master of Arts (Urban Geography) in
the University of Nairobi.

1984

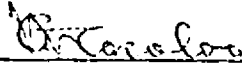
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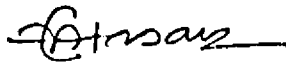
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.



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This thesis has been submitted for examination with my approval as the university supervisor.



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ABSTRACT

Shelter is a chief basic societal need, and therefore accessibility to decent rural and urban housing by a country's population is an important aspect of socio-economic development as it is positively correlated with labour productivity. The provision of housing needs to be planned to take cognizance of the poverty exhibited by the majority of the urban residents and the migrants from the rural areas. Urban housing problems cannot be analysed in isolation from a country's dominant political ideology and economic policies. Therefore, any observed skewness in the distribution of urban housing may be interpreted as a consequence of lopsided developmental policies, and the solutions offered for the housing problems must reflect a radical change in a country's political, economic and social milieu.

This study investigates the exact nature of the housing problems in a typical Kenyan town, Kisumu, and the apparent ineffectiveness of the official preventive and curative measures that have been proposed. The examination of this problem centres on two major issues: what the problem is and how the poor respond to it, and whether the current housing policies are capable of eradicating the problem.

Kisumu's 'free market' residential districts were stratified into low rent areas (those whose median rent per month is below Ksh. 300), the medium rent areas (Ksh. 300 - 700 per month) and high rent areas (over Ksh. 700), and four estates in each stratum chosen randomly. With households taken as the observation units, the stratified sampling technique was applied to ensure representative coverage as the estimated households vary in numbers by stratum.

A recording schedule was administered to 408 and 51 household heads in the three strata and the site and service scheme, respectively.

A difference of proportions test was applied to evaluate the assumption that the residents of high rent areas are favoured more in terms of the flow of information concerning vacant housing units. The analysis revealed that the variation of the information flow between the high and the low rent areas is statistically significant at the 0.05 level.

The implication is that there are separate urban housing markets catering for different socio-economic groups, and therefore any planning for the provision of housing must recognize this reality.

Having established that separate housing markets

exist, Thurstone's Law of Comparative Judgment Case V and Generalised Linear Interactive Modelling (GLIM) were used to estimate preference scales for Kisumu's residential districts and whether different income groups have a concordant view of the major attributes of a 'decent' residential district. The results of the analysis show that low income is not a handicap for the identification of what comprises an acceptable living environment, and therefore the concept of "revealed preference" may be grossly misleading if applied to the housing planning and provision particularly for the low income people.

The mal-distribution of income is shown to feature prominently in the analysis of housing problems and results in overcrowding and squatter phenomenon. The difference of means test has been used in this study to analyse both the spatial distribution of overcrowding and the comparison of income and house rents among different income groups. The study reveals that whereas the mean number of people per room (individual overcrowding) is statistically higher (Confidence level = 0.05) in the low rent areas than in the high rent areas, the sharing of housing units by different households (demographic overcrowding) is more prevalent in the medium rent areas. The implication is that the problem of overcrowding must be approached from different perspectives when dealing

with different income groups. The analysis also shows that it is not enough just to say that people spend a particular percentage of their incomes on housing; what their incomes are and the quality of the dwellings they inhabit must be clearly defined.

The study concludes that the current housing policies and programs are elitist, serving the interest of the high income people, and may have regressive effects on the real income of the urban poor. Even the programs intended for the low income population such as site and service schemes have been shown to benefit mainly the high income groups.

In the conclusion, it is stressed that in the absence of thorough structural changes in the whole socio-economic and political framework, many of the recommendations will serve only as palliatives rather than curatives. The meaningful starting point in the analysis of urban housing problems is a deep understanding of the structural causes of mass poverty. This will ensure the incorporation of the principles of social justice — need, contribution to common good, and merit — in urban housing planning and provision in an attempt to eradicate spatial and social inequalities.

ACKNOWLEDGEMENTS

This work is a result of two years work in advanced Urban Geography. The urge to investigate urban housing problems and policies was partly to fulfil the gap on this subject in Kenya's geographical literature and partly to offer an alternative approach to the analysis of housing. Many people have made this study a success and to them I owe sincere gratitude.

I wish to express my gratitude to Kenyatta University College for providing the scholarship which has enabled this research to be undertaken. The department of Geography at the university of Nairobi where this study was registered must also be mentioned for the academic atmosphere it offered for the entire period during which this work was underway. Special mention must be made of my supervisors, Dr. Mohammed Hasan and Dr. John Kahimbaara, though the latter had to leave for Lesotho before the work was in its final form. Their patience and encouragement were most invaluable to me, and have consequently ensured the success of this work.

I would also like to extend my sincere thanks to Professors Sherry Olson and Gordon Ewing of the department of Geography at McGill University, Canada, for their

unceasing scholarly criticism and patience during my one year there. Those who assisted in the data collection also deserve mention. I wish to particularly thank Mr. George Okara of Kisumu Boys' High School who not only helped me identify two reliable research assistants but also contributed in way of informal background information on Kisumu. Special mention should also be made of Messrs Mark Williams of McGill University and Michael Kivuva of Kenyatta University College for their services rendered in the form of Cartographic skills, and Mr. Samson E. Otieno for diligently typing this thesis. The interest and devotion shown by Professor Richard S. Odingo of the Geography Department, University of Nairobi, will never be forgotten.

Finally, very special thanks to my loved ones whose encouragement and comfort ensured the success of this work. They must also be remembered for their patience and endurance during my one year abroad at McGill University, a necessity which has helped to improve the quality of this work.

All the academic sins of omission and commission that may be detected in this work should, however, be attributed to the author and not to the persons mentioned above.

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1.1 The population and area of the annexed sublocations in Kisumu Municipality.....	5
2.1 The urban population of Kisumu, 1909	62
2.2 The population of Kisumu by sex and ethnic structure, 1938 and 1940	65
2.3 The population of Kisumu Town by sex and race, 1946	70
3.1 The planned and the actual number of respondents interviewed per stratum	109
3.2 Sources of information by type, period of residence and estate	114
3.3 The frequency of information sources by strata	115
3.4a The observed and expected (in brackets) frequencies of information sources on the first residence	115
3.4b The observed and expected (in brackets) frequencies of information sources on the first residence	116
3.5 The stratified frequencies and percentages of information sources	117
3.6a The results of the analysis of the formal sources of information on the first and current residence	118
3.6b The results of the analysis of the informal sources of information on the first and current residence	119
3.7 The frequency of overcrowding according to estates	120

	<u>Page</u>
3.8 The results of the analysis of individual overcrowding	121
3.9 The results of the analysis of demographic overcrowding	123
3.10 The scale values of all residential estates by rent categories	126
3.11 The scale values of all residential estates by income groups	127
3.12 The frequency of the percentage of income spent on rents by income groups	130
3.13 The summary of the analysis of the percentages of income spent on rent by income groups	131
3.14 The comparison of the means of actual rents with the means of 15% of incomes by income groups	133
3.15 The comparison of the means of actual rents with the means of 17.5% of incomes by income groups	133
3.16 The comparison of the means of actual rents with the means of 20% of incomes by income groups	134
4.1 The sources of first accommodation in Kisumu by strata	144
4.2 An inventory of the housing stock in the low rent areas of Kisumu, 1976	151
4.3 The interval scale values derived from Thurstone's Case V model for residential preference	161
4.4 The frequency of stated factors influencing stated residential preference	164
4.5 The relative importance of the factors that influence stated residential preference (all respondents together)	169

	<u>Page</u>
4.6 The frequency of the determinants of current residence in Kisumu	172
5.1 The mean household sizes in Kisumu by estates and strata	184
5.2 The frequency of demographic overcrowding in Kisumu by estates and strata	185
5.3 Employment classification for Kisumu residents by estates	190
5.4 The percentage of income spent on housing by rent categories	191
✓ 5.5 The mean percentage of income spent on housing by income groups	192
5.6 The distribution of monthly incomes by estates	194
5.7 Major informal activities in Kisumu's residential areas	200
5.8 The structure of property ownership in Kisumu by estates	204
6.1 The planned housing construction in Kisumu, 1979 - 1988	211
6.2 The basic minimum monthly wages (Ksh.) of employees aged 18 years and over	233
6.3 The area, population (1978) and housing stock in Kisumu's squatter settlements ...	240

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1.1 The Location of Kisumu Town in Kenya	2
1.2 Western Kenya (Kisumu Region)	4
1.3 Kisumu Municipality (including extended areas)	17
1.4 A Typology of Third World urban housing sector (Modified from Drakakis-Smith, 1979)..	25
1.5 A housing policy analytical framework	29
2.1 Major Landuses in Kisumu Town	73
3.1 Major Residential Districts in Kisumu Town ..	107
3.2 The relationship between the population, the sample and the sampling technique	110
4.1 The relative importance of information sources on the first residence by strata	143
4.2 The relative importance of information sources on the current residence by strata	147
4.3 The comparison of the low and high income respondents' ranking of residential districts (based on attractiveness scales)	160a
4.4 Residential Desirability Surface of Kisumu Town	171
6.1 The planned areas of low cost housing activity in Kisumu: 1979/1988	212
6.2 The structure of site and service schemes personnel in Kenya	223

LIST OF PLATES

<u>Plate</u>		<u>Page</u>
1	The Controversial Molasses Complex under Construction	8
2	The Kenya Breweries Plant under Construction in 1982	8
3	A Section of Kaloleni Estate	68
4	A Section of Arab Manyatta Estate	68
5	A high income house in Okore Estate	168
6	A Section of Nyalenda Estate	168
7	A typical modern house in Nairobi Area	201
8	A Squatter dwelling near Makasembo Estate ..	201
9	The USAID housing scheme	234
10	Street hawkers in Nyalenda Estate	234

LIST OF APPENDICES

<u>Appendix</u>	<u>Page</u>
A. The recording schedule administered to the sampled household heads	256
B. The questionnaire for the National Housing Corporation official and the Director of Housing Development Department at Kisumu	264
C. The questionnaire for the head of Housing and Social Services, Municipality of Kisumu..	266
D. The questionnaire for the Kisumu Town Physical Planner and the Nyanza Provincial Physical Planner	268
E. The observed matrix of sample proportions ...	269
F. The expected proportions under the Thurstonian model (p')	270
G. The observed θ values (θ'_{jk})	271
H. The expected θ values (θ''_{jk})	272

TABLE OF CONTENTS

	<u>Page</u>
Abstract	i-iv
Acknowledgements	v-vi
List of Tables	vii
List of Figures	x
List of Plates	xi
List of Appendices	xii
CHAPTER ONE: THE INTRODUCTION	1
1.1 Background to the Study Area	1
1.2 Statement of the Research Problem..	9
1.3 Research Objectives and Scope	14
1.4 Research Hypotheses	18
1.5 Literature Review	21
CHAPTER TWO: HISTORICAL CONSIDERATIONS	56
2.1 The Growth of Kisumu Town	56
2.2 A resumé of Kenya's housing policy.	76
CHAPTER THREE: METHODOLOGY AND ANALYSIS	88
3.1 Operational Definitions	88
✓3.2 Analytical Techniques	91
✓3.3 Data Collection	105
✓3.4 Data Analysis	113

	<u>Page</u>
CHAPTER FOUR: THE HOUSING MARKET IN KISUMU AND LOCATIONAL PREFERENCES	136
4.1 The Mechanism of the Housing Market	137
4.2 Housing Preference: Fact or Fiction?	155
 CHAPTER FIVE: URBAN POVERTY AND ITS IMPLICATIONS FOR HOUSING	 178
5.1 The Nature of Overcrowding	181
5.2 Income and Housing	190
 CHAPTER SIX: HOUSING THE URBAN POOR: REALITY OR ILLUSION?	 209
6.1 What are Site and Service Schemes?..	213
6.1.1 The Benefits of Site and Service Projects	215
6.1.2 The Project Design	216
6.1.3 Project Financing	217
6.1.4 The Project Organization	219
6.2 Site and Service Schemes in Kenya ..	222
6.2.1 The Allocation Procedures ...	224
6.3 An assessment of the impact of Low Income Housing programs	226
6.3.1 The Allocation Mechanism	227
6.3.2 The Impact of Site and Service Schemes	230

	<u>Page</u>
CHAPTER SEVEN: THE SUMMARY AND CONCLUSIONS	243
7.1 The summary of major findings and their implications for housing policies	243
7.2 The Recommendations and Suggestions for further Research	250
The Appendices	255
Bibliography	273

CHAPTER ONE

THE INTRODUCTION

This study aims at investigating the exact nature of the housing problems in Kenyan towns and why the curative measures proposed have not been particularly effective. Though it is based mainly on Kisumu's experience it should be relevant to other urban centres in Kenya because of the policy of 'Growth Poles' being pursued in Kenya.

This chapter begins by giving a short description of the importance of Kisumu as the regional centre for western Kenya and how its position is being consolidated by the current industrial investment. It is also shown how this industrial growth is linked to the housing problems. The objectives of the study and the principal hypotheses to be tested are then presented. Before ending with an outline of the contents of the subsequent chapters, there is a presentation of a selected review of literature pertinent to the current problem under investigation with a bias towards the problems of 'unplanned urban growth' in the Third World.

1.1 BACKGROUND TO THE STUDY AREA

Kisumu, the administrative headquarters of Nyanza

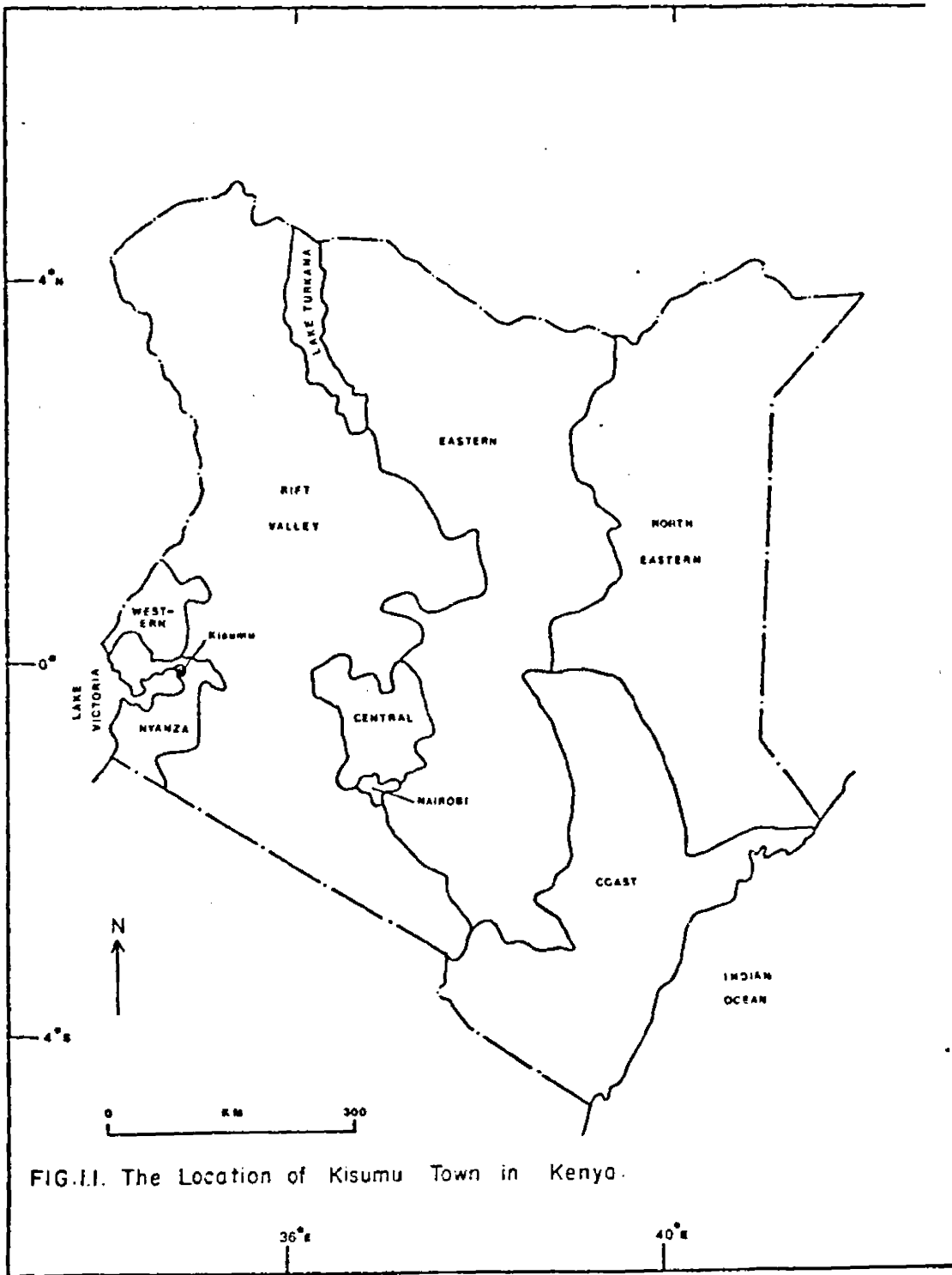


FIG.1.1. The Location of Kisumu Town in Kenya.

Province, is the largest and most important urban centre west of the Rift Valley. It is situated at the end of Winam Gulf (Fig 1.1) and is therefore in a strategic position in relation to other East African countries. Prior to 1962 it was the headquarters of the 'Old Nyanza' Province, the current Nyanza and Western Provinces. Despite the division of the old province, Kisumu still remains the focus of commercial, industrial and transport systems for the region normally referred to as Western Kenya or the Kisumu Region (Fig 1.2)¹.

Kisumu is situated in one of the most densely populated areas in Kenya and it boasts to have some 6 million culturally diverse inhabitants in its rural hinterland (Oucho, 1979). Its population catchment area has been described by demographers as a 'downward transitional zone' due to the fact that out-migration has been rampant in this region (Oucho, 1974). This phenomenon may be partly attributed to the diminishing carrying capacity of the land resulting from overpopulation, and partly to the lack of sufficient employment opportunities in this region.

1. Of the total industrial and business enterprises in Western Kenya, 25% are in Kisumu. Furthermore, 20% of all recorded employment is also within Kisumu. (Source: Republic of Kenya, 1979b)

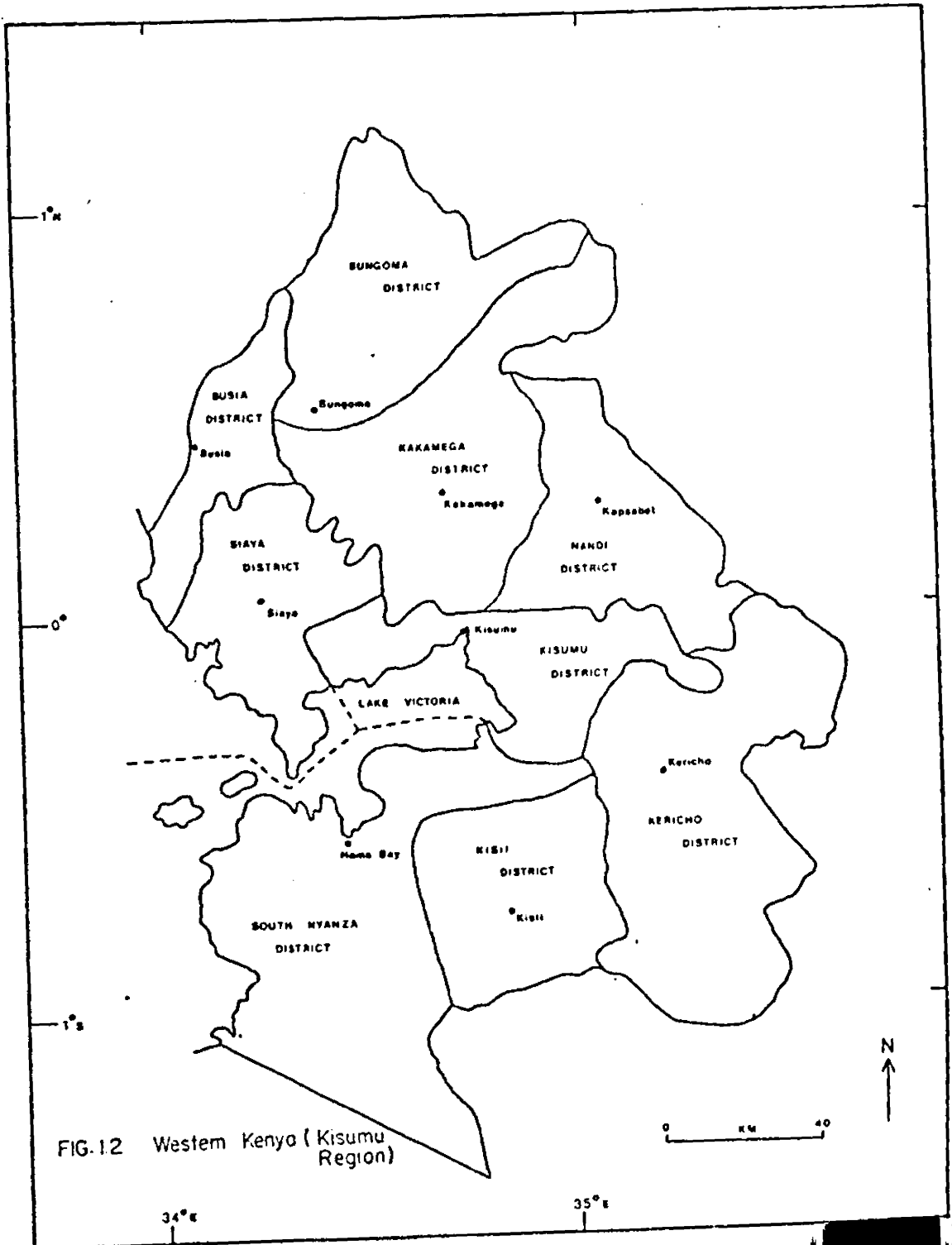


FIG.12 Western Kenya (Kisumu Region)

In the last decade, Kisumu's municipal boundary has grown from 40 km² to about 420 km² (Munyakho, 1982). The new municipal boundary (figure 1.3) now encloses sixteen sublocations. This means that the three major processes by which increases in urban population take place — natural increase, immigration, and the annexation of bordering rural areas — are rampant in Kisumu. The areal extent of the sublocations and their 1979 population estimates are given in Table 1.1.

TABLE 1.1

THE POPULATION AND AREA OF THE ANNEXED SUBLOCATIONS IN KISUMU MUNICIPALITY.

SUBLOCATION	POPULATION (1979)	AREA (KM ²)
Manyatta	23008	8
Nyalenda	21778	26
Kogony	6897	11
Korando	6705	19
Ojola	4031	19
Kanyawegi	7505	30
Dago	2711	11
Swahili (Mkendwa)	426	1
Konya	4309	14
Kadero	3406	12
Wathorego	5394	11
Kanyakwar	7147	8
Kasule	4317	15
Nyalunya	4155	12
Buoye	5084	27
Chiga	5582	22
T O T A L	112455	246

(Source: Republic of Kenya, 1979b).

The whole municipality had an estimated population of 152,643 in 1979 of which half were below 15 years in age (Republic of Kenya, 1979b)².

Since Kenya, at least on paper, pursues the policy of Growth Centres, Kisumu has recently been receiving its share of industrial investment as a growth centre for Western Kenya. Some of the new industries include:

- i) The controversial Molasses Utilization complex expected to cost KE52.5 million to complete (Plate 1). When operational, it is expected to produce power alcohol among other products which would help cut Kenya's oil imports by 170,000 barrels a year. It is expected to employ several hundreds of people directly.
- ii) The Kenya Brewery Plant, constructed on a 43 acre plot, was planned to cost KE14 million and is already operational (Plate 2). The first phase was expected to give direct employment to 500 people and this number is expected to rise when the last phase is completed. At its full capacity it will be producing 300 million bottles of beer per year.
- iii) The dry cells factory expected to cost KSh. 40 million will produce over 100,000 dry cells a day and employ

2. The article by Munyakho (1982) which is more recent puts Kisumu's population at 200,000 inhabitants.

over 300 people when the last phase is completed towards the end of 1983.

- iv) The Cotton wool factory expected to initially employ 200 people will cost KSh. 30 million. Other industrial ventures in the town include the safety matches and the foam mattresses factories.

Such rapid industrial growth carries with it some of the chronically serious Third World problems like housing due to the influx of people in search of employment. Another serious problem facing the town is the water shortage, a most ingenious paradox since the town is situated on the shores of the second largest fresh water lake in the world! As of mid 1982 the water demand in the town stood at 20 million litres a day but the municipality was able to supply only 9 million litres a day.³

3. The Municipal Council was undertaking a water supply project at a cost of KSh. 16 million which was expected to step up the supply to 15 million litres a day by the end of 1982 leaving a shortfall of 5 million litres. The problem is confounded by the fact that the Brewery Plant alone was expected to use 2.5 million litres a day. Meanwhile, the Municipal Council has initiated the design of another water supply project which is expected to make Kisumu self-sufficient in water up to the year 2000. The project will cost KSh. 52 million on completion.
(Source: Munyakho, 1982).

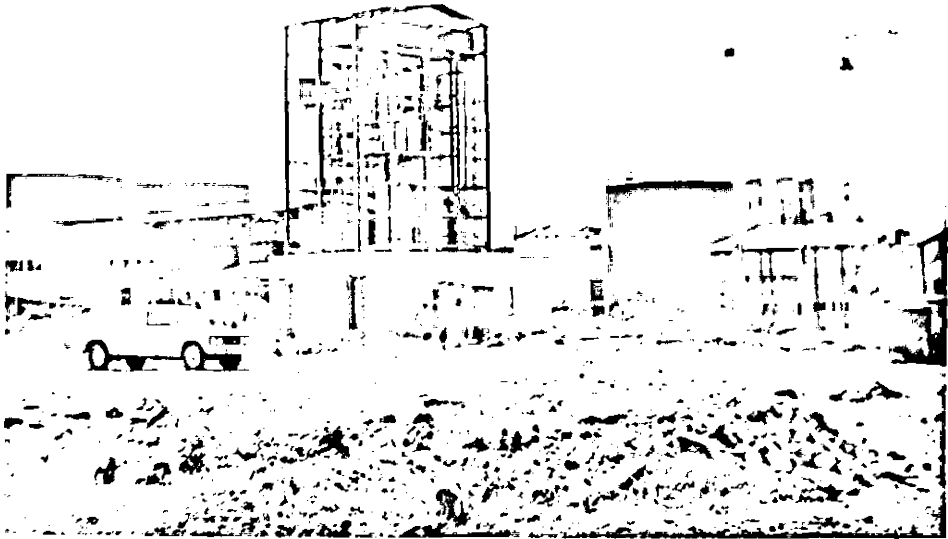


PLATE 1: The controversial Molasses Complex under construction.

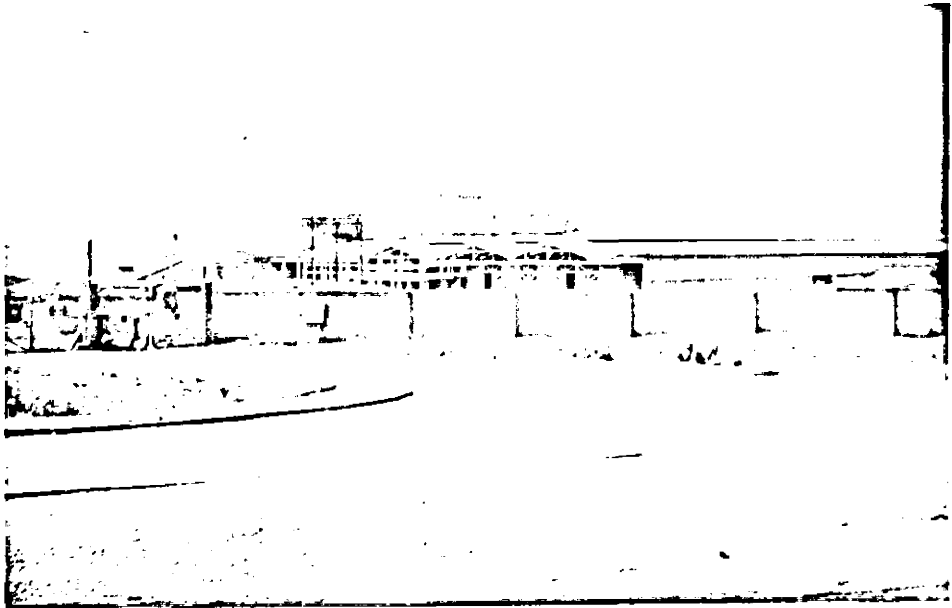


PLATE 2: The Kenya Breweries Plant under construction in 1982

1.2 STATEMENT OF THE RESEARCH PROBLEM

Though Third World countries are the least urbanized by world standards, the rate at which their urban centres are growing is unparalleled anywhere else in the world (Dwyer, 1975; Ackerman, 1981). Consequently, the urban problems connected with this rapid growth have tended to overshadow their rural counterparts and receive keener attention of the planners (Sandbrook, 1982). One of the chief problems which have been very elusive to the urban planner is how to house all the urban dwellers decently. The accessibility to decent rural and urban housing by a country's population is an important aspect of development. Therefore, housing provision must be considered by any government as one of its basic responsibilities. It is in order therefore that housing is included among the basic needs in Kenya's current Development Plan (Republic of Kenya, 1979a) and a concession that housing accounts for a significant share of capital formation thus contributing positively to national output and employment.

Housing is an important aspect of development in at least two ways. Firstly, housing construction creates massive direct employment because it is labour intensive. For example, in the early seventies it was estimated that on average each KE 1 million spent on modern

housing construction in Kenya created one year's full time employment for 500 skilled and 1500 unskilled labourers (Republic of Kenya, 1970 p.505). Housing construction also creates indirect employment in associated industries like timber, cement and transport. Secondly, research has shown that decent housing is related to labour productivity (Lea and Murrison, 1979; Roberts, 1978). A properly housed labourer who resides close to his place of work is expected to perform better at work than his counterpart who not only lives in a squalid environment but also has to expend a lot of energy and time to reach his place of work. The importance that families attach to housing is reflected in the proportion of their income that they devote to it. In Kenya, the conservative official figure is between 15% and 20% (Republic of Kenya, 1979a p. 170).

Poor housing conditions in Third World cities have been associated with poverty of the majority of the population (World Bank, 1975). However, many works on Third World urbanization rarely agree on the root causes of this abject poverty; what they agree on is that the housing situation in Third World cities is appalling (Dwyer, 1975; Harrison, 1979; Lloyd, 1979). In these cities, the shanty, the slum or squatter

housing areas are increasing at a far greater rate than any other aspect of urban physical development, and are becoming the predominant form of settlement with an estimated one-third of the urban population in the Third World already living in squatter settlements or shanty towns (Mangin, 1967; Dwyer, 1975; Seifulaziz, 1982).

It would be generally agreed that among the symptoms of housing problems are spiralling rates of rents, unhealthy residential environments and congestion, high proportion of poor quality houses, long journeys to work and a housing market that only caters for the minority. These conditions obtain in Third World cities and Kenya is no exception (Central Bureau of Statistics, 1981). Solutions to these problems have often been sought in attempts at stopping massive cityward migration and/or constructing houses in the cities to accommodate those already there. These houses have either been too few or economically and socially irrelevant to the majority of the urban population. It has been shown that people will continue to gravitate to the city, and slum dwellers will continue to be part of the city as long as lopsided development and the glaring rural-urban disparities persist (Todaro, 1977). Consequently, piecemeal measures and mere declarations of good intention must be replaced with a more radical approach to

the solution of housing problems. Housing projects, or any development projects, must never be initiated just to be politically visible but because they are economically feasible and socially relevant.

It is with this lack of general consensus on the radical causes of poverty and the relevance of its causes for housing in mind that Kisumu town has been chosen as the research area. With the sizeable industrial investment taking place in the town as already shown, many people are moving to Kisumu in search of employment as recent demographic trends show (Oucho, 1979). This phenomenon calls for an astute planning in the town, given the fact that its development is physically constrained.⁴ Proper housing planning is a necessity in order to provide decent shelter to the majority as Kisumu's housing conditions are appalling (Central Bureau of Statistics, 1981; Republic of Kenya, 1979b).

Being the third largest town in Kenya after Nairobi and Mombasa, Kisumu should not be allowed to develop

4. Expansion is limited by the Nyando Escarpment to the north, Lake Victoria to the South and South-west, and the Nyanza sugarbelt to the east. Furthermore to the South-east the area is swampy and prone to floods. This leaves only two corridors for development: the North-east along Chemelil Road and the North-west along Maseno Road. (Source: Kenya Government, 1969).

after the fashion of the first two which have acute housing problems. For example, Nairobi's slum dweller population has been estimated to be growing at an annual rate of 22.5% whereas the population growth rate of the city as a whole is 10% (Mbatawa wa Ngai, 1981).

The thrust of this research is to investigate the exact nature of the housing problem in Kisumu and why the measures adopted to deal with the problem as perceived by the planners have tended to be ineffective. It centres on two major issues:

- i) The real nature of the housing problem: the major factors that have caused it and continue to aggravate it.
- ii) Why the housing programs adopted to solve the housing problems of the low income majority have allegedly not achieved their objectives. In other words, do government actions match the stated aims?

The two issues are related in that a planner's perception of the nature of a problem influences his problem-solving strategies. If the former is partially or totally misguided then the latter would be irrelevant or unrealistic.

Though this research is about Kisumu in particular, the

findings that follow are expected to be relevant to other Kenyan towns. This is because the centralised decision-making in the country which influences urban development creates generally similar housing problems throughout the country.

1.3 THE OBJECTIVES AND SCOPE

This study has three major objectives related to the two issues raised in the problem statement.

These are:

- 1) To investigate the economic and demographic characteristics of the consumers of housing and how these would be translated into their housing needs and demand. This investigation is important as it is expected to shed some light on any inconsistency that may exist in the relationship between the housing programs advanced by planners and the capability of the people for whom they are intended. The knowledge of this inconsistency would be a step towards solving the problem of constructing houses that are economically and socially irrelevant to the needs of the urban majority. It would also help in ascertaining whether the majority of the urban residents can own their homes since urban home ownership is a key government housing policy.
- 2) To investigate the mechanisms of the urban housing

market, particularly the flow of information on the vacant housing stock in general and the allocation of houses meant for the low income people. This is an attempt to identify any loop-holes that may exist in housing allocation among the low income people and how these loop-holes could be closed in order to ensure effective participation by the low income people in the urban housing market. The workings of the urban housing market, particularly the way information on vacant units flow can determine house rents significantly. If the information flow is inefficient people may perceive a housing shortage when none actually exists, and these people may be exploited by landlords because they are ignorant of better alternatives elsewhere.

3) To assess the appropriateness of the housing programs officially put forward to solve the housing problems of the low income urban residents, namely the site and service and squatter upgrading schemes. The determination of the appropriateness will be done by a detailed comparison of the characteristics of the target population and the nature of these 'solutions' in terms of the official conditions to be fulfilled by the would-be house owners.

Kisumu town is defined in this study as the area including the old municipal boundary and the built-up

portions of the annexed sublocations of Nyalenda, Kanyakwar and Manyatta (Fig 1.3). Certain residential districts within the area defined as Kisumu were excluded from the study. These include:

- i) Estates built or hired exclusively for private company employees, civil servants and parastatal organization employees.
- ii) Other categories of residents like hotels, lodgings, boardings and hostels.

The research is solely concerned with residential districts where the allocation of housing units operates on a market basis.

The market-based residential districts were divided into three strata corresponding to the median rents:

- a) High rent areas (over KSh.700 per month)
- b) Medium rent areas (between KSh.300 and KSh.700 p.m.)
- c) Low rent areas (below KSh.300 per month).

The terms high rent, medium rent and low rent have been preferred to the more common ones like high income, medium income, and low income areas because of the heterogeneity of the incomes in these estates. There are some people (however few) whose incomes are high but live in low rent areas. Therefore, high incomes do not necessarily correspond with high rents at the individual level.

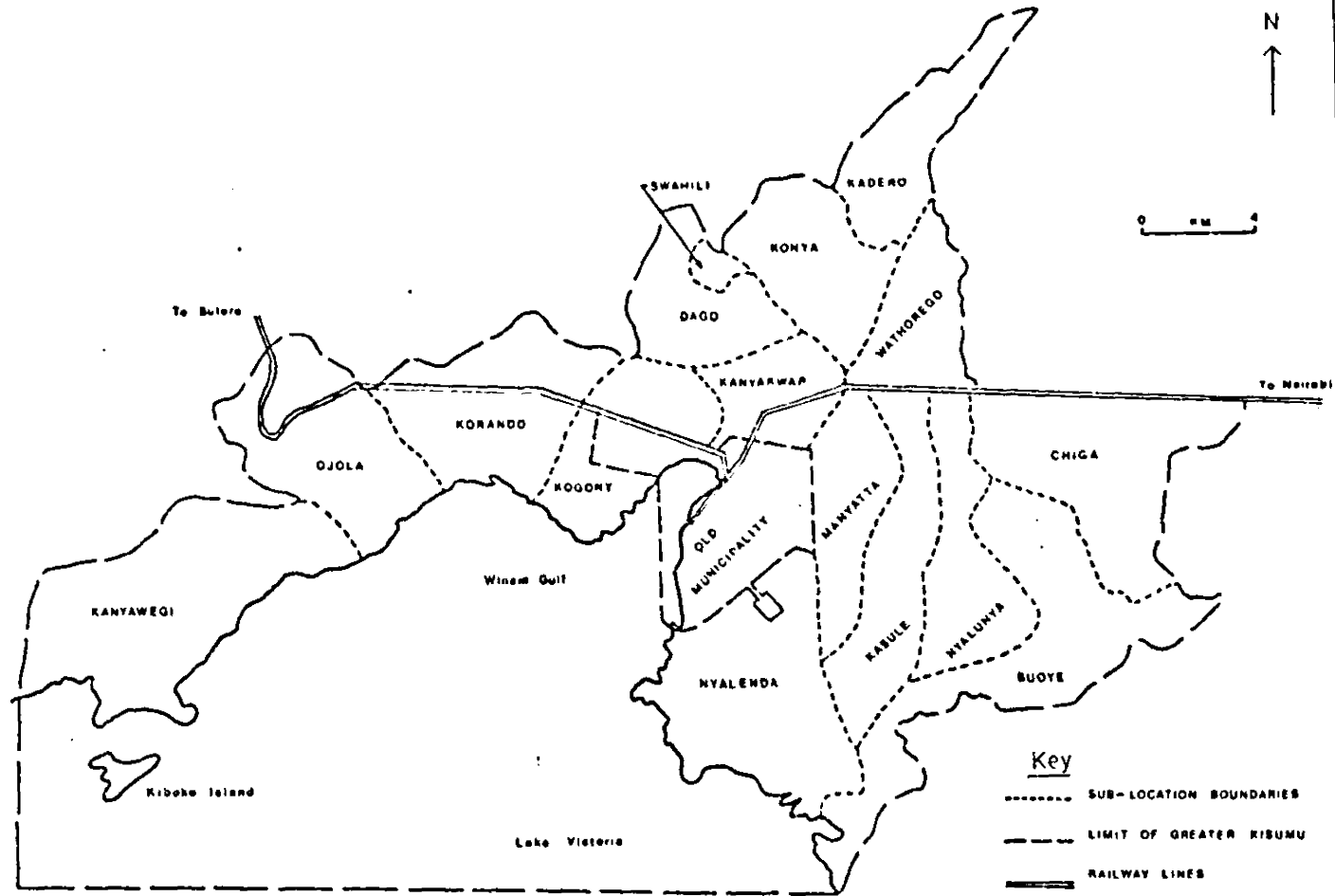


FIG. 13 Kisumu Municipality (including extended areas)

1.4 THE RESEARCH HYPOTHESES

For analytical purposes the residential areas were divided into three strata on the basis of median rents as already explained, and the respondents were also categorized into four major groups according to their monthly incomes.⁵

i) Lowest income	KSh. 0	- 1499
ii) Lower middle income	KSh. 1500	- 2999
iii) Upper middle income	KSh. 3000	- 4999
iv) Highest income	KSh. 5000 and above.	

In connection with the issues under investigation and the major objectives advanced, four major assumptions will be statistically tested for their validity:

1. The housing market in the town is markedly imperfect in relation to the availability of information on the housing stock.

H_0 : The distribution of the formal and the informal sources of information does not vary significantly among the three residential strata.

5. The categorization of the incomes is based on the recommended minimum wages in Kenya's urban areas as reported in The Kenya Gazette Supplement No. 49 of August 20, 1982.

H_1 : The incidence of the formal sources is significantly higher in high rent areas whereas the informal sources are significantly over-represented in the low rent areas.

2. The problem of overcrowding is different in nature among the three residential strata under study.⁶

Individual Overcrowding:

H_0 : There is no significant variation in the incidence of individual overcrowding among the three residential strata.

H_1 : The incidence of individual overcrowding is significantly higher in the low rent areas than in medium and high rent areas.

Demographic Overcrowding:

H_0 : The variations in demographic overcrowding among the three residential strata are so minimal that they may be attributed to chance.

H_1 : Demographic overcrowding is significantly more prevalent in middle rent residential areas than in low and high rent residential areas.

6. Overcrowding has been split into two. 'Individual overcrowding' occurs where more people than required by law are staying in the same dwelling unit. The maximum occupancy rate is 5 persons per two bedroomed house. It is distinct from 'demographic overcrowding' which occurs when two or more households share a dwelling unit intended for one household.

3. Stated locational preference is a function of the perceived physical and social factors of attractiveness that are not uniformly distributed among the residential districts.

H_0 : Stated locational preference patterns do not exhibit a similar perception by various income groups of the major factors of residential district attractiveness.

H_1 : Stated locational preference patterns reflect the similarity in the perception by the various income groups of the major factors influencing residential district attractiveness.

4. The structure of the solutions offered to the housing problems is incompatible with the economic capability of the majority of the urban residents.

H_0 : The variations in the proportions of income spent by different income groups on rent are due to chance.

H_1 : The lower income groups spend greater proportions of their income on housing than the higher income groups.

H_0 : The differences between the means of the actual rents paid by each of all the income groups and

the means of the corresponding 15%, 17.5% and 20% of their incomes are due to chance variation.⁷

H₁: The means of the actual rents paid are significantly greater than the means of 15%, 17.5% and 20% of the incomes.

1.5 LITERATURE REVIEW

This section discusses selected works on Third World housing. It begins by reviewing Third World urbanization trends in general and their links with the housing problems. A typology of the Third World housing sector is then presented with a brief discussion on the importance of analysing the housing problem within the wider national context and the pitfalls of attempting to solve the housing problems in isolation. A greater portion of this section is then devoted to works dealing with the problem of squatting in Third World cities, and the evaluation of solutions recommended by some scholars. It ends by reviewing the few works on Kisumu and showing the gaps that this study is expected to fill.

7. The government states that urban between 15% and 20% of their incomes or of Kenya, 1979a). The median of this which will also be used for compariso

Urbanization is one of the processes responsible for the distribution and re-distribution of the human population. As it entails the concentration of large populations in relatively small areas, it is related to settlement and housing (Kabra, 1975). How urbanization comes about, the rate at which it takes place and its impact on existing spatial patterns has been documented for many Third World countries. It is usually associated with industrialization, development and structural shifts away from agriculture (Davis and Golden, 1954). Hence the role of rural-urban migration has been over-emphasized in explaining rapid urban growth, though some scholars now contend that migration has been outpaced by natural increase as the major component of urban growth (Davis, 1965). However, due to wide variations among Third World countries it may be safely asserted that though natural increase tends to be the major cause of rapid urban growth, some countries still exhibit high rates of rural-urban migration. One thing is certain : Third World cities are growing very fast.

Fast rates of urban growth have a number of obvious problematic effects, two of which are unemployment and housing. Much has been written about unemployment as the more serious of the two problems (ILO, 1972). It is debatable whether unemployment per se is the problem

or poverty among the unemployed, the underemployed and the employed (Lloyd, 1979; Harrison, 1979; Sandbrook, 1982). Poverty and housing problems both in the cities and the rural areas in the Third World are intertwined. A complex problem usually arises from the relationship between income distribution, availability of housing stock and exorbitant house rents.

If the housing problem is really an income problem then development programs that stress 'housing assistance' instead of 'economic assistance' involve extra costs to society since the government may have to subsidize such housing (World Bank, 1975). This argument is in line with the major thrust of this research which is that attempting to solve the housing problem without fully understanding its real cause is tantamount to symptom treating. Housing assistance oriented programs, the World Bank report adds, fail to specify and identify who requires aid. The failure to identify and cater for the interest of the deserving group is a cancerous problem in the Third World where houses intended for the low income people end up in the hands of the wealthy (Ogutu, 1978; Herbert, 1979). A case in point which will be discussed later is the site and service program which has been proposed by the World Bank as a viable method of housing the low income people (World Bank, 1974).

It may be argued, therefore, that the first step in solving housing problems is an assault on poverty. The eradication of poverty does not merely imply massive financial aid to the victims as proposed by Lewis (1966) in his attempt to distinguish between poverty and what he terms 'the culture of poverty'. It is argued in this study that such panacea for 'curing' poverty is ill-conceived and is therefore not a curative but a palliative as it does not address itself to what causes total and relative deprivation in the Third World. An analysis of the housing problem must therefore take cognizance of the total organization of a society.

Housing as a distinct sector within a national economy has many sub-sectors, but this study concentrates mainly on the urban sector. Drakakis-Smith (1979) has identified three major sources of housing provision: the public sector (this is the smallest and houses a mixture of lower and middle income families), the private sector (for the middle and upper income groups), and the popular sector (this is the largest and houses the poorest families). Though he correctly stresses the intricate political and economic forces linking the various sectors, his distinction between 'private' and 'popular' sectors is not convincing. What he terms the popular sector is largely private since house owners in

this sector build the houses with their own capital. For this reason, a modified typology of the housing sectors and sub-sectors has been suggested for this study (Fig 1.4).

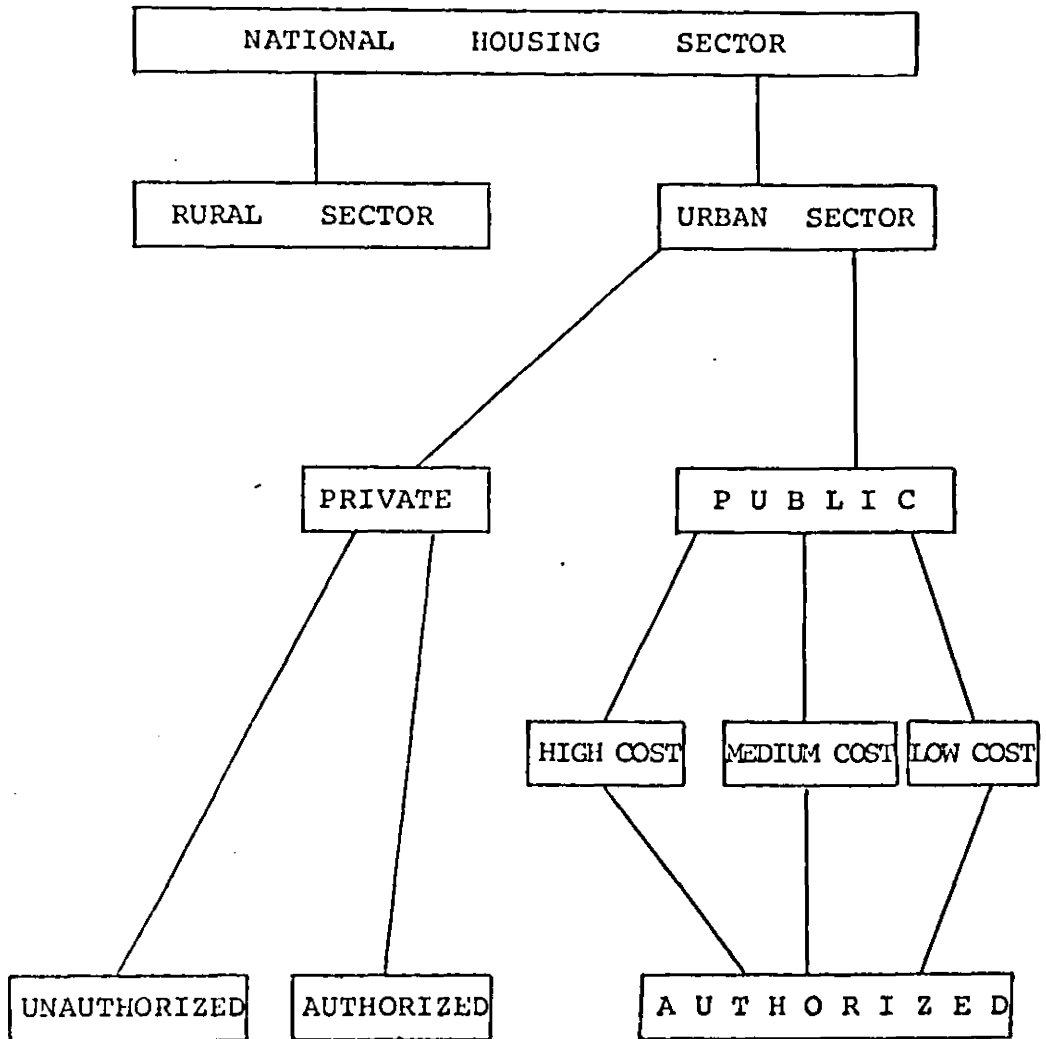


Fig 1.4 A TYPOLOGY OF THIRD WORLD URBAN HOUSING SECTOR
(Modified from Drakakis-Smith, 1979)

The urban public housing sector can be conveniently divided into three subsectors: high cost, medium cost

and low cost housing schemes which are all authorized and planned. The private sector may be dichotomized into authorized and unauthorized schemes. The unauthorized private sector corresponds to what Drakakis-Smith (1979) has termed the "popular sector", the sector that includes what has been variously called spontaneous, squatter or autonomous urban settlements of the Third World.

The so-called 'unauthorized private housing' has received the greatest attention in studies on Third World housing mainly because it houses the greatest number of urban dwellers in the Third World, increases faster (12% p.a.) than any other form of physical development (Conway, 1982) and also because of the negative official attitude towards it (Abrams, 1964; Dwyer, 1975; Lloyd, 1979; Turner, 1980). This sub-sector therefore receives greater attention in this literature review.

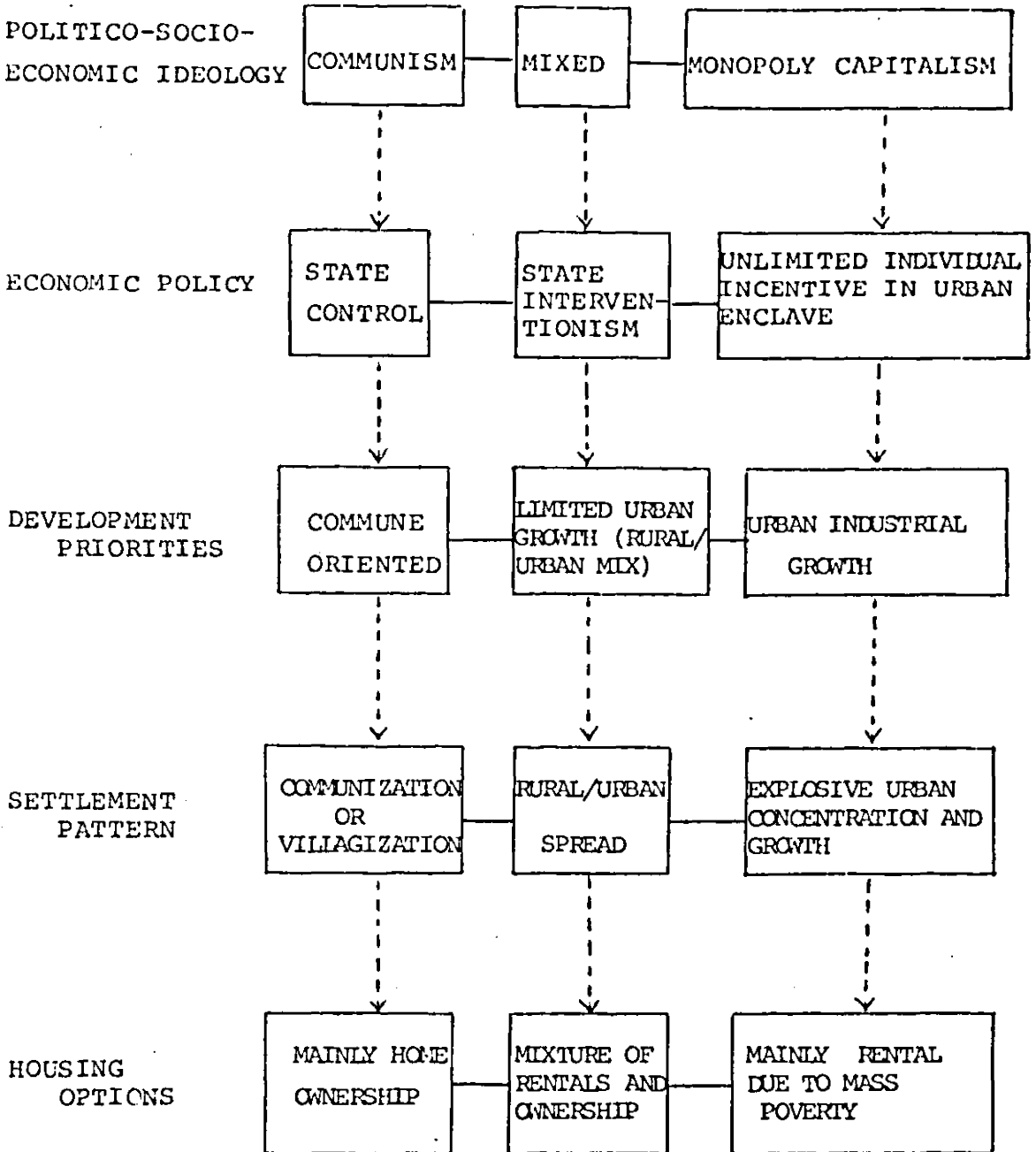
Conventionally, the index of the nature and magnitude of the urban housing problem is presented as the gap between the housing requirements and the availability of houses. Figures on the housing gap do not bring out the inherent incapability of the large mass of urban population to purchase or hire a sound dwelling unit (Kabra, 1975). Kabra maintains that the gap figures do

not tell us that even if the number of houses were to increase substantially, there is no guarantee that the unhoused will be housed. Many countries have recognised, at least theoretically, that the provision of housing is one of the primary concerns of society just like food and clothing. The percentage of income that people spend on it shows how important they think it is. Housing construction contributes to direct and indirect employment. Proper housing has also been shown to be positively correlated with labour productivity.

A house is the most expensive single item one buys in one's lifetime. Due to income inequalities, the majority, however, fail to own urban dwellings and, therefore, their need does not translate into effective demand. Despite the personalised consumption of housing, some scholars (cf Kabra, 1975) argue that it should be viewed as a social good because to the majority even their life-term earnings cannot permit them to acquire their own house. When viewed as a social good the implication is that there must be a collective responsibility for its provision and therefore it becomes the responsibility of the state to construct houses especially for those who are unable to do so. This calls for a differentiated approach to the housing question according to the various sectors or sub-sectors since housing

conditions are a reflection of peoples' socio-economic conditions. Housing as a social good is related to Harvey's (1973) concept of social justice which stresses that need, contribution to common good and merit should be the guidelines for the distribution of a nation's wealth.

Any analysis of housing problems that excludes broad national policies is incomplete (Drakakis-Smith, 1979). Drakakis-Smith has provided what he terms a 'housing policy framework' which shows how housing policy options fit into broader choices or 'styles' in national social policy. His original framework has been modified to suit the perspectives of this study (Fig 1.5). Figure 1.5 is a simplification of reality since there may be an element of each of the apparently distinct policies in every path of development that a nation takes. The dominant national philosophy/ideology will influence the economic policy pursued by a state since it has been argued that constitutional independence without economic emancipation is a symptom of neo-colonialism (Rodney, 1972). As Figure 1.5 shows, the economic policies pursued by a monopoly capitalist state, for example, will be urban biased, stressing economic growth at the expense of social development. This may be attributed to the demands of the omnipotent multinational corporations whose interest



————— INDICATES THE EXISTENCE OF A CONTINUUM

FIG. 1.5 A HOUSING POLICY ANALYTICAL FRAMEWORK
(Modified from Drakakis-Smith, 1979).

is profit maximization and labour exploitation.

The economic policy will implicitly and explicitly influence the development priorities of any nation. If it is the policy of the state to ensure industrial growth, for example, then its priorities will lie in massive capital investment in the urban industrial sector. When people perceive that they can only obtain wage employment in the urban areas where the industries are located, they will concentrate around the major industrial centres.

Settlement policies of urbanization that are formulated must take cognizance of the settlement patterns that emerge as a response to development priorities, economic policy and dominant political ideology. Therefore, any settlement policy that is at variance with peoples' perception of spatial inequalities will be irrelevant and ineffective. All the above factors, particularly a nation's development priorities will determine the proportion of the national budget that will be allocated to social development sectors like housing, health, education and recreation. If the economic wisdom is to invest in the industrial sector because it is 'productive' then very few resources will be devoted to the housing sector which is viewed as 'non-productive'. Thus, a housing policy, or lack of it, reflects the macro-concepts of the economy.

Furthermore, the housing options open to a state will be predetermined by a combination of all the above factors. Any analysis of housing that starts from the premise that the housing sector is autonomous is a distortion of reality. It is likely to suggest shallow solutions that would not only be impotent but may also aggravate the problem.

The complex relationship between the dominant political ideology and housing policy is clarified in works dealing with the Soviet urban housing where things like rent regulation, space allowance and social mix are to a large extent controlled by the state (Matthews, 1979). A comparison between Kenya and Tanzania, two neighbouring countries that are diametrically opposed in their political convictions, also shows how ideology influences urban development (Stren, 1975; 1976). The ways in which national and regional development strategies have implications for housing policies and programs have been clearly summarized by Chung-Tong Wu (1979).

The shortage of dwelling units and their unequal distribution is the result of an operation of the system based on private property and market mechanism free from meaningful public intervention. Without this intervention when the market forces have failed to ensure justice,

the social position of the poor means that a society in which housing units are produced and consumed as commodities cannot meet their needs (Steinberg, 1982). Harvey (1975) has attempted to examine the relationship between class structure in a capitalist society and residential differentiation. He dismisses the sociological explanation of differentiation which relies heavily on the notion that 'similar' people like to, or just live near each other. Harvey poses a very crucial question: do people live near each other because they are similar, or are they similar because they live near each other? He maintains that capitalism encourages increasing division and specialization of labour which may result in social and economic stratification, class consciousness and residential segregation. He further asserts that residential differentiation in the capitalist city means differential access to scarce resources required to acquire 'market capacity' — the ability to undertake certain kinds of functions within the division of labour, and it comprises attitudes, values, expectations and distinctive skills. Such differential access to society's scarce resources is socially unjust and may perpetuate and reproduce poverty, as is the case in many Third World countries.

It must be clear by now that housing needs are

associated with migrants' characteristics. Many migration studies normally start from a simplistic stereotype that it is the young adults who migrate to the towns in search of employment (Caldwell, 1969). Any provision of housing that does not take into account key factors like the characteristics of the areas of origin and destination, and the economic and demographic characteristics of the migrants may not be very meaningful (Pryor, 1979). The degree of permanence of stay in an urban centre is also of crucial importance to housing, since earlier studies had stressed that the African is a temporary urban dweller whose eventual destination was his village of origin (Elkan, 1967). Elkan (1976) concluded that there was no proletariat emerging in Nairobi.⁸ This conclusion has correctly been refuted by Bujra (1978) who sees no logical or definitional inconsistencies with an urban proletariat that maintains strong rural ties. She rejects the applicability of the classical Marxian concept of the proletariat to the African situation because, according to her, the capitalism in Nairobi is of a distorted character and so the proletariat that has emerged is one with an ill-developed class consciousness. Many modern researchers now tend to view the African as a town dweller whose basic needs must be satisfied there (Odongo and Lea, 1977).

8. He defines proletariat as a group of "people who no longer have a farm income and who are totally dependent upon a wage income for their livelihood" (Elkan, 1976 p. 705).

Once he has settled in the urban centre, the urban resident may keep changing locations within the town depending on external and internal forces (Herbert, 1972; Omondi, 1981). In this respect he will endeavour to obtain information on various parts of the town with regard to neighbourhood quality, vacancy of dwelling units and the rents. This implies a free flow of information in what has been classically termed the "free market", a market mechanism that never materialises in practice because the information flow is usually skewed in favour of the high income people. Indeed, it has been argued that some new migrants to the city settle in squatter settlements because they are ignorant of better alternatives elsewhere (Otani, 1981). This study will discuss the implications of this imperfect urban housing market.

Works on rents and urban land use by Western scholars such as Alonso (1964) must be modified when applied to local situations in the Third World. Such studies presume that price is mainly determined by the interaction between demand and supply. This is not always the case, particularly in the Third World where politics and a myriad of other local factors are important. Furthermore, Alonso's model is static and does not pay attention to changes through time. An attempt by Gordon (1978) to explain the historical development of urban land use

differentiation, though based on the North American experience, is superior to Alonso's model in the sense that it explores the conflict in society concerning the relationship to the means of production and control which influences residential differentiation and urban land use differentiation. Likewise the urban housing market as analysed by Muth (1970) becomes very difficult to verify in the Third World due, inter alia, to the paucity of reliable data and the different socio-political characteristics of these countries.

Much has been written about Third World housing in general, particularly the problem of housing the low income urban residents. A number of 'solutions' have been suggested, some of which have been adopted by Third World governments in collaboration with international agencies such as the World Bank. The writers vary greatly in their treatment of and sympathy with the inhabitants of the so-called Third World squatter settlements (Dwyer, 1975). Dwyer puts Prebisch (1963), Lerner (1967) and Juppenlatz (1970) into the same camp. Prebisch argues that squatter settlements house people who are poor, frustrated and economic drains to the government whereas Lerner sees the inhabitants of these settlements as displaced persons who have not been incorporated into modern industrial life. Juppenlatz sees the squatters

as defying law and order and building shelters that defy all urban standards and regulations. Furthermore, he sees the spontaneous settlements as a major part of what he calls the 'urban sickness' of Third World cities. He suggests two methods of approaching the problem: the integration of the urban immigrants and the assimilation of the squatters through urban redevelopment programs. He tends to view the phenomenon of squatting as a component of the evolution of cities and sees salvation in "some changes in the present structure of urban society and the existing sense of values" (Juppenlatz, 1970 p. 218). Such an approach does not connect the urban processes with the macro-societal organizations of which urban spatial organization is just a subset. Since it does not treat the causes but symptoms of the problem it is bound to fail.

Gugler (1970) belongs to the first group. He sees the solution of urban housing problems in curbing rural-urban migration by offering urban services in a discriminatory way whereby those who have resided long in the towns are favoured. Gugler has this advice for East African urban planners:

"A number of subsidised services are provided in urban areas..... If these are not to attract more unemployable to town, it is imperative that

the provision of such services be discriminatory..... Such differential treatment would most obviously apply to housing....." (Gugler, 1970 p.10).

It need not be stressed that such an approach cannot succeed since it does not grapple with the root cause of the problem.

The second group of writers emphasize the positive aspects of spontaneous settlements in contributing towards the solution of the immense problem of urban shelter in the Third World. They include Abrams (1964), Mangin (1967), and Turner (1966, 1967, 1968, 1972, 1976, 1979). In his article on squatter settlements in Latin America, Mangin (1967) sets out to present a model that contradicts many views held by planners, politicians, newspapermen and the majority of the general public. Some of the 'standard myths' about squatter settlements that he wants to disprove are: they consist of people direct from rural farms, they are chaotic, they are crime-ridden, they are an economic drain on the nation, and breeding grounds for radical leftist political activity. Such stereotypical views pointed to two 'solutions': the prevention of migration and the eradication of old squatter settlements replacing them with modern housing projects, and the prevention of the proliferation of

new squatter settlements.

Mangin (1967) maintains that squatter settlements have some economic importance like investment in housing and land improvement by the squatters. They also alleviate unemployment in the cities since most inhabitants there are self-employed and most activities there are labour-intensive. Squatter settlements also aid the growth of small businesses. Mangin therefore calls for a more sympathetic view of squatters and stresses the concept of self-help as the only way in which these settlements may be improved. The economic importance and monetary value of squatter dwellings has been corroborated by Jimenez (1982) in his study of the squatter settlements in Manila, Philippines.

The works of Turner and Mangin have strongly influenced planning attitudes towards spontaneous settlements and the rise of site and service schemes and squatter upgrading programs (Dwyer, 1975; Burgess, 1977, 1979; Conway, 1982).

In one of his earliest articles, Turner (1966) maintains that the existence of uncontrolled urban settlements is not the problem, but the fact that they are uncontrolled. He stresses that the difference between the nature of popular demand for dwellings and those supplied by

institutionalized society is the cause of autonomous urban settlements, and that these settlements are a vehicle for activities which are essential in the process of modernization. He argues that housing has three major functions: location, tenure and shelter depending on who requires housing and what his socio-economic status is. Turner concludes the article by calling on Third World governments to support popular initiatives, and encourage self-help as squatter settlements are not slums of despair but hope.

In another article, Turner (1967) develops his concept of self-help further and strongly condemns 'instant development' whereby ready-made houses are offered to the urban residents irrespective of the latter's requirements and capabilities. He advocates the concept of 'progressive development' or what may be termed owner-occupier-builder kind of housing. He concludes that urban residents need more space and not just standards; they also need a secure tenure which is a prerequisite for the improvements of the dwellings by the occupiers.

Turner (1968) reiterates the problem of conflicts between government programs and the demands of the people, and calls for re-alignment of institutional norms and action; otherwise, the collective will of the people will be

wasted. He argues that the mix of the three basic functions of the dwelling environment, location, tenure and amenity, depends on the socio-economic condition, priorities and expectations of each household. Turner creates a model which he uses to predict that the very low income people who have just arrived in the city (the bridgeheaders) will live in the inner city slums. As they stay in the city longer and acquire some form of secure job they become 'the consolidators' and squat on vacant urban land. The universal application of this model outside Latin America, particularly in Africa is doubtful (Muwonge, 1982). Muwonge found out that up-country migrants entered Nairobi through all the estates, but most especially by way of the intermediate zone. Their next move tends to be towards the city centre or the peripheral zone.

Turner (1968) argues for home ownership because it ensures social and economic security, commitment to neighbourhood and town life, and it also gives one the authority to modify and use the building in a more appropriate way. Turner's ideas on housing may be summarized in what has been called Turner's three laws of housing (Turner, 1976):

1. Dwellers should have control over the design, construction or management of their housing.

2. The important thing about housing is not what it is but what it does in peoples' lives.
3. Deficiencies and imperfections in your housing are infinitely more tolerable if they are your responsibility than if they are somebody else's.

Two identifiable areas of criticism of Turner's works have emerged, and may be dichotomized as theoretical criticisms and empirical criticisms (Lea, 1979). The most trenchant and detailed neo-marxist critique of Turner's ideas has been offered by Burgess (1977; 1979). Burgess contends that Turner underestimates the nature of land and housing as commodities or rather he underplays the importance of structural forces that continually make housing a commodity. According to Burgess, Turner stresses the use-value of housing at the expense of the exchange value. Burgess identifies different interest groups in land and housing development — owner occupiers, tenants, estate agents, landlords and developers, financial institutions and governments — whose interests often contradict and so may constrain the interests of the squatters. Furthermore, original squatter settlers tend to use land and housing as commodities by constructing more rooms and renting them out. The stress on utility maximization as the major motive in individuals is a kin to the ideas propounded by the

Chicago School of Ecology and the neo-classical land use modelists since Turner's models also stress tradeoffs between location, tenure and amenity whose relative mix would depend on the perceived utility of each household. Turner (1979) has attempted to react to the first criticism by maintaining that the issue of 'use value' versus 'market value' is a question of balance, not exclusion.

Another criticism is that Turner's model takes no consideration of implications of the internal differentiation that takes place within squatter settlements. There has developed what has been termed 'penny capitalism' associated with a wide range of quasi-monopolistic commercial craft, retail and household services. This has been corroborated by studies in South east Asia (McGee, 1979) and Ghana (Hart, 1973). In most African countries, it may take the form of ethnic variation where some forms of informal activities are the prerogative of particular ethnic groups. Burgess (1979) concludes that the squatter supposedly builds cheaply because he operates in a different sphere of circulating capital — that covered by the petty commodity production of housing. The squatter, however, has not escaped capitalism; he is merely in another part of it. Therefore, it suits international capitalism to allow squatters to build their shelters by themselves.

The empirical critics on the other hand have mainly concentrated on the validity of using Latin American experiences, where Turner and Mangin have done their research, to generalize on the prospects of self-help housing in the Third World. They agree that the level of success depends on the wider economic environment, the nature of cityward migration and land tenure practices in the Third World. However, it is questionable whether the squatters are mainly 'consolidators' as Turner maintains; the majority of them are genuinely very poor.

Turner's ideas now form part of a growing consensus of opinion among housing experts, planners and international aid groups (Burgess, 1977). The World Bank (1974) has outlined its concept of site and service schemes which definitely mirrors Turner's ideas. The Bank maintains that the essence of site and service schemes is the provision of urbanized land and supporting services due to the fact that Third World nations and the majority of their citizens are very poor and do not have enough resources to construct permanent urban houses to cater for the high rates of urban growth. According to the World Bank (1974) site and service schemes have several benefits:

- i) Increase supply of building plots with economical infrastructure and services.

- ii) Better physical living conditions among the urban poor.
- iii) Restraint on the growth of unplanned squatter settlements.
- iv) Tenure security
- v) Lower rents and reduction in the overcrowding of the squatter settlements.

Whether site and service schemes reduce overcrowding in the squatter settlements has been questioned (Turner, A., 1980). Turner maintains that the creation of more space in the lowest income area may not be realized because as soon as some people move from these settlements to the site and service schemes, others will move in (from rural areas, other towns and other parts of the same town) to take their places. This may be a valid criticism given the rapid rate of urban growth in the Third World. He argues that despite the fact that site and service schemes have acquired an almost talismanic quality of being a cure-all for the housing problems of the poor, solution does not lie in housing per se; mass access to employment and public facilities must be maximized for the poor to improve their dwellings.

This position is also taken by Herbert (1979) who argues that the fulfilment of the needs of households

is more important than just building houses. This should be viewed in connection with the role of a house in employment generation for the skilled and unskilled. Herbert contends that slum clearance does nothing but reduce the already low housing stock, and the ensuing relocation does not always benefit the low income people affected; the beneficiaries turn out to be the middle income or lower middle income families. The World Bank (1974) also stresses the importance of employment generation. In its outline, the Bank even suggests how settlers of sites and services schemes may be selected. According to the Bank, the conditions to consider should include, inter alia:

- i) Security of income
- ii) Evidence of commitment to self-help and community development
- iii) Individual needs in terms of dependents' income.
- iv) The social cohesiveness of groups to facilitate co-operation.
- v) Location in relation to workplace.

The degree of success of these schemes may depend on whether it is the 'right people' who have been allocated the plots. The fairness of housing allocation mechanisms in the Third World has been questioned by Sule (1978) after conducting a Nigerian case study. He

states that the allocation mechanism in Nigeria is the ballot system whereby the lottery system is adopted as a rationale for the delivery of housing services to the masses of the Nigerian Community. He argues that since the approach is by the game of chance, an applicant with more than one entry has a greater probability of getting a dwelling unit. He concludes that a public housing system that ignores the reality of poverty in the society and the enclaves of the city's affluence is grossly inadequate, and recommends that priority in the selection of participants should be granted according to the urgency of housing needs, not through the use of a ballot. Sule's conclusions and recommendation are in line with the perspectives of this study.

That conventional 'low cost' public housing programs have failed in the Third World has been seen as a justification for sites and services approach to housing (Madavo and Haldane, 1974).

Madavo and Haldane attribute the failure to low per capita income which makes the replication of these schemes impossible, the inability of the majority (about 80% in some countries) of the people to pay for these houses, and the high rates of urban growth in the Third World. They maintain that due to the increasing poverty and exploding urban growth, most developing countries are

beginning to stress self-help approaches to urban shelter which ensures maximum private involvement and minimum public expenditure. They argue that the two major constraints, physical and institutional, have to be removed if the serviced plot approach to urban shelter is to succeed. They identify five issues that have to be taken into account in project development: employment and income, design standards, cost recovery, allocation and tenure, and the organization of project development and execution.

A number of Third World countries have been experimenting with site and service and squatter upgrading schemes with mixed results. The endeavours in Latin America are well documented in the works of Turner and Mangin. Reports of similar studies in Africa and Asia have been scanty (Dwyer, 1975). The experiment in Upper Volta which is alleged to have had considerable success due to its incorporation of various institutions ranging from technical schools to the forestry department also had some serious drawbacks such as the middle income people benefitting more than the target group (Centre for Housing and Planning, U.N.O, 1978). In this particular program, the allocation of serviced plots and squatter upgrading were concurrent and helped in imparting building techniques to the lowest income people.

However, the main lesson from the study is that urban development should be linked with agricultural modernization to 'discourage' rural urban migration, otherwise urban success juxtaposed with rural stagnation will merely increase the number of inmigrants, thus worsening the housing situation.

An assessment of the slum and shanty upgrading in Colombo, Sri Lanka, concludes on a rather sour note (Steinberg, 1982). Steinberg concludes that economic factors such as increased construction costs and the low purchasing power of the poor suggest that the early improvement of housing is unlikely and so these new housing policies will not bring a substantial change in the housing situation. He also raises the question of the relationship between a particular mode of production and the success of low income housing schemes, and he is skeptical of the ability of the capitalist path of development to enhance the welfare of the low income people in terms of housing and income. He believes in the abolition of the capitalist mode of production as a prerequisite for solving the housing problems of the low income workers.

The provision of serviced plots is Kenya's policy for housing the low income people (National Housing

Corporation, 1977/78). The essence of the policy is the pooling together of the government's limited funds by providing infrastructural services and a small materials loan, together with the participants' resources in terms of finance and family labour. It is therefore the aim of the government to promote it in every urban centre due to its stated policy of 'Growth Centres'.

The issue of whether the success or relevance of these schemes in capital cities automatically imply that they will be successful in the provincial towns has been raised by a study in Uganda (Odongo and Lea, 1977). This comparative study of home ownership in Kampala and Soroti concludes that permanency in the urban environment is mainly a characteristic of the cities. This may influence one to desire to build a house in the town and thus become committed to town life, a very important prerequisite for the proper functioning of Site and Service Schemes. Odongo and Lea (1977) argue that since Soroti draws its population mainly from the surrounding area and its residents still have strong expectations of retiring back to the village, the desire for urban home-ownership may not be as strong as it is in cosmopolitan Kampala. This Ugandan study is relevant to this research since Kisumu is a provincial town with a sizeable population who may still have strong rural ties as in Soroti.

Much of the research on Kenyan housing problems has tended to concentrate on Nairobi and Mombasa (Harris, 1970; Stren, 1970a; 1970b; Chana and Morrison, 1973, Morrison, 1974). A few others have tended to compare the situation in major urban centres, particularly Nairobi, Mombasa and Kisumu (Waweru and Associates, 1976; Kayongo-Male, 1980). Research on immigration in Kisumu has pointers of great importance to the urban housing planner (Oucho, 1974). Oucho observed that younger migrants tend to stay with their spouses in town whereas old people tend to leave their wives in the rural areas, and then make frequent visits there. This behaviour among the old migrants has been corroborated by a separate study in Nairobi (Moock, 1978). Such information, though generalised, may help housing designers in determining house types and sizes. Oucho (1974) seems to tacitly advocate Growth Centre policy despite the fact that it does not re-dress the rural/urban differences and its validity as a development strategy has been questioned (Gaile, 1976).

The relationship between town and country in Africa has received widespread attention and it has been estimated that in Kenya, urban-rural income transfers represent one-fifth of the urban wage bill (Johnson and Whitelaw, 1974). A detailed study of such a phenomenon

political stability as portrayed in the early writings on squatter settlements describing them as 'hot-beds' for political radicalism and 'powderkegs' for revolution. Increasing empirical evidence now tends to portray the squatters as normal, hardworking, ambitious and conservative people whose major preoccupation is to better their lives (Cornelius, 1971).

The work of Omondi (1981) examines an aspect of housing in Kisumu, namely, intra-urban residential mobility. He identifies some of the major factors that influence these intra-urban shifts in Kisumu. However, the work tends to take the housing policy for granted and just describes how people adjust to both external and internal relocation factors.

The present study has been prompted by a number of factors:

1. It has been argued that developing countries can only either upgrade squatter settlements or initiate site and service schemes in alleviating housing problems (World Bank, 1975).

This thinking has apparently influenced many Third World governments, including Kenya, because today there is a great emphasis on self-help in urban housing indicating that home ownership is preferred to tenancy. However, there has not been a full examination of the relative

implications of each tenure policy. An attempt has been made by Okpala (1981) in evaluating the pros and cons of both rental and owner-occupier tenure policy in Nigeria. There is a need to evaluate whether the current low income housing programs in the Third World can work, given the economic and technological dependence of the majority of these countries. This study is expected to be the beginning of this kind of analysis of the housing situation in Kenya.

2. The existing disparity between the well-phrased objectives of the Kenya Government as outlined in the development Plans (Republic of Kenya, 1970, 1974, 1979, 1979a) and what is observed in the reality of the housing situation. Among the objectives of the government are to increase the urban stock of housing in order to keep pace with urban growth, and to ensure that new houses benefit particularly the low income groups. The persistent squatter phenomenon and the increasing 'marginalization' and 'proletarianization' of urban workers due to poor housing conditions, poverty, unemployment and underemployment lead us to doubt whether the stated objectives are being realized.

A casual glance at the newspapers in Kenya draws attention to the squalid housing conditions (Daily Nation Feb.17, 1981; Jul 15, 1981; July 1, 1981; The Standard May 19, 1982; The Weekly Review October 1, 1982).

The literature on housing in Kenya has not fully addressed itself to the causes of this continued deterioration of the housing conditions despite the official phrases of good intention.

3. There is a tendency among researchers on housing to treat the housing sector as autonomous, and hence whose problems may be solved by massive investments on that sector. Recommendations made within such a confined framework may not work. This study will attempt to set housing analysis in a broader framework showing its links with and subordination to other sectors of the economy.

CHAPTER TWOHISTORICAL CONSIDERATIONS

This chapter is devoted to historical perspectives with the aim of demonstrating how colonial policies and spatial patterns are still important in understanding current national problems in Kenya. The understanding of the housing problem can be enhanced by looking at the evolution of land use in the town upto the present time and the factors that have influenced the formulation of Kenya's housing policy. Hence this chapter is divided into two sections. The first section gives an account of the growth of Kisumu town from the time the railway line from Mombasa reached Lake Victoria to the present. Emphasis is laid on the physical and population growth of the town and how these are related to the housing problem. The second section presents a short exposition of the development of Kenya's post independence housing policy, though showing how factors existing before independence have continued to be influential in the formation of current policies.

2.1 THE GROWTH OF KISUMU TOWN

Kisumu, the oldest lake port in East Africa, is situated on the shores of Lake Victoria's Winam Gulf

just to the south of the equator. The town rises from 1131 metres on the lake shore to 1186 metres above sea-level and stands on a down-faulted lava ridge in the floor of the Nyanza Rift Valley, a branch of the East African Rift System.

The town as it is known today has a long and varied history behind it, and some of the big names in colonial history like Colonel Ternan (after whom the current Fort Ternan township was named) and the Duke of Connaught, to mention a few, ended their trek to the interior of the Country from Mombasa here. The drastic changes it has undergone has prompted one columnist to write:

"If the Duke and Duchess of Connaught had to visit Kisumu today, 76 years after his last visit they would hardly believe their eyes.....

A stone's throw from the Town Hall the big WEDCO Centre, Alpha House, the Pan-African Insurance and the East African Power and Lighting multi-storey office would block his view of the fresh water lake" (Otieno, 1982 p. 15).

Kisumu was virtually non-existent when the first European, Henry Stanley, reached its present site in 1875.

During the last century European industrialists and traders strongly desired to exploit the commercial resources of Africa and this among other factors, led

to exploratory and missionary expeditions to Africa. In order to facilitate the 'opening up' of the interior of East Africa, the British decided to link Mombasa with Uganda by a railway line. A survey undertaken by Captain Macdonald from Mombasa to Lake Victoria was completed in 1893. The construction of the railway line began in Mombasa in 1895 and reached Nairobi in 1899. After the railway line passed Nakuru there was a disagreement as to the precise point along the shores of Lake Victoria where the line should end. The initial plans were for the railway to end at Port Victoria on the shores of Berkeley (now Sio) Bay which is to the northwest of Kisumu (Oucho, 1980).

The chief engineer of the railway, Sir George Whitehouse, and a railway surveyor, Blakett, agreed in 1898 to make Kisumu the terminus of the railway. Whitehouse named the future township Port Florence after his wife. The activities here therefore were initially bound up exclusively with the progress of the railway. A food depot was established to feed the forward survey parties; and telegraph lines, roads and other means of communication were immediately constructed to connect this new port with other settlement stations and depots at Molo, Kibigori, Mau Summit and Mumias. Another move that assured the growth of Kisumu in the

initial stages was the transfer of the civil headquarters from Mumias and that of port equipment and transport staff from Port Victoria to Kisumu in 1899. This was directed by the then acting Commissioner for Uganda, Colonel Ternan. In July that year he sketched the first skeleton development plan for the town "which included landing places and wharves along the lake shore and government buildings and rental shops in the streets behind, but with room left between the first buildings and the lake for public gardens and promenade" (Otieno, 1982 p.18).

In May 1900 C.W. Hobley, the first administrator of Nyanza Province, drew a plan for the township. In his plan "plots were allocated to the firms Boustead, Ridley and the German D.O.A.G., as well as to the Asians who chose to settle in this administrative centre" (Obudho and Waller, 1976 p.83).

In December 1901 the railway, or more commonly known as the 'Uganda Railway',¹ reached Kisumu and the foundation was now laid firmly for the growth of this colonial town as both a regional administrative centre

1. It was called the 'Uganda Railway' partly due to the fact that the eastern border of Uganda extended upto the present-day Naivasha until 1902 when it was moved to the present-day Busia, and partly because the railway was intended as a link with Uganda though it was built on Kenyan soil.

and a port, a link via the lake with other East African countries. Originally sited on the northern side of the Gulf, Kisumu railway station was moved to higher ground on the southern side in 1903. In the same year the first Township Ordinance was passed in British East Africa and this empowered the Governor to gazette any area as a township. Consequently, in the same year, the first township boundary of Kisumu was gazetted; 12566 acres including water were set aside within a radius of 2.5 miles from the collector's office. During the town's infancy the residential quarters were still attached to the shops and were mainly along the present Obote Road. The colonial administrators chose the higher ground (now Milimani) to build their residences.

Several stations were built in Kisumu's hinterland and several ports established in its foreland between 1903 and 1906 and this helped to reinforce the development of the town. The town started experiencing housing problems, particularly for the African population right from its initial stages. In one of the earliest annual reports, an administrator wrote:

"It is very necessary that suitable quarters should be provided without delay for native sweepers, who have an old cattle shed to live in at present, and are naturally discontented.

Should these men run away, they would be very difficult to replace" (Kisumu Municipal Council, 1907).

The utilitarian relationship between the colonialists and the indigenous peoples is thus evident from the quotation. The British administrators had to come to terms with the housing problems of two types of non-British urban dwellers in Kisumu. On the one hand was the African population which had either become attracted to the town for what it offered economically or who had been alienated from their farms by the British settler farmers. On the other hand, there were traders of non-African origin like the Arabs and the Indian coolies who had been working on the railway.

Despite the drawbacks to Kisumu's development brought about by very poor health conditions, by 1908 the principal port facilities were complete and there was a small Indian bazaar, four European trading houses and several Indian shops. The population at this time consisted of 47 Europeans, 550 Goans, Indians and Eurasians, and 1500 Africans who resided mainly outside the 2.5 mile boundary limit except government employees who resided within the town boundary (Obudho and Waller, 1976).

With the improvement of social amenities, the population of Kisumu increased in 1909 (Table 2.1).

TABLE 2.1: THE URBAN POPULATION OF KISUMU, 1909

ETHNIC GROUP	MALE	FEMALE	CHILDREN	TOTAL
European	37	10	3	50
Eurasian	4	1	1	6
Goan	66	6	7	79
Indian	223	40	46	309
African	***	***	***	2639
TOTAL	330	57	57	3083

Source: (Obudho and Waller, 1976 p. 85).

The statistics on the African Population was not available by the three categories of male, female and children.

At this time the four major industrial companies in Kisumu were collective and distributive branches of major companies based in Nairobi and so did not directly contribute to the urban employment of Kisumu. These companies imported mainly consumer goods. Only the British East Africa Corporation owned a cotton gin at Kisumu. Otherwise, Kisumu was mainly an administrative town with a very low industrial base. Port facilities developed more rapidly than any other functions of the township.

More buildings were erected between 1912 and 1914 with commercial banks and hotels being established for the first time. However, the development of the town was halted briefly during the First World War (1914-1918). After the War a new development scheme was drawn up by the township committee formed in 1914 to manage the affairs of the town. For the first time, the committee allocated residential land according to ethnic or racial background. The population of Kisumu during the First World War showed an overwhelming majority of males since most Africans were enrolled in military Carrier Corps and were stationed at Kisumu, the only military camp in Western Kenya at the time.² More firms were established in Kisumu between 1918 and 1919 which included India Standard Bank, Smith Mackenzie & Co., S. Adams & Co., Singer Sewing Machines, and African Mercantile. In the late 1920s, buildings were erected along the present Ogada and Odera Streets, and so the former shops-cum-residences along Obote Road were demolished.

New hospitals, new government offices and a modern airport were completed in 1931. The airport, developed to link London - Cairo - Nairobi - Cape Town, was later transferred to Nairobi, and this is one of the factors that led to the loss of fortune as far as Kisumu's development.

2. In 1916 there were about 4000 African men in Kisumu, compared to 64 European, 110 Goan and 548 Indian men at the time. (Source: Obudho and Waller, 1976 p.89).

was concerned. After the antimalaria campaign, inaugurated to make Kisumu more habitable, was completed in 1937 the growth of the township continued at a great pace. Two other factors that contributed to this accelerated growth were the discovery of gold in Western Kenya at this time and the fact that very prosperous sugar cane farming and refining industries were already in full swing in the neighbouring towns of Miwani and Muhoroni.

The rapid growth was again halted during the Second World War (1939-1945) when all the physical and social planning schemes were in doldrums so as to divert all goods and services to the War effort. Furthermore, during the War the railway line was extended from Nakuru to Kampala, and in Tanzania, Dar es Salaam was connected by rail to the ports along the southern shores of Lake Victoria. These two developments resulted in an economic decline from which Kisumu does not seem to have yet recovered sufficiently. In addition, with the onset of the Second World War, the gold mining era in Nyanza Province came to a close and so the mining towns at Yala, Asembo and Kakamega have since become "ghost towns" whose survival depend largely on meagre government administrative services.

The effect of the War on the population of Kisumu is

evident from the comparison of the population in 1938 and 1940 (Table 2.2).

TABLE 2.2: THE POPULATION OF KISUMU BY SEX AND ETHNIC STRUCTURE 1938 AND 1940

ETHNIC GROUP	MALES		FEMALES		CHILDREN		TOTAL		% INCREASE 1938 - 1940
	1938	1940	1938	1940	1938	1940	1938	1940	
European	154	106	90	107	68	92	310	305	- 1.61
Indian	683	816	312	677	841	1067	1836	2580	+ 39.43
Goan	67	66	28	23	51	52	146	141	- 3.42
Arabs & Others	37	26	28	18	49	29	114	73	- 35.96
African	1956	2879	1102	791	1095	1263	4153	4933	+ 18.98
TOTAL	2897	3893	1560	1616	2102	2503	6559	8012	+ 21.41

(Source: Obudho and Waller, 1976)

There was massive migration from Kisumu to other safer areas of the country. Only the Indian population among the non-African groups increased during this period by 39.43% (Table 2.2). Their population increased because the War meant greater need for consumer goods which could be supplied by their shops.

It was stated earlier that land in Kisumu was allocated on ethnic grounds. Therefore, racial segregation developed in the town. The first settlement at the present-day Nyalenda, 2.5 miles from the town centre, and

Manyatta residential areas occurred in 1914 (Van Gemert, 1979). These areas were outside the colonial municipal jurisdiction and proved very popular with the African population who could not be housed by the authorities. The African settlers in these areas began taking advantage of the lack of proper housing for the African population working in the town. Consequently, rental houses began appearing in Nyalenda and Manyatta in 1955 and 1958 respectively.

The population of Nyalenda swelled up further in 1961 - 1962 when there was immigration there from the lake side after the 1961 floods when the level of Lake Victoria rose. It is very surprising that although Nyalenda and Manyatta have served as the major residential areas for the low income people who work in the town, they were never considered part of the Kisumu municipality until 1971.³

Mention should also be made of the other older residential areas of Kisumu. In 1924 there was the first settlement for the railway workers from Tanzania and the Coast at Kaloleni. These were mainly Moslems. The Colonial government attempted to plan this settlement

3. This was a result of the favourable recommendation contained in The Ogotu Commission of Enquiry (Extension of Boundaries) referred to in "Kisumu's Expansion opens way for more development" in Inside Kenya Today No. 16 (June, 1972) Pp. 43-47.

by using a grid-layout noticeable even today. Kaloleni is at the moment right in the middle of the town and needs complete redevelopment and modernization (Plate 3). The settlement at Bandani, on the western side of the town, was established in 1929 when the Kisumu Aerodrome was constructed and therefore families who had hitherto lived on the site had to be relocated. It is another area in the municipality with a very strong Moslem influence because most of the people evicted from the airport site were of Nubian origin. When the colonial government evicted them a "Nubian Village" was constructed in the town to accommodate them but they allegedly refused to occupy the dwellings as the huts were reportedly below standard.⁴ The rejected huts were allocated to government employees in the town who apparently accepted them for lack of better alternatives. To date, the adjective 'Nubian' is still used to refer to the residential area though the structures have improved over the years. The Shauri Moyo residential area was also meant to house government African servants.

There is also an old residential area in Kisumu which was (and still is) called the "Arab Manyatta" as

4. This was an overt act by the government to segregate people on ethnic or regional bases. It perhaps helped them rationalize their racist views of separate development, a form of "housing apartheid".



PLATE 3: A section of Kaloleni Estate (origin 1924).



PLATE 4: A section of Arab Manyatta Estate. Attempts at slum clearance by creating Mosque Estate has not succeeded.

it was mainly occupied by the Arab population. Today, like Kaloleni, it is in the middle of the town and is perhaps the worst eyesore in the town centre (Plate 4). This slum has persistently defied the stringent action of Planners.⁵

The Asians were more business oriented and therefore preferred to stay in their business-cum-residential section of the town, the "Indian Bazaar". They lived, and most of them still do, mainly in the town centre.

The township of Kisumu was declared a municipality as from January 1, 1941 by the Proclamation No. 31 dated March 6, 1941 (Kisumu Municipal Council, 1941, p. 1). This declaration found a town already differentiated residentially on the basis of ethnicity and race, a common feature in most African cities before and after independence. It must be stressed at this juncture that the Colonial urbanization policy was racially biased. The towns were viewed as the exclusive domain of the Europeans whereas the Africans were to be merely marginally involved in urban life. There was overt action by the authorities to restrict African residence in the towns; Africans

5. There have been attempts at slum clearance by creating Mosque Estate. However, the old buildings still stand adjacent to the new structures. This is reminiscent of the Furwani slum clearance in Nairobi which stands out as a clear example of the fate of any bourgeois housing policy imposed on the low income people.

were viewed as temporary urban sojourners who must ultimately return to their rural areas. This reactionary view was translated into the colonial urban policy and manifested in the poor urban services offered to the African urban residents. With independence, very little has changed and the ruling elite merely moved into the quarters previously meant for the Europeans but remained oblivious of the socio-economic welfare of the poor majority.

Despite the colonial discriminatory measures, by 1946 the African urban population in Kisumu was significant (Table 2.3).

According to Table 2.3 it is very conspicuous that the African women were under-represented in the town, compared to the ratio of non-African women to non-African

TABLE 2.3: THE POPULATION OF KISUMU TOWN BY SEX AND RACE : 1946

ETHNIC GROUP	MALES	FEMALES	CHILDREN	TOTAL
African	2043	655	1584	4282
Non-Africans	1692	1078	2550	5320
TOTAL	3735	1733	4134	9602

(Source: Kisumu Municipal Council, 1946 p.2)

men. This may be partly explained by the fact that most African men left their wives at home due to the Colonial urbanization policy and because decent accommodation for

a married couple was missing in the town. The urban "African locations" consisted mainly of single rooms and so it was culturally impossible for parents to share such rooms with their grown up children. The ratio of the African women to children (1:2.4) as compared to that of non-Africans (1:2.3) also reiterates the postulation that the adverse urban conditions ensured that part of the family had to stay in the rural areas.

The housing sub-committee of the Municipal Board recommended that all African municipal employees living within the municipal area should be housed in municipal quarters at the cost of K£13,160 (Kisumu Municipal Council, 1946). At this time, the area of the town was 4,656 acres but 946 acres were under water, leaving a land area of 3710 acres. The area of the town did not increase even upto 1952 but the population increased rapidly to 13,663 inhabitants by the same year.

After the end of the Second World War, more Asian and African families returned to Kisumu to take advantage of the security and educational facilities available in the town. Consequently there was an urgent need for more houses in the town. The tenant purchase houses within the town could not compete successfully with the cheaper accommodation that existed in the peripheral areas of Kisumu. Because of racial prejudices at the time, much

of the commercial land in Kisumu was in the hands of non-Africans. It was not until 1958 that one of the largest housing projects for the Africans was begun, and construction work continued up to 1959 (Obudho and Waller, 1976). In addition to governmentally built houses, private developers also built houses for middle and higher income groups.

The current major land uses in Kisumu — industrial, commercial and residential — are shown in Figure 2.1. The industrial area is situated close to the lake and runs parallel to the lake shore. The area is served mainly by the railway and acts as the terminus of the two railway lines that connect Kisumu with the rest of the country. It is separated from the other land uses by Makasembo Road and stretches towards the airport in the north-west. In 1969, the industrial zone covered a mere 6.5% of all land uses in Kisumu (Kenya Government, 1969 p. 9).

At present the industrial area seems to be expanding in two distinct directions: along the road to Maseno in the north-west and along the road to Chemelil in the north-east (Fig 2.1).

The location of the controversial Molasses Utilization Complex shown in Figure 2.1 may suggest which of the two directions will receive greater emphasis in industrial

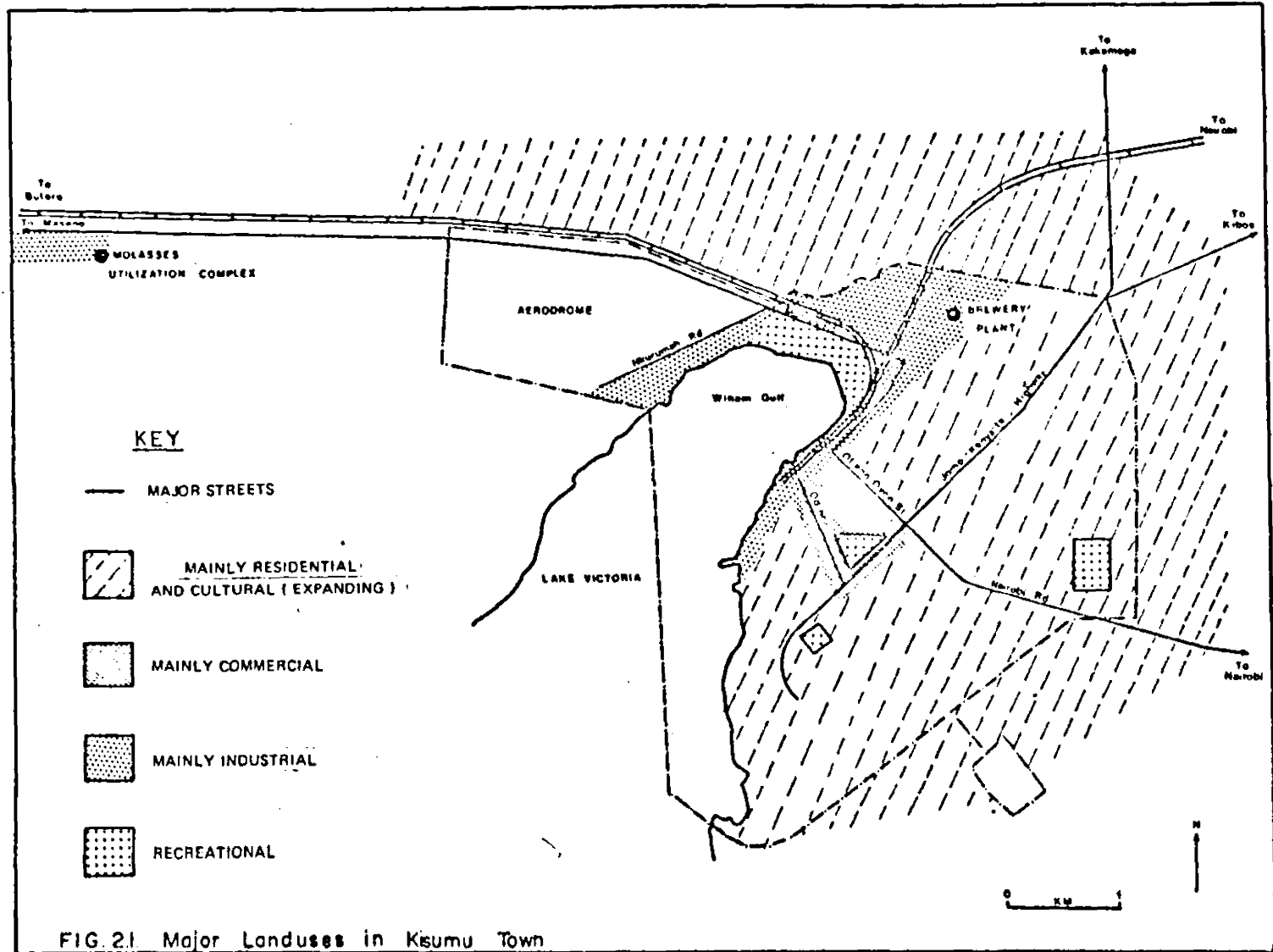


FIG. 2.1 Major Landuses in Kisumu Town

investment given that other factories — the safety matches and the foam mattresses plants — have been located beyond the molasses plant along the same Maseno Road.

The Central Business District (CBD) covers much of the commercial land use in the town. Attempts have been made to divide the CBD into three distinct parts: the northern or government section; the central which is the commercial and business area proper; and the southern, which is the business (mainly retailing) and residential section, popularly known as the bazaar (Obudho and Waller, 1976 p. 117). The northern section mainly comprises of Central and Local Government administrative offices whereas the central portion consists of modern offices, department stores and firms which are branches of Nairobi-based companies. Much of the business in the bazaar is owned by Kenyan Asians and this is part of the oldest section of the town. The majority of these Asians use the first floor of their shops for residential purposes.

The third category of land use, the residential zone, covers the greatest portion of urban land in Kisumu. In 1969 it covered 45.9% of the existing urban land (Kenya Government, 1969 p.9). Distinct subdivisions of residential areas related to the historical growth of the town

may be discerned. The bazaar may be seen as a separate residential area with businessmen living on the upper floors of their shops. A second distinct area is that part that has been referred to as "the Hill" or Mlimani. This area was once an exclusively European enclave, but today the economic status dictates who stays there. This is the best residential area with low population densities and few residential structures per unit area. It has been estimated that the average density in this area is 1-3 houses per acre (Oyoo, 1974). Other high income areas include Tom Mboya and Okore in the northern suburbs of the town.

The third subdivision is the medium quality residential area that dominates the eastern section of the town. The last subdivision comprises of what has been, until recently, referred to as the peri-urban areas. These are the randomly constructed dwelling structures surrounding the physically planned areas of the town. These poor quality structures in Nyalenda, Manyatta, Pandpieri, Migosi and Obunga house more than all the formal structures in the town combined. This area is characterised by high density of both dwelling structures and people, few sanitary facilities and a complete absence of infrastructural services. As a consequence, informal economic activities prevailing here include prostitution, beer brewing

and petty retail trade.⁶

The four subdivisions of the residential zone outlined above may be compressed to give three residential strata according to the general quality of the residential structures, the services available and the rents charged. Thus we would have low, medium and high rent areas. This is the categorization which has been adopted in this study as already explained.

2.2 A RESUME OF KENYA'S HOUSING POLICY.

A concise treatment of Kenya's stated current housing policy is essential at this juncture if one is to understand the acute problem of housing. Policy influences programs of action and therefore the analysis of the relationship between the two may help in the assessment of the successes and failures of any country's attempts to solve its perceived developmental problems. It is necessary to emphasize that the way policies are stated and the programs of action implemented may reflect the planners' view of the problem. This may be incompatible with the problem as perceived by the people for

6. Dosio (1977) claims that there is a concentration of three main workplaces in Kisumu — the industrial area, the CBD and the provincial headquarters. Such an assertion only considers wage employment in the modern sector of the economy, because the informal sectors in the residential areas are equally important employment foci, particularly for the urban poor.

whom the plans are meant. It is with the above dialectics in mind that Kenya's housing policy will be assessed throughout this work.

It is a truism to assert that Kenya's current development policies, of which housing policy is a subset, are a product of history. Despite the obvious historical roots, emphasis is here laid on the current policies but conscious attempts will be made to link the policy to history where logically appropriate. Thus Independence Day is taken as the starting point.

At independence in 1963 the black majority government inherited a situation characterised by a number of features.

First, urbanization rates were high particularly of the African population; it was 5.95% per annum (Republic of Kenya, 1966/67). This mainly consisted of rural-urban migration fuelled by the expectations of job opportunities. The colonial urbanization policy had implicitly and explicitly discouraged urban stabilization among the Africans, but with independence the restrictive conditions were relaxed. Men who had secured employment in the towns now brought their families from the rural areas to stay with them resulting in rapid household (family) formation. The young government recognised that it could

not keep pace with this growth rate in terms of housing provision and saw only two alternatives for the provision of adequate housing.

The first was the reduction of the cost of housing per family. The government had had experience in the construction of the Jericho Housing Estate in Nairobi where the cost per family was K£100. The reduction according to the government could be achieved by the proper use of cheap local materials in construction, and so site and service schemes were considered to be a realistic way of achieving that (These schemes will be elaborated upon later on). Self-help in housing construction was also deemed capable of reducing construction costs borne by the Central government. The other alternative was the inducement of private capital by encouraging housing co-operative societies. However, the drift to the cities continue to date due to the continued abysmal socio-economic disparities between urban and rural areas. The crux of the problem is that all these people need productive employment and decent housing.

The second urban residential feature inherited at independence was the segregation by race. The European population occupied the most luxurious neighbourhoods like Muthaiga in Nairobi and Milimani in Kisumu. Next on the ladder were the Asians who also carved out

exclusive areas for themselves. At the base of the pyramid were the Africans who either scattered themselves in squalid rings round the towns or were humped together in low standard residential districts known as the 'African locations'. This 'housing apartheid' has continued unabated with the economically and politically strong African elite replacing the Europeans and the Asians in the upper grade residential areas. This has led to the apparent belief that this residential stratification on socio-economic and political basis is the best pattern of housing development. Hence the housing policy in Kenya, through the National Housing Corporation (N.H.C.), and the Housing Finance Company of Kenya (H.F.C.K.), takes for granted that separate development for low, medium and high income people is necessary and indispensable. This 'apartheid' in housing makes social integration difficult to achieve in Kenya, and therefore makes Kenya's housing policy very elitist.

The third feature is related to the effects of the economic slump experienced by Kenya between 1957 and 1965. It resulted in a drop in the construction of residential units. Due to the high rates of rural-urban migration, rapid rates of household formation and extremely slow increase in the construction of urban dwelling units, both effective demand and housing needs outpaced

the supply causing rents to rise. The new government responded to the situation by inviting expatriate 'experts'. Under the United Nations Program for Technical Assistance, Charles Abrams and Lawrence Bloomberg arrived in early 1964 to research short and long term housing needs and recommend appropriate action. Their recommendations, including the urge to establish a national housing authority, have been the cornerstone of Kenya's housing policy (Republic of Kenya, 1966/67).

Nevertheless there has been a more structural continuity than innovation and change in Kenya's housing policy even after independence. The situation will continue to deteriorate in the absence of new thinking and new policies in economic and physical planning to find radical solutions (Stren, 1970a; Safier, 1970).

It is appropriate at this juncture to summarize the key programs the government has been encouraging since independence to combat the ever-increasing housing problem. Firstly, there has been an emphasis on rural development with the intention of making the rural areas just as attractive as the towns (Republic of Kenya, 1974). Money has always been earmarked for the construction of access roads, hospitals and dispensaries, schools and water supplies. Farmers have been encouraged to concentrate on their farms to prove that the benefits accruing

from farming are equal to if not more than those accruing from modern sector urban employment. The chief objective of all these programs was to discourage rural-urban migration. In certain cases, there was an overt call to the people to 'go back to the land'. However, by the mid 1970s urbanization rates had increased from 5.95% p.a. at independence to 7.1% p.a.

Some authors on East African urbanization such as Gugler (1970), have even argued that one of the ways of curbing rural-urban drift was for the government to ensure that the provision of urban services, including housing, is discriminatory: that is those with a record of past urban residence and/or employment be given preference. Such arguments overlook one of the basic tenets of African culture, the extended family. Newly arrived urban immigrants always stay with relatives when still looking for employment, and therefore discriminating against them in the provision of basic services cannot bar them from coming to the towns. Gugler (1970) neither goes to the root cause of the problem nor does he suggest concrete policies and programs for dealing with the rural-urban migration and its attendant housing problems as they are. In sum, concentration on rural development has not proved a positive cure for this chronic urban malaise.

The second way in which the government has reacted is related to the first. The Kenya Government is officially committed to the Growth Centre policy as a means of reducing urban concentration in Nairobi and Mombasa, and therefore central place hierarchy has been defined for the whole country based on provincial and district boundaries: one Local Centre for every 5,000 rural people; one Market Centre for every 15,000; one Rural Centre for every 40,000; and one Urban Centre for every 120,000 rural people (Republic of Kenya, 1974 p. 120). The plan is to provide these central places with the necessary infrastructural services and industrial investment that would act as a catalyst for diverting people from Nairobi, the primate city.

One of the reasons why this approach has not succeeded may be attributed to the inability of the government to convince the multinational corporations to invest in remote towns. There is empirical evidence to show that the peripheral bourgeoisie in the Third World owns no means of production. They may own commercial capital but not industrial capital (Shivji, 1973). Consequently they cannot dictate where industrial investment will be located. They are merely what may be referred to as "neo-colonialist spannerboys" whose occupation is to oil the cogwheels of a system that is consciously and deliberately designed to pauperise and underdevelop the Third World.

The third reaction to urban problems smacks of a defeatist attitude based on "ad hocism". Despite all the attempts at decentralisation, Nairobi and Mombasa still continue to receive a major share of government's investment in housing; a recognition that decentralisation has failed? The concentration of industrial and housing investment in the metropolis has the counter-productive nature of attracting more people into these already congested places.

A fourth plan of action has been the planning for the peri-urban areas where the population growth and poverty are most acute. In the past, shanty demolition had been the chief means of discouraging the so called "Spontaneous Settlements". However, their persistence led to the equally inappropriate method of slum clearance which entailed the allocation of alternative sites for occupation by those whose dwellings were demolished. The snag with this approach was that the alternatives offered were always too expensive for the majority to afford as was the case with the slum clearance in Pumwani and Arab Manyatta in Nairobi and Kisumu respectively. Currently, the stress is laid on squatter upgrading schemes which in a nutshell means that the substandard housing in the towns are no longer to be demolished.

The government now aims at providing the basic services like water, roads, dispensaries, schools and street lighting to the residents of these areas. This scheme, under the rubric of "the Second Urban Project", is mainly funded by the World Bank and includes other educational programs like nutrition and family planning. The apparent official recognition of the role peri-urban areas play in development may have been a result of the recommendations by the International Labour Organization which advised the government to encourage the 'informal sector' of the economy which is usually concentrated in the peri-urban areas (ILO, 1972).

The origin and basis of Kenya's housing policy can be traced through all the development plans since independence. During the 1970-1974 plan period, it was stated that Kenya aims at providing every family with a decent home providing at least the basic standards of health, privacy and security. It was recognised in the same plan that the problem of inadequate incomes for the majority of families may impede the realization of the stated objective.

In the plan covering 1974-1978 development period, it is argued that the worsening situation in urban housing can be attributed to : the rapid growth of urban population,

the increase in building costs, and the fact that upto 40% of the urban residents cannot afford to pay even minimal rents (another concession that income plays an important role in housing problems). It is stressed in the plan that the maximum occupancy rate for a two-roomed house is 5 persons. Greater emphasis was to be laid during that plan period on the provision of low cost houses (Kf300 - Kf1200). It was assumed that these houses would be afforded by people earning between KSh.200 and KSh.800 per month.

The most recent documented statement on housing policy may be found in the 1979-1983 Development Plan. It states categorically that "specifically the government aims at:

- i) increasing the stock of housing in the urban areas so as to keep pace with the demand caused by urban population growth;
- ii) meeting the housing shortfall that already exists in major urban areas;
- iii) ensuring that the houses produced benefit in particular those families in the lowest income groups whose need for shelter is greatest; and
- iv) maintaining a healthy and safe urban environment, free from danger of epidemics and fire (Republic of Kenya, 1979a p. 172).

A housing policy, or any policy, that is not spelt out in specific plans and programs tends to become just empty phrases of good intentions. One central policy currently espoused by the government is that it intends to encourage urban home ownership and discourage rental schemes. This could be a positive method of ensuring stability in and commitment to urban life among the urbanites, given the fact that most of them still consider the rural areas of birth as "home". However, whereas middle and high income people may have the resources, through incomes and loans, to enable them own urban houses either through Tenant Purchase or Mortgage Schemes, it is not clear how the urban poor were expected to own homes, assuming that they wanted to.

It is government belief that site and service schemes are one 'proven' method of reaching the majority of all low-income urban families. Thus it is the policy and program of action for housing low income urbanites. The essence of this scheme is the pooling together of the government's limited funds by providing infrastructural services and a small materials loan, together with the participants' resources in terms of finance and family labour. Under this scheme, low income is defined as Ksh.300 to Ksh.1200 per month. The government, through the National Housing Corporation, spends KE350 in servicing

plots and allocating them to the applicants who qualify certain conditions of income, age, property ownership etc. (National Housing Corporation, 1977/78). The allottees are then given materials loan worth K£350 to put up a minimum of two habitable rooms together with a core (one room, toilet, kitchen and bathroom). They are not allowed to sell their property within a period of five years from the date of allocation in order to prevent the plots from going to the rich people. The National Housing Corporation provides technical supervisors to guide the allottees during the construction period.

The government also encourages the infusion of private capital into the housing market.

In summary, therefore, the housing market in Kenya which is naturally a product of the wider socio-economic and political system, exposes the low income people and the urban poor to exploitation since the market is controlled by and operated for the benefit of the higher classes.

CHAPTER THREE

THE METHODOLOGY AND ANALYSIS

This chapter is very crucial as all the inferences and conclusions that will be made in this study depend on the methods of data collection and data analysis applied. The chapter is divided into four major sections. The first section deals with the definitions of the key terms as they are used in this study. This is followed by the description of the data and the appropriate methods required for the analysis of each hypothesis. The third section discusses the methods used in acquiring data for this study. The chapter ends with the presentation of the calculations performed in order to test the hypotheses. The results of these computations are summarized in the form of tables, reserving their full interpretations for the subsequent chapters.

3.1 OPERATIONAL DEFINITIONS

Household: The concept of a 'household' is based on the arrangements made by persons individually or in groups for providing themselves with food or other essentials for living. A household may have a distinct head or it may consist of two or more people who have decided to live together as equal partners under one roof in order

to minimize their living costs. Therefore, there may be:

- i) a one-person household
- ii) a multi-person (or a multi-family) household, related or otherwise.

It is also possible to have many households living in one dwelling unit.

Overcrowding: This phenomenon occurs when more people than the maximum number required by law stay in a dwelling unit. In Kenya, the maximum occupancy rate for a two-bedroomed house is five persons (Republic of Kenya, 1974). In this study, overcrowding will be examined at two levels: individual and demographic overcrowding. Individual overcrowding occurs where more than five people stay in a two-bedroomed house, whereas demographic overcrowding occurs where two or more households share a dwelling unit intended for one household (Block, 1946).

Housing Demand: Housing demand is the desire for a dwelling unit supported by the economic ability to satisfy that desire. It is the effective demand as used by the economists and should be distinguished from 'need' which does not take the ability to pay into account. The housing need is the number of conventional dwelling units that needs to be constructed or improved at a particular point

in time in order to eradicate homelessness, the occupation of shacks and overcrowding. It is based on the laws of morality and social justice.

Households that have the economic ability but do not wish to spend it on improved housing do not represent effective demand.

Housing Supply: This is the provision of dwelling units over a period of time. The supply at any particular point in time may include the already existing stock of houses that falls vacant and the ones that are constructed as a response to demand. In a 'free market' effective demand would determine the supply and the interaction of the two together would determine price or the rent.

Housing Policy: The housing policy may be seen as the philosophy and methodology of housing supply. Usually a policy is an official guideline for any aspect of development. In this study, a distinction is made between macro-level policies, i.e. the overall policies of the state that manifest themselves in various facets of society, and the micro-level housing policy which is dependent on the first but only guides the location and provision of housing. The distinction is made only for analytical purposes because the two are actually intertwined.

Stated Locational Preferences: These are the cognitive choices of residential areas where individuals prefer to live as revealed by their overt (stated) ranking of a set of residential districts from the most to the least preferred. This method of eliciting information on preference presumes that the respondent can accurately and reliably report his preference ranking of a set of alternatives. It is distinct from 'revealed preference' which is inferred from the actual choice made rather than from cognitive rankings, that is, where a person actually lives is taken as his revealed preference (Ewing and Kulka, 1976).

3.2 THE ANALYTICAL METHODS

1. The Housing Market

Where communication systems, particularly the mass media, are not fully developed, the diffusion of information will be scanty and may benefit only those few with access to it. With regard to the housing market, the implication is that when people have not read or heard about the existence of vacant housing units they would normally assume that all the available houses are occupied. In short, lack of information on the supply of housing would create an artificial housing shortage thus raising rents. Furthermore, lack of information exposes the urban

resident to problems of choice; if a person does not know all the alternatives available to him, he may end up living in a low grade housing estate when he can afford a more decent house elsewhere.

The first hypothesis tests the extent to which information diffusion on housing availability is developed in the town and whether there are areal differentiations in the information flow.

Data were collected on the sources of information on house availability both for the first residence and for the residence where the respondent was staying at the time of the research. The information sources were dichotomized as follows:

- a) Formal Sources:
 - i) Mass media (T.V., radio, newspaper)
 - ii) Estate agents
 - iii) On the spot advertisements
- b) Informal Sources:
 - i) Family members and relatives
 - ii) Friends
 - iii) Others

First, it will be tested whether there is any significant difference between the formal and the informal sources of information on the availability of the housing stock.

Different temporal resolutions will be tested separately, i.e. sources of information on the first and current residences will be tested separately. A chi square statistic given by the following formula will be calculated for each

temporal resolution.

$$X^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where,

r = the number of categories (In this case, there are two categories: formal and informal sources).

k = the number of samples (In this case they are three: low, medium and high rent strata)

O_{ij} = the observed frequency in the i^{th} category of the j^{th} sample

E_{ij} = the expected frequency in the i^{th} category of the j^{th} sample

The degrees of freedom are given by $(r-1)(k-1)$

In order to compute the chi square statistic the data will be presented in a 2 x 3 matrix and the appropriate expected values calculated for each cell of the matrix.

After it has been established that the difference between the formal and the informal sources of information is not due to chance, areal variations in these information sources will then be tested. A difference of proportions test is considered appropriate here because it is restricted to two samples and also to a dichotomised variable, two conditions which apply to our data.

The test involves the calculation of a χ^2 - score (Blalock, 1972 p. 230):

$$z = \frac{(p_i - p_j) - \phi}{\left[\left(\frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \left(1 - \frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \right]^{\frac{1}{2}} \left(\frac{n_i + n_j}{n_i n_j} \right)^{\frac{1}{2}}}$$

where,

p_i = the proportion of the i^{th} sample that exhibits the variable under study.

p_j = the proportion of the j^{th} sample that exhibits the variable under study.

n_i = the size of the i^{th} sample.

n_j = the size of the j^{th} sample.

The proportions are calculated as follows: The total number of respondents in each stratum is determined. Then the total number of respondents in each stratum who received information through formal sources are separated from the number who received it through informal sources. The number of respondents in each category (i.e. whether formal or informal) is then expressed as a proportion of all the respondents in that particular stratum. Both proportions must add to unity as this is a dichotomized variable. Two strata are then compared in turns on the basis of each category of information. The computed value of Z is then compared with the critical Z value at the 95% confidence level to enable us accept or reject the research hypothesis.

2. The Problem of Overcrowding

The two forms of overcrowding, individual and

demographic, will be analysed separately.

Individual Overcrowding: The test is to determine whether the mean number of people per room in the sampled estates is significantly different in the three residential strata. Data were collected on the number of rooms in each dwelling unit and the total number of people living in each dwelling unit. Then the mean number of people per room was calculated for each of the three strata.

The difference of means test given by the formula below will be used to test the hypothesis that individual overcrowding is a more serious problem in the low rent areas than in the other two strata (Freund, 1973).

$$Z = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S_i^2}{n_i} + \frac{S_j^2}{n_j} \right]^{\frac{1}{2}}}$$

where,

\bar{X}_i = the mean number of people per room in the low rent stratum

\bar{X}_j = the mean number of people per room in the medium or high rent stratum

S_i^2 = the sample variance of x_i

S_j^2 = the sample variance of x_j

n_i = the number of observations in the low rent stratum

n_j = the number of observations in either the medium or high rent stratum.

The computed value of Z is then compared with the critical Z value at the 95% confidence level to enable us reject or accept the research hypothesis.

Demographic Overcrowding: The test will be to determine whether the sharing of residential units varies among the three residential strata.

The data required here are the number of households that are sharing a dwelling unit intended for one household. The frequency of households exhibiting this phenomenon is then kept for each of the three residential strata. A difference of proportions test (Blalock, 1972) which has the following expression will be applied.

$$Z = \frac{(p_i - p_j) - \phi}{\left[\left(\frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \left(1 - \frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \right]^{\frac{1}{2}} \left(\frac{n_i + n_j}{n_i n_j} \right)^{\frac{1}{2}}}$$

where,

p_i = the proportion of the i^{th} sample experiencing demographic overcrowding

p_j = the proportion of the j^{th} sample experiencing demographic overcrowding

n_i = the size of the i^{th} sample

n_j = the size of the j^{th} sample.

The comparison will be done for the three pairs, namely, low rent versus high rent, low rent versus medium rent, and medium rent versus high rent. The computed Z values will be compared with the critical Z value at the 95% confidence level.

3. The Determinants of residential desirability

There is a general consensus in the Behavioural Sciences that spatial behaviour implies a search among alternatives and that ultimate choice is relative rather than absolute. This implies that before any final choice is made either a paired comparison on some pre-determined attribute(s) takes place in the respondent's mind or the respondent compares each of the choices with all the others simultaneously. In this study, twenty seven residential districts in Kisumu were presented to the respondents simultaneously and they were asked to rank them from the most to the least preferred on an aggregate attribute called 'attractiveness' which summarized all the physical and social characteristics of these districts.

It was hypothesised that despite income differences, the respondents perceive the factors influencing residential desirability in the same way. Therefore, the aggregate ranking patterns of the various income groups would be similar.

The data required for testing this hypothesis are:

- i) The ranks of the residential districts from the most to the least preferred.
- ii) The physical and social characteristics of each residential district in terms of:

- a) The mean number of rooms per dwelling unit
- b) The construction materials of the houses: whether permanent, semi-permanent or temporary
- c) The frequency of refuse collection
- d) The popularity of each district based on the number of people who resided there when they first came to Kisumu
- e) The distance to major employment centres
- f) Whether the houses are municipal or non-municipal
- g) The crime rate in each residential district.

In analysing this hypothesis, 'Thurstone's Law of Comparative Judgment Case V' will be applied (Thurstone, 1927). Thurstonian Law Case V is a model that estimates scale values from sample preference proportions. It permits the construction of a unidimensional interval scale using responses from variability data collection procedures such as paired comparisons. The interval scale is important in that it helps to infer the scale distance between two stimuli.

The procedure in the Thurstonian analysis is as follows:

- 1) The total number of times that each residential district is preferred to each of the other twenty six is calculated.
- 2) A matrix of sample proportions is generated based on the formula

$$P_{jk} = C_{jk} / [C_{jk} + C_{kj}]$$

where,

P_{jk} = the proportional number of times j is preferred to k

C_{jk} = the total number of times j is preferred to k

C_{kj} = the total number of times k is preferred to j

$[C_{jk} + C_{kj}]$ = the total number of times that the two stimuli are compared

This matrix must be square; and in our case, it is a 27 x 27 matrix because there are 27 residential districts to rank. The columns dominate the rows and so the cell entry $p(1,2)$ is the proportional number of times that the second district is preferred to the first. The leading diagonals are empty because any entries there would imply the proportional number of times a district is preferred over itself which is absurd. The maximum perceived similarity between any two districts would have the value of 0.5. Any departure from this value in either direction represents an increase in the perceived dissimilarity between the districts in question. A measure of perceived dissimilarity, d_{jk} , is therefore

$$d_{jk} = P_{jk} - 0.5$$

So if $P_{jk} = 0.5$, $d_{jk} = \emptyset$ showing no dissimilarity.

3) From the matrix of sample proportions, a matrix of Z -score values appropriate for each proportion is

either generated by a computer or looked up in a table of normal distribution. If $P_{jk} < 0.5$ the Z - value is negative but if $P_{jk} > 0.5$ the Z - value is positive.

- 4) The column totals of the Z - values are computed and the scale values obtained from the Column Sums by taking a simple average of each column's Z -values. This scale value expresses residential district x as a deviation from the mean of all 27 scale values (corresponding to the 27 residential districts). Under this procedure the mean of the 27 scale values will always be zero.
- 5) The reference point of zero is determined. This is normally arbitrarily fixed. It is logical to make the least preferred district have a scale value of zero and then fix all the other districts on a single line based on their relative positions to the least preferred district. From this linear scale it can be determined by how much one district is preferred to another on this aggregate attribute.

One advantage of the Thurstonian Law Case V is that from the scale values, we can work backwards to approximate how well the model fits the original proportions data. For example, if district X had a scale value of 0.61 and

district Y had a scale value of 1.48, from that information we can predict the proportion of respondents preferring district X to district Y. First, the scale difference is obtained ($0.61 - 1.48 = -0.87$). From the table of inverse normal distribution, the proportion of the area under the standard normal curve corresponding to a z value of -0.87 which is 0.19 is looked up. How close the predicted proportion is to the observed proportion may be determined by the use of the chi-squared test to estimate the goodness of fit.

The formula is

$$X^2 = \sum \frac{(\theta''_{jk} - \theta'_{jk})^2}{821/n}$$

where,

$\theta'_{jk} = \text{arc Sin}\sqrt{P_{jk}}$; P_{jk} = the observed proportion

$\theta''_{jk} = \text{arc Sin}\sqrt{p'_{jk}}$; p'_{jk} = the predicted proportion

n = the number of people making comparisons,
and 821 is given.

The degrees of freedom = $(k-1)(k-2)/2$;

where,

k = the number of residential districts.

The computed value of X^2 will be compared with the critical X^2 value at the 95% confidence level, and a decision reached as to whether the model fitted the data well.

A computer package, Generalized Linear Interactive

Modelling (GLIM), is to be used to estimate the relative importance of the physical and social factors that could have been used by the respondents to differentiate between the attractiveness of each of the residential districts. GLIM is appropriate here because it can take dummy variables and some of the independent variables used in this analysis are not measured on the interval scale.

The relationship between the scale values for each residential district and the independent variables may be given as:

$$Y = f (X_1 b_1 + X_2 b_2 + \dots + X_7 b_7)$$

where,

Y = the scale value for each district generated by the Thurstonian model

$X_1 \dots X_7$ = the physical and social factors influencing residential attractiveness

$b_1 \dots b_7$ = the regression coefficients

Each of the seven factors will be introduced into the model separately in order to determine its relative importance in the whole relationship.

4. Incomes and Rents

It is hypothesized that the structure of the solutions offered for the housing problems is incompatible with the economic capability of the majority of the urban

residents.

The data required for the analysis of this hypothesis are:

- i) The rents paid by each household per month
- ii) The monthly incomes of the respondents
- iii) The conditions to be fulfilled before one is eligible for site and service schemes
- iv) The government claims that urban residents spend between 15% and 20% of their incomes on rent (Republic of Kenya, 1979a). Therefore, 15%, 20% and 17.5% (which is the median of this range) of respondents' incomes are required for comparison with actual rents.

This hypothesis has been split into two major components:

- a) The comparison of the percentage of income spent by different income groups on housing. The test for any significant differences in the percentage of income spent on rent by various income groups is done by the difference of means test whose expression is given below

$$z = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S_i^2}{n_i} + \frac{S_j^2}{n_j} \right]^{\frac{1}{2}}}$$

where,

\bar{X}_i = the mean percentage of income spent by the i^{th} group on housing

- \bar{X}_j = the mean percentage of income spent by the j^{th} income group on housing
 S^2_i = the sample variance of x_i
 S^2_j = the sample variance of x_j
 n_i = the number of cases in the i^{th} income group
 n_j = the number of cases in the j^{th} income group

The computations involved are:

- i) The proportion of income each respondent spends on housing is computed
- ii) The means of those percentages are computed for each of the four income groups

The means of the percentages for all the four income groups are then compared with each other for any significant differences.

- b) The comparison of the actual rents paid by different income groups with 15%, 17.5% and 20% of their incomes. The aim of the analysis is to ascertain whether the Kenya Government is justified in claiming that urban residents spend between 15% and 20% of their incomes on housing.

Again, the difference of means test will be applied

$$\# = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S^2_i}{n_i} + \frac{S^2_j}{n_j} \right]^{\frac{1}{2}}}$$

No need to
 calculate

where,

\bar{X}_i = the mean of the actual rents paid by the i^{th} income group

\bar{X}_j = the mean of 15%, 17.5% or 20% of the incomes of the same group

S^2_i = the sample variance of x_i

S^2_j = the variance of x_j

$n_i = n_j$ = the number of observations in that income group.

The analysis will be done for each income group in order to find out which of them approximates the official government statement.

3.3 DATA COLLECTION

3.3.1 Sampling Techniques

Sampling is inevitable in research due to the constraints of time and resources that researchers always encounter. However, for a sample to be useful and meaningful it must be a fair representative of the population from which it is drawn such that its statistics provide adequate knowledge for making inferences about the corresponding population parameters. In this study, the universe or population is all the households residing in 'free-market' residential estates within the old boundary of Kisumu municipality and the former peri-urban areas at the

time of research (Fig 3.1). It would have been impossible to interview all the households during the research which was conducted between January and May 1982. Residential estates were therefore delimited as the units of observation. Since there are twenty seven major 'free market' residential areas or estates, the inclusion of all of them would have resulted in a mere general survey of the whole town instead of a more intensive coverage. Consequently, the technique of stratified systematic sampling was employed because it reduces the unrepresentativeness of a sample and it also reduces the sampling error.

To facilitate data collection and consequent analysis, the residential districts were stratified into three broad categories or strata based on the median rents per month. They fell under:

- i) The low rents areas (below Ksh.300 per month):
Kaloleni, Nyalenda, Manyatta, Nyawita, Obunga, Bandani, Pandpieri, Arab Manyatta and Nairobi Area or Migosi.
- ii) The medium rent areas (Ksh.300 - Ksh.700 per month):
Ondiek, Makasembo, Arina, Nubian, Ofafa, Kibuye, Shauri Moyo, Lumumba, USAID Scheme, Patel Flats and Pembe Tatu.
- iii) The high rent areas (over Ksh. 700 per month):
Milimani, Tom Mboya, Kodhek Flats, Mosque, Shauri Yako, Okore and Town Centre.

- | | |
|---------------|--------------------|
| 1. ARINA | 15. SHAUPIYAKO |
| 2. KIBUYE | 16. BANDANI |
| 3. PATEL | 17. MIGOSI |
| 4. MILIMANI | 18. LUMUMBA |
| 5. MBOYA | 19. ORUNGA |
| 6. NYAWITA | 20. OFAFA |
| 7. NYALENDA | 21. SITE & SERVICE |
| 8. KALOLENI | 22. MAKASEMBO |
| 9. PANDIPIRI | 23. MANYATTA |
| 10. SHALIMUYO | 24. KODIEK |
| 11. ONDIEK | 25. OKORE |
| 12. NUBIAN | 26. TOWN CENTRE |
| 13. MOSQUE | 27. USAID |
| 14. PEMBETATU | |

0 ———— 1
KM



FIG.3.1. Major Residential Districts in Kisumu Town

After the stratification of the 'free-market' estates, there were two options for drawing the sample: either to sample the estates in each stratum first and then use the same sampling fraction across the three strata, or to sample the estates in each stratum and then use different sampling fractions for sampling the households. The latter option seemed a better choice on grounds that some estates are very overcrowded and much internal variability may exist, thus warranting a more intensive coverage than others.

Therefore the names of the estates in each stratum were written on pieces of paper and put into a small box from which they were drawn randomly without replacement. Some estates with few residential structures were put together as a single district; thus we have Arab Manyatta - Kaloleni treated as a single unit. The number of structures in each residential district provided a clue to the number of respondents to be interviewed. The residential districts from which the research data were collected are Nyalenda, Nairobi Area, and Kaloleni-Manyatta Arab for the low rent areas; Makasembo, USAID Scheme, Arina and Kibuye - Patel Flats for the medium rent areas; and the high rent areas of Milimani, Tom Mboya, Okore and Kodhek - Mosque.

In the low rent areas, 55 dwelling structures per

estate were to be covered whereas in the medium and high rent areas the corresponding figures were 40 and 30 respectively. This information is summarized in Table 3.1.

TABLE 3.1: THE PLANNED AND THE ACTUAL NUMBER OF RESPONDENTS INTERVIEWED PER STRATUM

S T R A T A	PLANNED	ACTUAL
1. Low Rent Areas	165	152
2. Medium Rent Areas	160	150
3. High Rent Areas	120	106
T O T A L	445	408

It must be noted that the site and service housing scheme which under official circumstances would have been included under the low rent areas has been omitted in most calculations because it does not, according to the operational definition of low rent areas, belong there. It is consequently used for demonstrating the disparity between the official housing policy and what actually transpires in practice. The outcome may suggest why some of the housing programmes 'officially' intended for the low income people have never achieved their objectives. A diagrammatic representation of the sampling technique is illustrated in Figure 3.2.

3.3.2 Data Sources

The sources of data were mainly two:

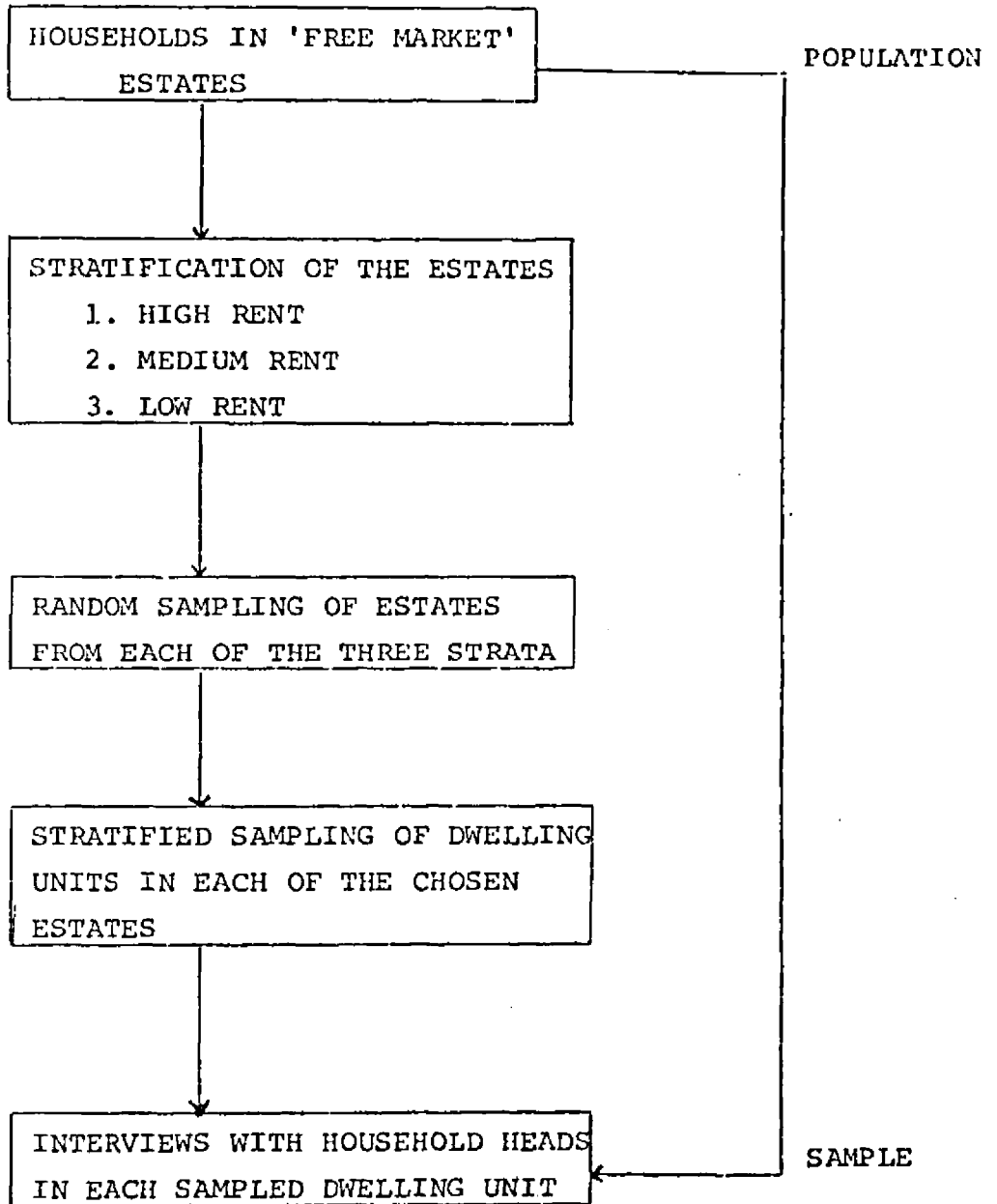


FIG. 3.2: The relationship between the population, the sample and the sampling technique.

1. Primary Sources:

Primary data were collected with the aid of a recording schedule, administered both by two research assistants and the principal investigator (Appendix A). In the residential areas where the houses had street addresses or were simply numbered and where people were capable of completing the questionnaire on their own, the questionnaire was sometimes left with the household head to study and fill in. The interviewers later returned to check the answers with the respondent.

In other estates where the majority of the residents were semi-illiterate and the houses built haphazardly the interviewers had to translate the questionnaire into Kiswahili, elicit and record the answers themselves. The personal contact type of interview was preferred over others because of the nature of the study. Respondents in Third World cities normally do not admit that they use their houses for other 'illicit' or 'informal' economic activities understandably for fear of police harassment. Such activities, whenever they are carried out, can sometimes be noticed by the interviewer despite denials by the respondents. Furthermore, personal contact helps the interviewer in probing the respondent to give correct answers, and it also gives the respondent the chance to ask questions about points that are not clear to him.

In short, the method ensures the reliability of the results received.

There were also interviews with heads of departments concerned with general physical and economic planning and those concerned with the provision of housing (See the appendices B, C, and D for copies of the questionnaires).

These included:

- i) The Director, Housing Development Department of the Kisumu municipality
- ii) The Provincial Physical Planning Officer, Nyanza Province
- iii) The Town Planner, Municipality of Kisumu
- iv) The Acting Director of Housing and Social Services, Municipality of Kisumu
- v) The Senior Assistant Programming Officer, National Housing Corporation, Nairobi.

During the period of the research, personal observations were made about the town which may be difficult to obtain formally; for example, that some residents of Patel Flats were being served with quit notices to give room for the Kenya Breweries personnel who were willing to pay higher rents.

2. Secondary Sources:

These covered library work in both published and unpublished works.

Data were also gathered from official records of the town like the Annual Reports, the annual reports of the National Housing Corporation, and some old accounts at the Kenya National Archives in Nairobi. Much of the secondary data have been reviewed in the section dealing with the literature review.

3.4 DATA ANALYSIS

The First Hypothesis:

The information sources on the availability of the vacant housing units were collected both for the first residence and for the residence where the respondent was staying at the time of the research. The information sources were dichotomized into formal and informal categories and their incidents by estates are summarized in Table 3.2.

TABLE 3.2: SOURCES OF INFORMATION BY TYPE, PERIOD OF RESIDENCE AND ESTATE

E S T A T E	FIRST RESIDENCE				CURRENT RESIDENCE			
	FORMAL SOURCE		INFORMAL SOURCE		FORMAL SOURCE		INFORMAL SOURCE	
	N	%	N	%	N	%	N	%
Okore	9	36.0	16	64.0	12	48.0	13	52.0
Milimani	15	50.0	15	50.0	13	43.3	17	56.7
Mosque- Kodhek	18	69.2	8	30.8	18	69.2	8	30.8
Mboya	18	72.0	7	28.0	14	56.0	11	44.0
Makasembo	20	58.8	14	41.2	21	61.8	13	38.2
USAID Scheme	8	20.0	32	80.0	9	36.0	31	64.0
Arina	21	52.5	19	47.5	28	70.0	12	30.0
Patel- Kibuye	29	82.9	6	17.1	24	68.6	11	31.4
Nyalenda	0	0.0	49	100.0	0	0.0	49	100.0
Nairobi Area	2	3.6	53	96.4	3	5.5	52	94.5
Kaloleni- Arab	6	12.8	41	87.2	1	2.1	46	97.9
Site and Service	4	7.7	48	92.3	4	7.7	48	92.3

To facilitate the analysis, the information was aggregated to the level of three distinct strata as shown in Table 3.3.

TABLE 3.3: THE FREQUENCY OF INFORMATION SOURCES BY STRATA

INFORMATION SOURCE	FIRST RESIDENCE			CURRENT RESIDENCE		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
Formal	60	78	8	57	82	4
Informal	46	71	143	49	67	147
TOTAL	106	149	151	106	149	151

As already stated earlier, the first analysis is to determine whether the formal and the informal sources of information differ significantly in their incidents. Before computing the chi square statistic, the expected frequencies were computed for both the first and the current residences as shown in Table 3.4a and Table 3.4b

TABLE 3.4a: THE OBSERVED AND EXPECTED (IN BRACKETS) FREQUENCIES OF INFORMATION SOURCES ON THE FIRST RESIDENCE

INFORMATION TYPE \ RESIDENTIAL STRATA	HIGH	MEDIUM	LOW	TOTAL
	FORMAL	60 (38)	78 (54)	8 (54)
INFORMAL	46 (68)	71 (95)	143 (97)	260
TOTAL	106	149	151	406

TABLE 3.4b: THE OBSERVED AND EXPECTED (IN BRACKETS) FREQUENCIES OF INFORMATION SOURCES ON THE CURRENT RESIDENCE

RESIDENTIAL STRATA INFORMATION TYPE	HIGH	MEDIUM	LOW	TOTAL
	FORMAL	57 (37)	82 (53)	4 (53)
INFORMAL	49 (69)	67 (96)	147 (98)	263
TOTAL	106	149	151	406

The chi square statistic was computed, using the formula below, for each of the temporal resolutions. It is a two-tailed test.

$$X^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where,

r = the number of categories (formal/informal)

k = the number of samples (the three strata)

O_{ij} = the observed frequency in the i^{th} category of the j^{th} sample

E_{ij} = the expected frequency in the i^{th} category of the j^{th} sample

The degrees of freedom = $(r - 1) (k - 1)$

The figures substituted in the formula for the current residence are:

$$\begin{aligned}
 x^2 &= \frac{(57 - 37)^2}{37} + \frac{(49-69)^2}{69} + \frac{(82 - 53)^2}{53} + \frac{(67-96)^2}{96} \\
 &\quad + \frac{(4 - 53)^2}{53} + \frac{(147-98)^2}{98} \\
 &= 10.8 + 5.8 + 15.9 + 8.8 + 45.3 + 24.5 = 111.10
 \end{aligned}$$

The chi square values of 98.66 and 111.10 were obtained for the first and the current residences respectively. The inference is that the difference between the frequencies of the formal and the informal sources of information is so large that it cannot be attributed to chance.

The above positive result then led to the examination as to whether a particular category of information source was dominant in specific strata. Data for both the first and the current residences were organized in the form of frequencies and percentages as shown in Table 3.5.

TABLE 3.5: THE STRATIFIED FREQUENCIES AND PERCENTAGES OF INFORMATION SOURCES.

STRATA	FIRST RESIDENCE				CURRENT RESIDENCE			
	FORMAL		INFORMAL		FORMAL		INFORMAL	
	FREQUENCY	%	FREQUENCY	%	FREQUENCY	%	FREQUENCY	%
HIGH	60	56.6	46	43.4	57	53.8	49	46.2
MEDIUM	78	52.3	71	47.7	82	55.0	67	45.0
LOW	8	5.3	143	94.7	4	2.6	147	97.4

It is Table 3.5 which formed the basis for further analysis.

It was to be tested whether the percentages of the respondents who obtained information on the availability of housing units through either the formal or informal sources varied significantly among the three residential strata. A one-tailed test for a difference of proportions whose expression is given below was used to analyse the hypothesis.

$$z = \frac{(p_i - p_j) - \emptyset}{\left[\left(\frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \left(1 - \frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \right]^{\frac{1}{2}} \left(\frac{n_i + n_j}{n_i n_j} \right)^{\frac{1}{2}}}$$

The figures substituted in the formula when the sources of information obtained in the formal way were compared between high and low rent areas are:

$$z = \frac{(0.57 - 0.05) - \emptyset}{\left[\left(\frac{0.57(106) + 0.05(151)}{106 + 151} \right) \left(1 - \frac{0.57(106) + 0.05(151)}{106 + 151} \right) \right]^{\frac{1}{2}} \left(\frac{106 + 151}{106(151)} \right)^{\frac{1}{2}}}$$

= 9.30

The analysis was done both for the first and the current residence because there was a need to investigate whether there were areal and temporal variations. The results of the analysis are summarized in Table 3.6a and 3.6b.

TABLE 3.6a: THE RESULTS OF THE ANALYSIS OF THE FORMAL SOURCES OF INFORMATION ON THE FIRST AND CURRENT RESIDENCE

S T R A T A	FIRST RESIDENCE				z	CURRENT RESIDENCE					
	pi	pj	ni	nj		STRATA	pi	pj	ni	nj	
High-Low	0.57	0.05	106	151	9.30	M-Low	0.55	0.03	149	151	9.19
High-Medium	0.57	0.52	106	149	0.79	M-High	0.55	0.54	149	106	0.16
Medium-Low	0.52	0.05	149	151	9.03	H-Low	0.54	0.03	106	151	9.42

TABLE 3.6b: THE RESULTS OF THE ANALYSIS OF THE INFORMAL SOURCES OF INFORMATION ON THE FIRST AND CURRENT RESIDENCE

FIRST RESIDENCE						CURRENT RESIDENCE					
STRATA	p_i	p_j	n_i	n_j	\bar{z}	STRATA	p_i	p_j	n_i	n_j	\bar{z}
Low-High	0.95	0.43	151	106	9.30	L-High	0.97	0.46	151	106	9.42
Low-Medium	0.95	0.48	151	149	9.03	L-Med.	0.97	0.45	151	149	9.94
Medium-Low	0.48	0.43	149	106	0.79	H-Med.	0.46	0.45	106	149	0.16

The \bar{z} -values in Table 3.6a and 3.6b show that significant differences exist between the proportions at the 95% confidence level except when the high and the medium strata are compared. What may be inferred is that information sources on vacant houses are skewed, with the formal sources favouring the high and medium rent areas whereas the informal sources are predominant in the low rent areas. Therefore, the alternative hypothesis that the informal sources are over-represented in the low rent areas whereas the formal sources are a preserve of the residents of the medium and high rent areas may be accepted with 95% confidence. However, a fuller interpretation of the results of this hypothesis will be given in the first section of the next chapter dealing with the political economy of the housing market.

The Second Hypothesis

The problem of overcrowding was divided into

individual and demographic types, each of which was analysed using a separate analytical tool. Table 3.7 summarizes overcrowding according to estates.

TABLE 3.7: THE FREQUENCY OF OVERCROWDING ACCORDING TO ESTATES

E S T A T E S	INDIVIDUAL OVERCROWDING		DEMOGRAPHIC OVERCROWDING	
	FREQUENCY	%	FREQUENCY	%
Okore	3	12.00	0	0.00
Milimani	3	10.00	1	3.33
Mosque-Kodhek	3	11.54	1	3.85
Mboya	5	20.00	1	4.00
Makasembo	27	77.14	7	20.00
USAID Scheme	20	50.00	1	2.50
Arina	25	62.50	4	10.00
Kibuye-Patel	11	31.43	6	17.14
Nyalenda	29	58.00	0	0.00
Nairobi Area	22	40.00	2	3.64
Kaloleni - Arab	34	72.34	6	12.77
Site and Service	18	34.62	2	3.85

Individual Overcrowding

It was hypothesized that the mean number of people per room was significantly higher in the low rent stratum than in the other two strata.

The result was that there were 2.62 people per room in the low rent areas, 1.99 in the medium rent areas and 1.50 in the high rent areas.

The test for the difference of means whose expression is given below was then applied to test the hypothesis.

$$z = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S_i^2}{n_i} + \frac{S_j^2}{n_j} \right]^{\frac{1}{2}}}$$

where,

\bar{X}_i = the mean number of people per room in the i^{th} sample

\bar{X}_j = the mean number of people per room in the j^{th} sample

S_i^2 = the sample variance of X_i

S_j^2 = the sample variance of X_j

n_i = the size of the i^{th} sample

n_j = the size of the j^{th} sample

The outcome of the analysis is summarized in Table 3.8

TABLE 3.8: THE RESULTS OF THE ANALYSIS OF INDIVIDUAL OVERCROWDING

RENT CATEGORY	\bar{X}_i	\bar{X}_j	S_i^2	S_j^2	n_i	n_j	z-value
Low vs High	2.62	1.50	2.99	0.52	151	106	7.15
Low vs Medium	2.62	1.99	2.99	1.06	151	149	3.85
Medium vs High	1.99	1.50	1.06	0.52	149	106	2.99

According to Table 3.8 it can be asserted with 95% confidence that the mean number of people per room is significantly different among the three residential strata. The inference is that the low rent areas with z-values of 7.15 and 3.85 when compared with the high and medium

rent areas respectively show higher cases of individual overcrowding than the medium and high rent areas.

Demographic Overcrowding:

The sharing of residential units by different households was also tested for any spatial variation as it had been hypothesised that demographic overcrowding is more prevalent in the medium rent areas than in the other two strata.

A difference of proportions test whose formula is given below was applied to analyse this type of overcrowding.

$$z = \frac{(p_i - p_j) - \phi}{\left[\left(\frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \left(1 - \frac{n_i p_i + n_j p_j}{n_i + n_j} \right) \right]^{\frac{1}{2}} \left(\frac{n_i + n_j}{n_i n_j} \right)^{\frac{1}{2}}}$$

where,

p_i = the proportion of the i^{th} sample experiencing demographic overcrowding

p_j = the proportion of the j^{th} sample experiencing demographic overcrowding

n_i = the size of the i^{th} sample

n_j = the size of the j^{th} sample.

The comparison was done for the three pairs of residential strata and the results are summarized in Table 3.9.

TABLE 3.9: THE RESULTS OF THE ANALYSIS OF DEMOGRAPHIC OVERCROWDING

RENT CATEGORY	p_i	p_j	n_i	n_j	z -Value
Medium - Low	0.12	0.05	150	152	2.18
Medium - High	0.12	0.03	150	106	2.57
Low - High	0.05	0.03	152	106	0.79

With reference to the z - values obtained and recorded in Table 3.9, it can be stated with 95% confidence that the proportion of the households sharing dwelling units in the medium rent estates is significantly higher than the proportions in the low and high rent estates. The research hypothesis is therefore confirmed and accepted, and the inference is that demographic overcrowding is more prevalent in the medium rent areas than in the low and high rent areas. A fuller interpretation of these findings on overcrowding will be given in the first section of Chapter Five dealing with the causes and implications of overcrowding.

The Third Hypothesis

It was hypothesized that the factors which influence residential desirability are similar among different income groups as shown by their preference patterns.

A computer program was applied to Thurstone's Law of Comparative Judgment to generate matrices of proportions showing the proportional number of times that each residential district was ranked higher than each of all the others (See Appendix E).

The matrix of proportions representing the rankings by all the respondents was then used to test how well the model fitted our data. The goodness of fit is tested by calculating a chi square statistic using the formula below

$$X^2 = \sum \frac{(\theta''_{jk} - \theta'_{jk})^2}{821/\eta}$$

where,

θ'_{jk} = the arc $\text{Sin}\sqrt{p_{jk}}$; p_{jk} = the observed proportion

θ''_{jk} = the arc $\text{Sin}\sqrt{p'_{jk}}$; p'_{jk} = the expected proportion

η = the number of people making the comparisons, and 821 is given.

The degrees of freedom = $(k-1)(k-2)/2$

where,

k = the number of residential districts.

The figures that were used in testing the goodness of fit are given in the Appendices F, G and H.

With the degrees of freedom of 325, the critical chi square value of 360 ($\alpha = 0.05$) is greater than the computed value of $X^2 = 275$. Therefore, the model fitted our data well.

Having established the existence of a goodness of fit, the matrices of proportions were used to obtain the scale values for each residential district (Tables 3.10 and 3.11).

The scale values were then taken as the dependent variables and used to estimate the relative importance of the factors used by the respondents in differentiating between the desirability of the residential districts. A computer package, Generalised Linear Interactive Modelling (GLIM), was used to fit the factors in a stepwise regression fashion. Not all the factors were statistically significant at the 95% confidence level as the t-values in the stepwise regression function below shows¹

$$Y = -2.076 + 0.3493\text{Room} + 0.9117\text{Cons}(2) + 1.1370\text{Cons}(3) + 0.0152\text{FIRST}$$

(4.8440)	(4.2150)	(3.3255)	(2.9382)
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What the regression equation shows is that the mean number of rooms per dwelling unit in an estate positively influences the ranking of that particular estate by the respondents. The same applies to whether the dwelling units in an estate are constructed of semi-permanent (Cons 2 in the model) or permanent (Cons 3 in the model) materials. The popularity of an estate as measured by the number of respondents who stayed there when they first arrived in the town also has a significant influence on the ranks.

1. The t-values in brackets are compared with the critical value of t at the 0.05 confidence level with degrees of freedom of 19 which is 1.729.

TABLE 3.10: THE SCALE VALUES OF ALL RESIDENTIAL ESTATES
BY RENT CATEGORIES

ALL RESPONDENTS		LOW RENT		MEDIUM RENT		HIGH RENT		
1	Milimani	1.500	Milimani	1.359	Milimani	1.275	Milimani	2.217
2	Mboya	1.270	Mboya	1.167	Mboya	1.201	Mboya	1.765
3	Patel	0.893	Mosque	0.788	Mosque	1.106	Patel	1.085
4	Okore	0.817	Arina	0.731	Okore	0.957	Okore	0.874
5	Mosque	0.792	Kodhek	0.629	Kodhek	0.859	Kodhek	0.779
6	Kodhek	0.742	Patel	0.580	Patel	0.802	Mosque	0.750
7	Arina	0.606	Kibuye	0.491	Town Centre	0.686	Town Centre	0.689
8	Town Centre	0.588	Shauri Yako	0.427	Arina	0.631	Arina	0.622
9	Kibuye	0.474	Okore	0.314	Makasenbo	0.598	Kibuye	0.482
10	Ondiek	0.252	Town Centre	0.063	Kibuye	0.542	Ondiek	0.076
11	Makasenbo	0.228	Ondiek	0.035	Ondiek	0.530	Pembe Tatu	0.070
12	Shauri Yako	0.219	Nyalenda	-0.015	Shauri Yako	0.487	Shauri Yako	0.054
13	Pembe Tatu	0.191	Pembe Tatu	-0.021	Pembe Tatu	0.402	Makasenbo	-0.058
14	Lumumba	0.030	Shauri Moyo	-0.055	Lumumba	0.346	Nubian	-0.114
15	Nubian	-0.005	Makasenbo	-0.059	Nubian	0.150	Shauri Moyo	-0.181
16	Shauri Moyo	-0.135	Lumumba	-0.141	Usaid Scheme	0.001	Lumumba	-0.240
17	Usaid Scheme	-0.165	Site&Service	-0.191	Shauri Moyo	-0.209	Usaid Scheme	0.276
18	Site&Service	-0.297	Nubian	-0.262	Site&Service	0.244	Site&Service	-0.406
19	Nyawita	-0.623	Usaid Scheme	-0.442	Migosi	-0.473	Nyawita	-0.664
20	Ofafa	-0.628	Nyawita	-0.449	Ofafa	-0.507	Ofafa	-0.739
21	Migosi	-0.700	Kaloleni	-0.470	Nyawita	-0.615	Manyatta	-0.754
22	Manyatta	-0.736	Pandpieri	-0.747	Manyatta	-0.774	Pandpieri	-0.807
23	Nyalenda	-0.790	Migosi	-0.795	Nyalenda	-1.002	Nyalenda	-0.872
24	Pandpieri	-0.914	Manyatta	-1.006	Kaloleni	-1.473	Migosi	-0.872
25	Kaloleni	-0.956	Ofafa	-1.188	Bandani	-1.566	Kaloleni	-0.906
26	Bandani	-1.188	Bandani	-1.244	Pandpieri	-1.635	Bandani	-1.166
27	Obunga	-1.465	Obunga	-2.503	Obunga	-2.075	Obunga	-1.406

TABLE 3.11: THE SCALE VALUES OF ALL RESIDENTIAL ESTATES BY INCOME GROUPS

LOWEST		LOWER MIDDLE		UPPER MIDDLE		UPPER	
1 Milimani	1.408	Milimani	1.228	Milimani	2.194	Milimani	2.457
2 Okore	1.254	Mboya	1.140	Mboya	1.545	Mboya	2.199
3 Mosque	1.225	Mosque	0.846	Patel	1.099	Patel	1.247
4 Mboya	1.221	Okore	0.840	Kodhek	0.780	Mosque	1.212
5 Patel	1.007	Arina	0.778	Okore	0.733	Okore	1.131
6 Kodhek	0.980	Kodhek	0.738	Town Centre	0.660	Kodhek	0.843
7 Shauri Moyo	0.908	Patel	0.728	Arina	0.648	Town Centre	0.788
8 Arina	0.817	Kibuye	0.546	Mosque	0.577	Kibuye	0.649
9 Town Centre	0.679	Town Centre	0.529	Kibuye	0.341	Arina	0.546
10 Kibuye	0.663	Makasembo	0.433	Pembe Tatu	0.050	Ondiek	0.269
11 Ondiek	0.264	Ondiek	0.417	Shauri Yako	0.016	Pembe Tatu	0.236
12 Makasembo	0.250	Shauri Yako	0.395	Ondiek	0.006	Shauri Yako	0.168
13 Lumumba	0.249	Pembe Tatu	0.235	Makasembo	0.003	Makasembo	0.015
14 Pembe Tatu	0.188	Lumumba	0.113	Lumumba	-0.142	Nubian	-0.065
15 Nubian	0.104	Nubian	0.048	Nubian	-0.147	Shauri Moyo	-0.076
16 Shauri Moyo	-0.029	Shauri Moyo	-0.117	USAID	-0.222	USAID	-0.098
17 USAID	-0.183	USAID	-0.173	Shauri Moyo	-0.276	Site&Service	-0.276
18 Site&Service	-0.218	Site&Service	-0.275	Site&Service	-0.445	Lumumba	-0.293
19 Nyalenda	-0.497	Ofafa	-0.452	Nyawita	-0.509	Nyalenda	-0.920
20 Ofafa	-0.695	Nyawita	-0.494	Ofafa	-0.675	Manyatta	-0.949
21 Migosi	-0.737	Migosi	-0.569	Pandpieri	-0.729	Ofafa	-1.020
22 Manyatta	-0.907	Manyatta	-0.672	Kaloleni	-0.761	Migosi	-1.026
23 Nyawita	-1.071	Nyalenda	-0.824	Manyatta	-0.774	Pandpieri	-1.050
24 Pandpieri	-1.281	Kaloleni	-1.111	Migosi	-0.852	Nyawita	-1.073
25 Kaloleni	-1.293	Pandpieri	-1.190	Nyalenda	-0.973	Kaloleni	-1.205
26 Bandani	-1.904	Bandani	-1.273	Bandani	-1.063	Bandani	-1.567
27 Obunga	-2.402	Obunga	-1.865	Obunga	-1.083	Obunga	-2.143

The factors that were included in the analysis are:

- i) The average number of rooms per house in the estate
- ii) The construction material : semi-permanent or permanent
- iii) The popularity of the estates
- iv) The frequency of refuse collection
- v) Whether there are municipal or non-municipal houses in the estate
- vi) The distance to major employment centres
- vii) The crime rate in the residential districts.

The last four factors are not significant at the 95% confidence level and therefore are not included in the regression function.

When the scale values (Tables 3.10 and 3.11) are observed, there is a general preference pattern whether the respondents belong to different income groups. The only major constraint could therefore be prohibitive rents.

The question of distance to the major employment centres must be interpreted with caution though it is not significant at the 95% confidence level. This is because the low rent residential areas are located on the periphery of the town, and so the fact that they

score low on a preference scale may have very little to do with their location in relation to employment centres. Furthermore, Kisumu is still a relatively small town and therefore the problem of location with respect to major employment centres may not be acute yet. However, it will become increasingly important as the town expands areally.

The data on the crime rate that were used may not be very reliable because data on other estates were missing and the sub-divisions used (Muga, 1977) do not necessarily correspond to the subdivisions adopted for this study. A fuller interpretation of these findings is given in the second section of Chapter Four.

The Fourth Hypothesis

The general hypothesis is that the conventional houses supplied to the market are beyond the economic reach of the majority of the urban residents. The hypothesis has been split into two major categories: the comparison of the percentage of income spent by various income groups on housing and the comparison of the actual rents paid by various income groups with 15%, 17.5% and 20% of their incomes.

The percentage of incomes spent on rents

The percentage of income spent on rents by the four

income groups is given in Table 3.12.

The means of the proportion of income spent by various income groups on rent were tested for any significant differences as it had been hypothesized that the lower income groups spend greater proportions of their incomes on housing than the higher income groups.

The difference of means test given by the following formula was applied to the data.

TABLE 3.12: THE FREQUENCY OF THE PERCENTAGE OF INCOME SPENT ON RENTS BY INCOME GROUPS

% OF INCOME SPENT ON HOUSING	LOWEST INCOME		LOWER MIDDLE		UPPER MIDDLE		HIGHER INCOME	
	£	%	£	%	£	%	£	%
< 15	70	52.2	58	29.9	35	43.2	12	25.0
15 - 17	18	13.4	34	17.5	5	6.2	12	25.0
18 - 20	10	7.5	20	10.3	13	16.1	6	12.5
21 - 23	4	3.0	27	13.9	11	13.6	1	2.1
24 - 26	9	6.7	20	10.3	7	8.6	6	12.5
27 - 29	5	3.7	12	6.2	3	3.7	5	10.4
30 - 32	3	2.3	10	5.2	1	1.2	3	6.2
33 - 35	4	3.0	5	2.6	0	0.0	1	2.1
> 35	11	8.2	8	4.1	6	7.4	2	4.2
TOTAL	134	100	194	100	81	100	48	100

$$z = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S_i^2}{n_i} + \frac{S_j^2}{n_j} \right]^{\frac{1}{2}}}$$

where,

\bar{X}_i = the mean percentage of income spent by the i^{th} income group on housing

\bar{X}_j = the mean percentage of income spent by the j^{th} income group on housing

S_i^2 = the sample variance of X_i

S_j^2 = the sample variance of X_j

n_i = the size of the i^{th} sample

n_j = the size of the j^{th} sample

Each income group was compared with each of all the others ($\alpha = 0.05$) and the results are given in Table 3.13

TABLE 3.13: THE SUMMARY OF THE ANALYSIS OF THE PERCENTAGES OF INCOME SPENT ON RENT BY INCOME GROUPS

COMPARISON BY GROUP	\bar{X}_i	\bar{X}_j	S_i^2	S_j^2	n_i	n_j	Z-VALUE
Lower Middle - Highest	20.0	19.7	64.6	90.7	194	48	0.20
Lower Mid. - Upper Middle	20.0	18.1	64.6	98.8	194	81	1.58
Lower Middle - Lowest	20.0	17.4	64.6	108.1	194	134	2.48
Highest - Upper Middle	19.7	18.1	90.7	98.8	48	81	0.95
Highest - Lowest	19.7	17.4	90.7	108.1	48	134	1.43
Upper Middle - Lowest	18.1	17.4	98.8	108.1	81	134	0.48

It is evident there is some variation in the percentage of income that urban residents spend on housing. However the results of the analysis (Table 3.13) indicate that only the difference between the lower middle and the

lowest income groups is statistically significant at the 95% confidence level ($Z = 2.48$). Our interpretation of the results must be very cautious because the type of structures for which the low income people pay rents are not comparable in any way with the rest of the structures inhabited by the other income groups.

Another factor that should be taken into account when interpreting these results is the income distribution, although this control has not been integrated into this analysis; for example, 15% of a monthly income of KSh.450 cannot be meaningfully compared with 15% of a monthly income of KSh. 10,000.

The actual rents compared with the official figure

The means of the actual rents paid by each of the four income groups and the means of 15%, 17.5% and 20% of their incomes are compared. The government states that urban residents pay between 15% and 20% of their incomes on rent, and so the aim of the analysis is to determine which income group approximates the official statement. The difference of means test, whose formula is given below, was used

$$z = \frac{\bar{X}_i - \bar{X}_j}{\left[\frac{S_i^2}{n_i} + \frac{S_j^2}{n_j} \right]^{\frac{1}{2}}}$$

where,

\bar{X}_i = the mean of the actual rents paid by the i^{th} income group

\bar{X}_j = the mean of 15%, 17.5% or 20% of the incomes earned by the same income group

S_i^2 = the sample variance of X_i

S_j^2 = the sample variance of X_j

$n_i=n_j$ = the number of observations in that income group.

The results of the analysis are summarized in Table 3.14 to 3.16

TABLE 3.14: THE COMPARISON OF THE MEANS OF ACTUAL RENTS WITH THE MEANS OF 15% OF INCOMES BY INCOME GROUP

INCOME GROUP	\bar{X}_i	\bar{X}_j	S_i^2	S_j^2	n_i	n_j	Z-VALUE
Lowest	152	121	19841	2589	134	134	2.40
Lower Middle	399	309	30412	4784	194	194	6.68
Upper Middle	693	569	187600	11089	81	81	2.50
Highest	1423	1071	531436	221608	48	48	2.81

TABLE 3.15: THE COMPARISON OF THE MEANS OF ACTUAL RENTS WITH THE MEANS OF 17.5% OF INCOMES BY INCOME GROUPS

INCOME GROUP	\bar{X}_i	\bar{X}_j	S_i^2	S_j^2	n_i	n_j	Z-VALUE
Lowest	152	141	19841	3524	134	134	0.83
Lower Middle	399	361	30412	6514	194	194	2.75
Upper Middle	693	664	187600	15092	81	81	0.58
Highest	1423	1250	531436	301630	48	48	1.31

TABLE 3.16: THE COMPARISON OF THE MEANS OF ACTUAL RENTS WITH THE MEANS OF 20% OF INCOMES BY INCOME GROUPS

INCOME GROUP	\bar{X}_i	\bar{X}_j	S_i^2	S_j^2	n_i	n_j	Z-VALUE
Lowest	152	161	19841	8603	134	134	-0.62
Lower Middle	399	412	30412	8511	194	194	-0.92
Upper Middle	693	759	187600	19716	81	81	-1.30
Highest	1423	1429	531436	393975	48	48	-0.04

The pattern in Table 3.14 to 3.16 can be summarized thus:

- i) When the actual rents are compared with 15% of the incomes it is found that the means of the actual rents are significantly higher at the 0.05 confidence level than the means of 15% of the incomes (Table 3.14). The implication is that the majority of the people spend more than 15% of their incomes on housing, and therefore the use of 15% as the lower limit by the government lacks credibility.
- ii) When compared with 17.5% of the incomes, only the actual rents paid by the lower middle income group turns out to be significant at the 95% confidence level ($z = 2.75$).
- iii) The comparison of the actual rents with 20% of the incomes reveals a change of pattern. The Z-values are negative implying that the means of 20% of incomes are higher than the means of the actual rents. However, none of the Z-values is significant at the 0.05 confidence level.

A complete interpretation of the findings is given in the second section of Chapter Five, and in Chapter Six which deals with the problems of housing the urban poor.

C H A P T E R F O U RTHE HOUSING MARKET IN KISUMU AND LOCATIONAL PREFERENCES

The results of the analyses presented in the previous chapter are the basis of the discussions in the following chapters.

This chapter is divided into two major sections corresponding to the first and third hypotheses. The first section begins by briefly discussing some of the major socio-economic determinants of housing needs and how these are related to the urban housing market. The problems of viewing 'housing' as a good in the neo-classical economic sense are revealed and it is shown that a more meaningful approach to the housing market should incorporate the tenets of political economy. It is shown that there are urban sub-markets each catering for a different socio-economic group with the upper income groups having a wider field of choice than the lower income groups. This then leads to the second section of the chapter which addresses itself to the problems of preference for urban residential location.

There is a short discussion on the stated and the revealed approaches to preference analysis, and the reasons why the former approach is considered superior to the latter are examined. The major factors

that influence the preference for residential location are examined across different income groups. Though it is found that the different income groups perceive spatial inequalities similarly, it is concluded that where the majority of people live and where they would prefer to live are extremely at variance and so the question of whether the urban poor can manifest revealed preference for residential location becomes a meaningless issue as their choices are extremely restricted if not at all non-existent.

4.1 THE MECHANISM OF THE HOUSING MARKET

The search for an urban house for location or relocation is akin to migration in that both supposedly involve an evaluation of alternatives and rely heavily on the flow of information from the potential destination to the area of origin. The characteristics of the person performing the search are fundamental in understanding and predicting the most likely courses of action. Some of these characteristics that are related to the housing needs and demand are: age, education, occupation and socio-economic status, household size and life cycle stage, and motives for urban residence.

i) Age: The propensity to move is greatest in the young adult age groups. In Kisumu it was discovered that the ages of the majority at the time they moved to

the town ranged between 20 years and 35 years though most of them had some urban experience before moving to Kisumu. The only exception was the USAID housing scheme which housed people who were mainly between 20 and 25 years when they moved into the town. This may be due to the nature of this housing scheme; the authorities built one or two core rooms with kitchen and toilet facilities and the allottees were required to build other rooms to make them two-bedroomed houses. At the time of research, most of the houses there consisted of either one or two rooms. This kind of dwelling lends itself to sharing among young single people with steady incomes.

ii) Education: This is important in decision-making studies in that it may influence the variables one considers in his place utility perception. Furthermore, education may determine the extent to which one utilizes mass media in his search for an alternative dwelling. It would be expected that people who reside in low rent areas have had limited formal education and therefore would be very much restricted in their utilization of mass media and other channels of information diffusion (Oucho, 1974). These people may, therefore, rely heavily on the informal sources, particularly the word of mouth.

iii) Occupation and socio-economic status: The income and social class of an urban resident may constrain his

choice set in that he must evaluate real or perceived house rents against his ability to pay. Therefore, occupation will determine which area a person looks up to as a potential residence and which areas he considers irrelevant because of cost. This will influence the kind of information flow to which one will be responsive.

iv) Household size and life-cycle stage: The priority that a married person would attach to space is likely to differ from that of a single person. A young unmarried migrant may tolerate house-sharing much more than a family person. Due to the scarcity of housing, uncertain job opportunities and low wages, the majority of the low income people still leave their wives and younger children in the rural areas and either live alone or with one or two grown-up children often in one room in the town. In fact according to the 1979 Census results there are more men (77,722) than women (74,921) in Kisumu municipality and yet at the provincial and national levels there are more women than men. This may partly be explained by the fact that some men still leave their wives in the rural areas, and partly that more men than women migrate to the cities to look for jobs.

v) One's motive for being in the urban area is also important. If the migrant considers the urban environment

as his new home to whose community activities he must be committed, he may ponder settling there permanently and improving his housing environment. If, on the other hand, he perceives himself as a sojourner in the town, he may postpone comfortable life and save money for investment in his rural area of origin. In this case, he may confine himself to the search for a dwelling unit whose rent is low.

All the factors considered above and the institutional framework in which they interplay seem to disadvantage the low income urban worker who must adjust to and devise ways of surviving in such a socio-economic milieu that continually frustrates him. So, when we conventionally talk of "the housing market", what do we mean? In neo-classical economics, the notion of market implies three discrete entities: a good, a supplier, and a consumer. The interaction between the supply and the demand for a good is expected to occur in a market atmosphere where the forces of demand and supply are the chief determinants of the price for that good. This is what has been referred to as the "free market".

Extending the same argument and logic to housing, we would say that the rent for a particular dwelling unit would depend on the number of similar dwelling units that are unoccupied and available and the number of people

with the necessary financial resources who are looking for that kind of dwelling unit. This has led writers like Needham (1977) to assert that the major factors affecting housing demand are: the existence of lending institutions, the size of salaries, the relative location of existing houses and the degree of social mobility in the social structure of a particular society.

However, a dwelling unit as a commodity or a good is different from other goods and commodities in that it is a spatially fixed good and so its quality will be both endogenous and exogenous. The deficit in one region cannot be rectified by transporting the surplus from another region to the deprived region. Therefore, it is not uncommon to find monstrous variations in house rents among various cities of the same country. Another difference between housing and other goods is that the usefulness of a house depends on its location and area, services such as water, electricity, sewerage and roads supplied to the plot, and even the transport available in that location. The compound nature of housing contrasts with say, a bottle of coca-cola which remains what it is whether it is sold in the Arab Manyatta or in the Milimani residential districts of Kisumu. The implication is that no two houses, however similar, will ever be the same or perfect substitutes.

The scarcity of well-located land, the high capital costs of servicing land, high land prices caused by speculation, and the durability of housing make for a relatively inelastic housing supply; increases in urban population, family formation and income levels lead to large shifts in demand which frequently outstrip the supply response. All this points to the fact that housing markets are very imperfect, and for the majority, the search for a house rarely involves a choice of alternatives. Most urban residents have to make do with whatever is available and within their economic capability.

Given all these conditions and the fact that most urban residents of the Third World are poor and semi-illiterate, it is hardly surprising that there is a distortion in the flow of information on the vacancy of dwelling units in Kisumu town.

It was found that the informal sources of information were more important in the search for the first residence than the formal sources.¹

It is not enough just to know that the informal sources are more important than the formal sources; it would be

1. A chi square statistic of 98.66 significant at the 0.05 level was obtained showing that the difference in the two major sources of information - formal/informal - is not due to chance.

more helpful to learn whether there are any areal variations in the sources. In this study it was hypothesised that the informal sources of information were over-represented in the low rent areas. It is evident from Figure 4.1 that the informal sources of information are very important in the low rent areas.

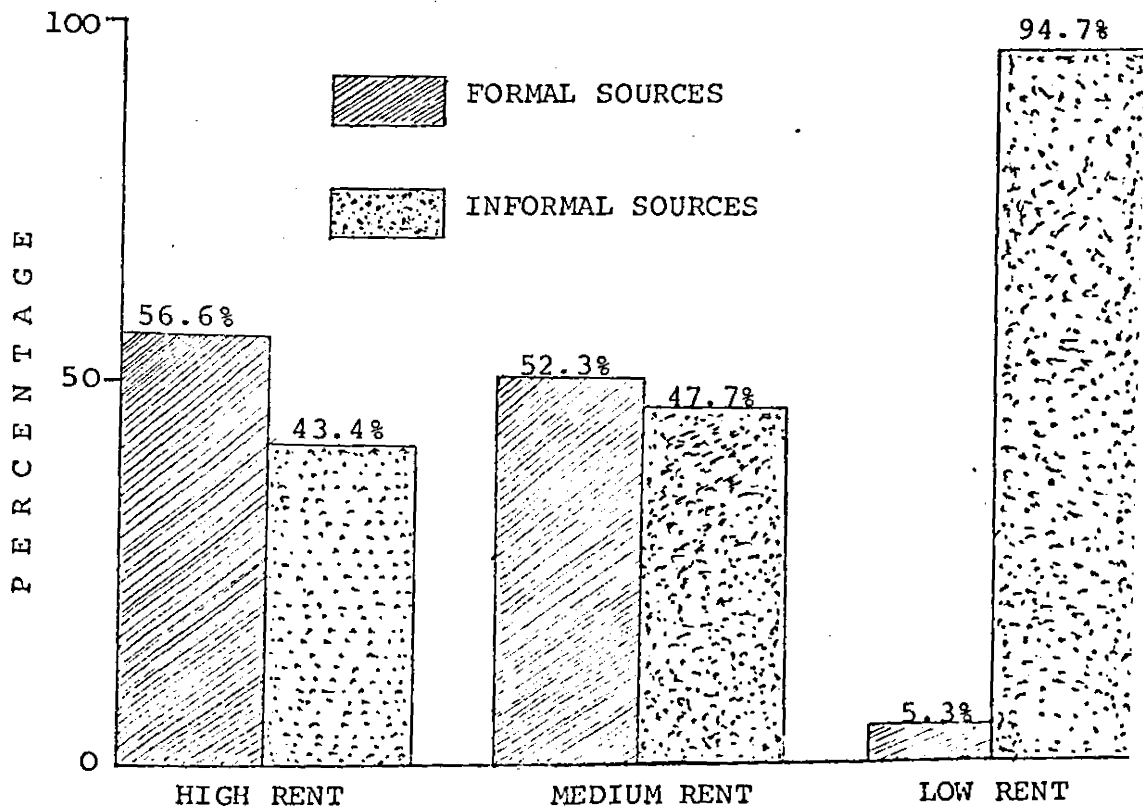


FIG 4.1: The relative importance of information sources on the first residence by strata.

A difference of proportions test was applied in the analysis of these differences and pointed to the same conclusion. Significant Z - values at the 0.05 level were obtained between high and low rent areas ($Z = 9.30$)

and between medium and low rent areas ($Z = 9.03$). The difference between the high and the medium rent areas yielded a Z - score of 0.79 which was not significant.

The implication is that the residents of the low rent areas rely mainly on family networks and word of mouth from friends and acquaintances. This finding corroborates the findings in other Third World cities that the choice (or is it lack of choice?) of a residential area among low income people tend to reflect kin ties, and relatives tend to cluster together particularly in low rent areas (Lloyd, 1979). This degree of localisation is easy to understand when we examine how the respondents first obtained accommodation when they arrived in Kisumu. This is summarised in Table 4.1.

TABLE 4.1: THE SOURCES OF FIRST ACCOMMODATION IN KISUMU BY STRATA

FREQUENCY AND PERCENTAGE BY STRATA ACCOMMODATION SOURCES	HIGH RENT		MEDIUM RENT		LOW RENT		TOTAL	
	n	%	n	%	n	%	n	%
Relatives	45	42.5	69	46.0	79	52.0	193	47.3
Friends	24	22.6	38	25.3	37	24.3	99	24.3
Employer	28	26.4	18	12.0	4	2.6	50	12.2
Built own residence	3	2.8	2	1.3	6	4.0	11	2.7
Other	6	5.7	23	15.4	26	17.1	55	13.5
TOTAL	106	100	150	100	152	100	408	100

It is hardly surprising that 71.6% of all the respondents stayed with friends and relatives when they first arrived in Kisumu. In the low rent areas, however, 76.3% stayed with relatives and friends compared with 71.3% and 65.1% in the medium rent and high rent areas, respectively. It is assumed that the hosts will have more knowledge of available housing nearby, and the recent migrant will probably prefer to be near his kin who will steer him through the hazards of his new life. Another factor that may ensure ethnic clustering is the existence of ethnic welfare associations which tend to bind people from the same rural area together. Meetings of such associations may serve as occasions for publicizing the names of the new arrivals who may still be in desperate need of employment and shelter.

It is also not difficult to understand why these associations will be more functional for the low income people than for the upper income people. The former are normally people with unsteady jobs and social insecurity; and also due to their lack of inter-ethnic exposure, they feel very insecure outside their own ethnic groups. Furthermore, due to their limited formal education, they may arrive in the city with no knowledge of any other language apart from their mother-tongue. This may further inhibit their quick integration into city life in terms of functional social networks.

The situation of the low income people may be contrasted with that of the better educated higher income groups who may rely on supra-ethnic class associations for their upward mobility.

Before the implications of this skewed information flow are examined, it is imperative to find out whether this pattern of spatial variation in information sources persisted over a period of time. In other words, after people have arrived in the city and utilized ethnic associations to obtain housing, does the success of their later intra-urban relocations depend on these interactions or do they expand their horizons by more extensive socialization outside their initial acquaintances and become increasingly more reliant on the formal sources?

A counter-argument can be put forward that as one's stay in the city is prolonged, one broadens one's social sphere of operation to the extent that one becomes more dependent on informal interactions and informal methods of problem solving than when one arrived. This means that we would expect the importance of the informal sources to increase.

To ascertain whether any pattern was apparent, the same respondents were asked to state how they obtained information on the vacancy of their current residence. Their responses are summarized in Figure 4.2.

According to Figure 4.2 the incidence of the formal sources decreased by 2.7% and 2.8% in the low rent and high rent areas, respectively whereas it slightly increased by 2.7% in the medium rent areas. An analysis to determine

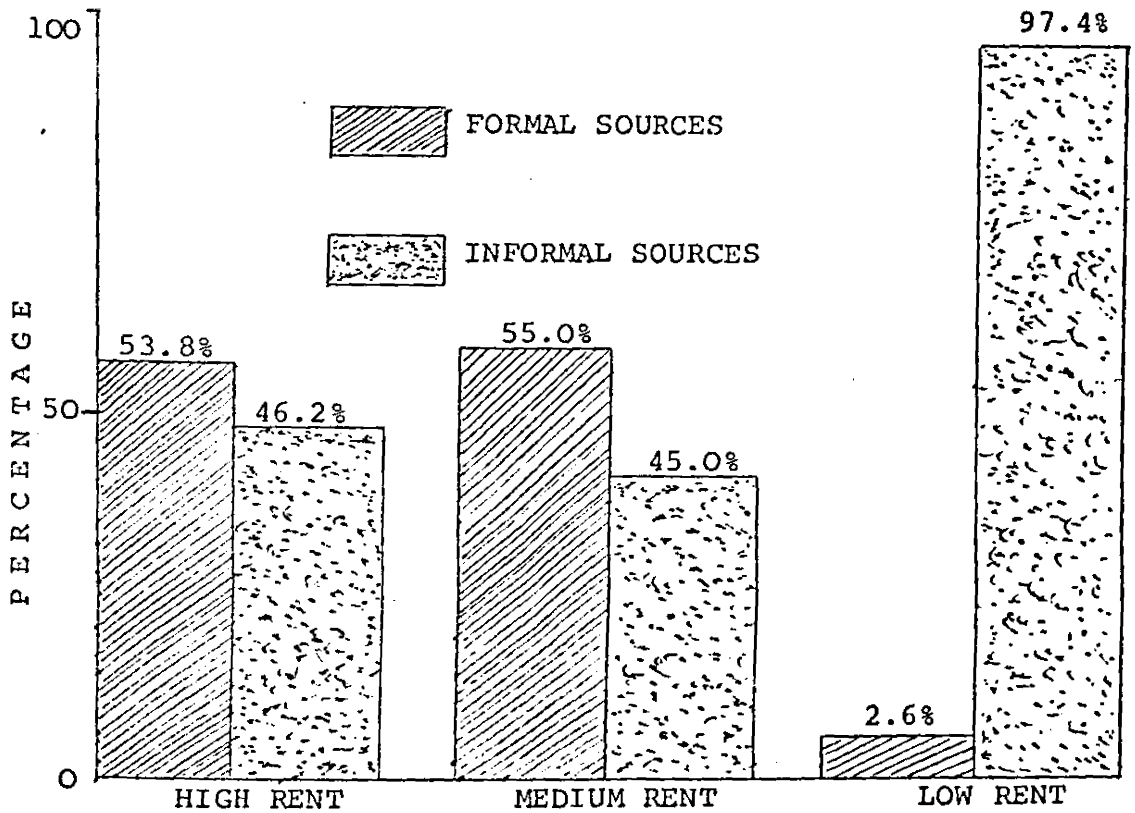


FIG 4.2: The relative importance of information sources on the current residence by strata.

if the decreases and the increases are significant yielded insignificant χ^2 - values at the 0.05 confidence level. Nevertheless, it is evident that the role played by the informal sources remain very important. This assertion is supported by the highly significant (at the 0.05 level) Chi squared value of 111.1 obtained when the incidence of

the formal and the informal sources of information are compared on a citywide basis.

One possible reason why the formal sources of information remain so vital among the dwellers of medium rent estates is that the majority of these estates belong to the municipal council and, therefore, before people occupy them they have to put their names on the waiting list at the municipal office. In this way, the means of housing acquisition 'appears' to be impersonal and formal. The word 'appears' is used because what transpires between the moment an applicant fills an application form and the time he actually occupies the municipal housing may involve some informal interactions. In the high and low rent areas, the informal sources remain important, and this may be partly attributed to the fact that the majority of the houses in these two strata are predominantly in private hands. This may mean that since the landlord is not required by any law to formally advertise, he may solicit for the right tenants by word of mouth. Furthermore, the tenant who is about to vacate a dwelling unit may contact his kith and kin who may be in need of a house and then introduce the potential tenant to the landlord.

As in the case of the first residence, there is

an areal differentiation in the formal/informal sources among the three residential strata. The formal sources are more important in the high and medium rent areas than in the low rent areas as signified by the significant Z-values (confidence level = 0.05) obtained by comparing low rent with high rent areas ($Z = 9.42$) and by comparing the low rent areas with the medium rent areas ($Z = 9.94$). As in the previous analysis, the difference observed between the medium and high rent areas is not statistically significant at the 0.05 level.

A number of conclusions may be drawn from the foregoing analysis. Firstly, the residents of the high and medium rent areas (and by implication, high and middle income workers) have a wider information field than the residents of the low rent areas among whom are the urban poor. The flow of information on vacant housing units is not uniform to all residents of the town. This skewed flow of information was alluded to by a columnist writing about slum dwellers of Nairobi's Korokocho village (Otani, 1981). Otani claims that some urban residents live in squatter settlements because of ignorance. They are new in the city and do not know how to acquire decent dwellings. In this case a more uniform flow of information would probably help the slum dweller obtain a more habitable structure for

the same amount of money.

The spatial variation in information sources may even warrant us to talk of separate housing markets in the town: one for the high and middle income people and another for the urban poor. This dualism is authenticated by a casual glance at the Kenya's newspapers. Numerous houses for sale and rent are advertised for Nairobi and Mombasa (and very rarely for other towns), but none of these houses are for the lowest income people. The existence of a dual market may also be supported by the contents of the Kisumu Municipal Council's annual reports. Despite the fact that the municipal authorities use a conservative method of assessing housing demand (i.e. they base it on the number of people on the waiting list for municipal houses) they seem to be oblivious of any method of assessing the housing need among the lowest income people who cannot afford the council houses.

According to the 1979 and 1980 municipal annual reports, the number of people on the waiting list doubled in one year, rising from 1186 in 1979 to 2344 in 1980. In the reports, however, there is no reference to the people in the squatter areas. At the time of this research there were 1106 municipal rental units and about

379 tenant purchase and mortgage housing units in Kisumu. The acting Director of Housing and Social Services, Mr. Kapere, revealed that between 1975 and 1981 no municipal rental houses were constructed in the town and so it is difficult to estimate the annual increase of municipal houses, though he claimed that about four municipal rental houses fall vacant every month.

An inventory of the housing stock in the squatter areas was attempted by Waweru and Associates (1976) and their findings are summarized in Table 4.2. It is difficult to estimate the rate at which these houses increase per

TABLE 4.2: AN INVENTORY OF THE HOUSING STOCK IN THE LOW RENT AREAS OF KISUMU (1976).

ESTATE	NO. OF STRUCTURES
Manyatta	1455
Nyalenda	1373
Migosi/Nairobi Area	353
Pand pieri	1160
TOTAL	4341

(Source: Waweru and Associates, 1976).

year. However, the number of people who live in sub-standard housing, 2/3 of the 1979 population, is a rough indication as to how many urban residents are served by the so-called formal housing market (Republic of Kenya,

1979b). Though the apparent housing markets behave as though they are completely independent, their interdependence is easy to understand as will be explained shortly.

The second major conclusion that may be drawn from the above findings is that the people whose interests should be taken care of by the state are left to fend for themselves and are at the mercy of private landlords who, in many cases, may encourage artificial shortages of houses so as to hike rents. Therefore, the skewed flow of information, in as much as it may not be planned, makes the urban poor vulnerable to exploitation. By leaving the housing needs of the majority poor to be catered for by private landlords, the scarce national resources may now be expended on luxury consumer durables by the elite or on some token housing schemes built mainly to cater for the interests of the upper income groups. It has even been argued and shown in Zambia that the squatters subsidise the government by providing essential services free of charge. They take care of their housing needs and costs, provide other squatters with houses, goods and services while the government concentrates its housing policy on the middle and upper income groups, the chief beneficiaries of its housing efforts (Hansen, 1982).

A classic example of an irrelevant token housing scheme is the National Housing Corporation houses built in Kitale in 1978 which could not be occupied for three years because the rents were above the capacity of most people living in the town (Daily Nation, February 17, 1981 p.6). The crucial question is why they are built!

Another illustration may be given by an advertisement soliciting applications for mortgage housing schemes in Kisumu. The houses were to be categorized in three income groups based on the construction costs (Daily Nation, December 1981)². The applicants for these houses would obviously arrange with their employers to assist them obtain loans from housing finance institutions in order to buy the houses. Such extravagant schemes, by no means limited to Kisumu, may tempt one to suggest that many of the problems of Third World countries do not result from a lack of funds but rather from misallocation of the existing funds.

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2. The categories, the number of dwelling units and the costs were as follows:
- i) 50 units for low medium cost each ranging between Ksh. 90,000 to Ksh.200,000.
 - ii) 30 units for medium cost each ranging between Ksh. 201,000 to Ksh.300,000.
 - iii) 20 units for medium high cost each ranging between Ksh.301,000 to Ksh.500,000.

This market arrangement also aids petty commodity production of housing in that as lack of information on alternatives exposes the urban poor to the problems of choice, the absentee landlords of the squatter settlements (the squattocrats) will normally increase the rents of their hovels and engage in more production of these indecent dwellings due to the ever-increasing demand without necessarily flooding the market.

In fact the Acting Director of Social Services and Housing in Kisumu admitted that the private developers are the chief suppliers of housing followed by the National Housing Corporation in conjunction with the municipal council.

Everything therefore seems to be designed to the interest of the higher income groups. This is hardly surprising when we analyse this situation in terms of the framework established in the review of literature. Kenya's path of development may be described as 'peripheral capitalist', a metropolis-dependent form of organization that functions mainly for the interest of international monopoly capitalism. This kind of organization thrives well in a situation where a small wealthy clique is charged with the power to formulate policies governing all the developmental sectors of the nation. Due to their class consciousness and allegiance they

formulate policies that are highly elitist and allocate the scarce national resources mainly for their own benefit (Mulei, 1982). Any housing markets or sub-markets that emerge, therefore, must reflect the macro-processes at work in the society, particularly the distribution of political and economic power.

5.2 HOUSING PREFERENCE : FACT OR FICTION?

It has been established in the preceding section that the housing market in Kisumu is grossly imperfect, and encourages what may be termed a system of 'housing apartheid'. The relationship between housing market and spatial choice behaviour is clear in that a search among alternatives is implied. Since it is common to talk of the housing market, the housing environment may then be seen in this context as a commodity to be consumed, and therefore, preference may be inferred from consumption. In the field of consumer preference analysis there is a perpetual debate as to whether stated preference or revealed preference is the more valid basis for determining consumers' preferences.

The stated preference approach requires the respondents to provide the researcher with a subjective judgment of either how much they prefer a particular stimulus to each of several other stimuli (i.e. rating each stimulus) or whether a particular stimulus is more or less preferred

to each of the others (i.e. ranking the stimuli from the most to the least preferred). Some opponents of this approach like Ewing and Kulka (1979) follow the argument of the philosopher Bertrand Russell who wrote:

"The discovery of our own motives can only be made by the same process by which we discover other peoples', namely the process of observing our actions and inferring the desire which could prompt them" (Russell, B. Analysis of Mind. London, Allen and Unwin, 1921).

The opponents of the stated preference approach argue that the limitations of using the questionnaire to obtain preference include the difficulty of designing and administering it. They add that we cannot presume that the respondent can reliably report his preference ranking of a set of alternatives because people may consciously or unconsciously convey a preference that is at odds with their true preference, and also because it may not be scientific to assume that people will consider all the major attributes of the stimuli that influence their preference before they rank the stimuli.

The other approach, the revealed preference approach, relies on the observation of the actual overt

'choice' which the respondent makes between available alternatives, holding constant any choice constraints. The implication is that the choice made reveals the respondent's preference. The major weakness of this approach is its assumption that 'choice' of an alternative implies or reveals a preference for that alternative. Behaviour may not be necessarily discretionary but may reflect environmental and personal constraints which the analyst may have no knowledge of. There may be situations where random choice is better than no choice at all, and in such cases it would be incorrect to infer preference from choice behaviour.

The choice between stated and revealed preference approaches must begin with an examination of the conditions under which it is true that observed behaviour reflects preferences, and it must be certain that it is a realistic choice situation we are examining (Pirie, 1976). We must therefore consider the existence of alternatives, the full knowledge of the alternatives by respondents and the equal accessibility to all the available alternatives since the assumption that everybody had equal opportunities to manifest a particular behaviour may be misleading.

There are scholars like Gray (1975, 1976) and Duncan (1976) who stress that the notion that families choose

where and in what type of housing they live in is mythical and irrational and therefore any analysis based on this notion is obfuscatory and anyone who insists on such mythical and descriptive techniques must be tacitly attempting to justify the injustices in housing so visible in urban societies.

Duncan (1976) maintains that in a situation of unequal distribution of wealth, prestige and power, the study of constraints and allocation rather than preference and demand provides a more realistic viewpoint from which to understand housing situations and housing markets.

In the positivist revealed approach, gravity formulations are used to attempt a prediction of the housing demand by job supply. The particular model that is usually used in this situation is the "attraction constrained gravity model" shown below:

$$T_{ij} = B_j W_i E_j f(C_{ij})$$

where,

T_{ij} = the number of people working in zone j who 'choose' to live in zone i

W_i = the measure of attractiveness of zone i as a residential area

E_j = the given number of employment opportunities in zone j

$f(C_{ij})$ = some function of distance between zones i and j

B_j = (the balancing factor) is given by the equation

$$B_j = \frac{1}{\sum_i W_i f(C_{ij})}$$

Such an approach ignores the questions of the creation and allocation of jobs and houses by the authorities and assumes that where to reside mainly depend on peoples' choices. Though individuals perceive the existence of spatial inequalities, many are constricted and constrained in their choices and are pushed into particular housing situations because of their position in the housing market in relation to the individuals and institutions controlling the housing systems. Therefore an analysis which stresses individual choice and overlooks the real macro processes at work in creating urban socio-spatial patterns is bound to offer inadequate explanations to the housing problems leading to inadequate solutions aimed at reforms within the existing political and socio-economic structures.

Given the nature of the housing market being examined in this work, it was concluded that the stated preference approach is superior to the revealed preference approach, and therefore in this study data from stated preferences are analysed. The term 'preference' as used in this work refers more to latent preference (or is it 'wishful thinking?') rather than actual preference and there is no assumption made that where the respondents

were found living during the research reflected their preference. It refers to where people would like to live rather than where they are living, and the incongruity of these two as reported in this study is a clear indication that most urban households are more contestants in a competition whose results are a foregone conclusion against them.

The major thrust of the hypothesis discussed in this section is to ascertain whether different income groups residing in very different environmental situations have similar perceptions of what constitutes a decent residential environment.

Thurstone's Law of Comparative Judgment (Case V) was used to compute scale values for each residential district based on the proportional number of times that each district was preferred to each of all the others. These attractiveness scale values were used to derive interval scales for all the categories of the respondents, taking the residential district with the lowest scale value as the zero point (Table 4.3).

A graphical comparison of the perception of residential district attractiveness between the high income and the low income respondents is given in Figure 4.3. Based on this graphical comparison, we may conclude that all the respondents generally agreed on the most and the

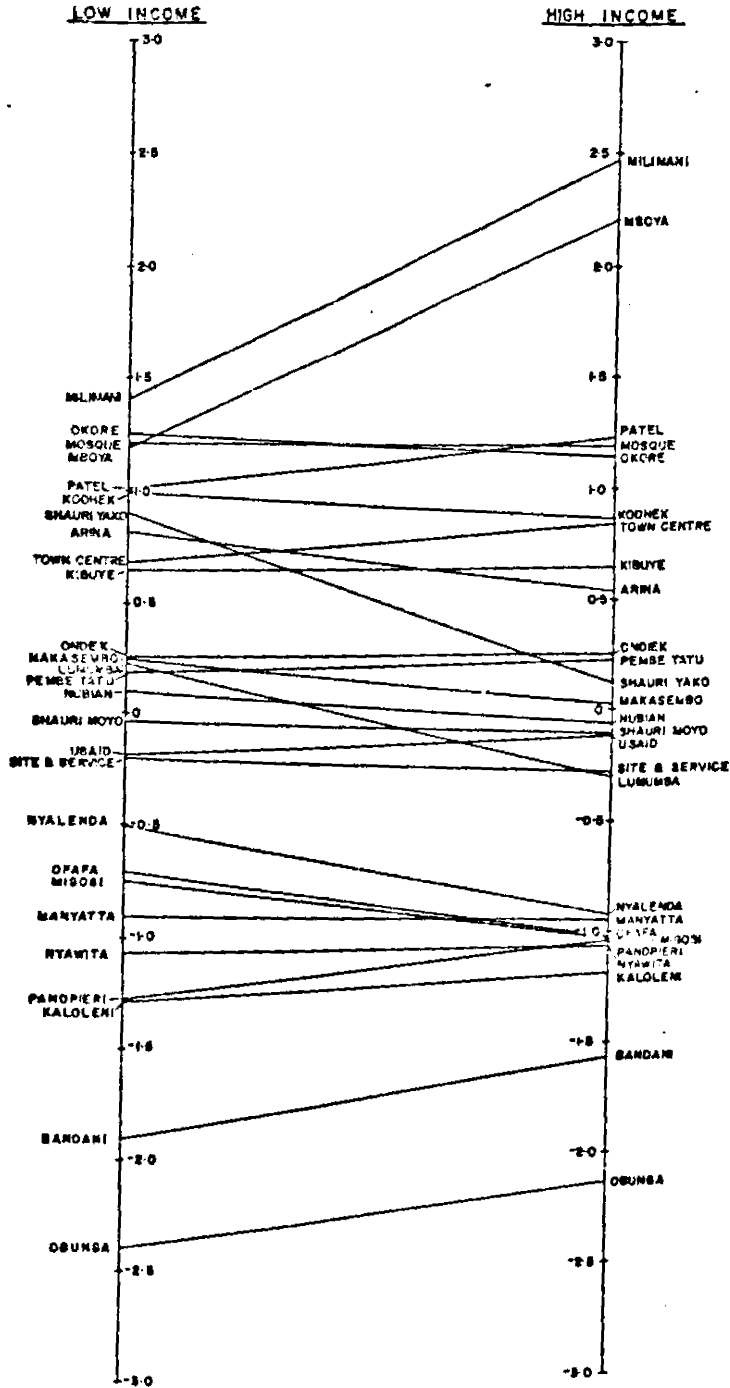


Fig. 4.3 THE COMPARISON OF THE LOW AND HIGH INCOME RESPONDENTS' RANKING OF RESIDENTIAL DISTRICTS (BASED ON ATTRACTIVENESS SCALES)

TABLE 4.3: THE INTERVAL SCALE VALUES DERIVED FROM THURSTONE'S CASE V MODEL FOR RESIDENTIAL PREFERENCE

ESTATE	INTERVAL SCALE VALUES ACCORDING TO RESPONDENT CATEGORIES							
	A	B	C	D	E	F	G	H
Arina	2.1	3.2	2.7	1.7	2.7	3.2	2.7	2.0
Kibuye	1.9	3.1	2.4	1.4	2.8	3.0	2.6	1.9
Patel	2.4	3.4	2.6	2.1	3.4	3.1	2.9	2.5
Milimani	3.0	3.8	3.1	3.3	4.6	3.9	3.4	3.6
Mboya	2.7	3.6	3.0	2.6	4.3	3.7	3.3	3.2
Nyawita	0.9	1.3	1.4	0.6	1.1	2.1	1.5	0.8
Nyalenda	0.7	1.9	1.1	0.2	1.2	2.5	1.1	0.5
Kaloleni	0.5	1.1	0.8	0.3	0.9	2.0	0.6	0.5
Pandpieri	0.6	1.1	0.8	0.4	1.1	1.8	0.4	0.6
Shauri Moyo	1.3	2.4	1.8	0.8	2.1	2.4	1.9	1.2
Ondiek	1.7	2.7	2.3	1.1	2.4	2.6	2.6	1.5
Nubian	1.5	2.5	1.9	0.9	2.1	2.2	2.2	1.3
Mosque	2.3	3.6	2.7	1.7	3.4	3.3	3.2	2.2
Pembe Tatu	1.7	2.6	2.1	1.1	2.4	2.5	2.5	1.5
Shauri Yako	1.7	3.3	2.3	1.1	2.3	2.9	2.6	1.5
Bandani	0.3	0.5	0.6	0.1	0.6	1.3	0.5	0.2
Migosi	0.8	1.7	1.3	0.2	1.1	1.7	1.6	0.5
Lumumba	1.5	2.7	2.0	0.9	1.9	2.4	2.4	1.2
Obunga	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ofafa	0.8	1.7	1.4	0.4	1.1	1.3	1.6	0.7
Site & Service	1.2	2.2	1.6	0.6	1.9	2.3	1.8	1.0
Makasembo	1.7	2.7	2.3	1.1	2.2	2.5	2.7	1.4
Manyatta	0.7	1.5	1.2	0.3	1.2	1.5	1.3	0.7
Kodhek	2.2	3.4	2.6	1.9	3.0	3.1	2.9	2.2
Okore	2.3	3.7	2.7	1.8	3.3	2.8	3.0	2.3
Town Centre	2.1	3.1	2.4	1.7	2.9	2.6	2.8	2.1
Usaid Scheme	1.3	2.2	1.7	0.9	2.0	2.1	2.1	1.1

A = All Respondents; B = Low income; C = Lower Middle Income
D = Upper Middle Income; E = Upper Income; F = Low Rent
G = Medium Rent; H = High Rent.

least preferred districts in Kisumu. In other words, Milimani and Obunga are perceived as the most preferred and the least preferred, respectively with the attractiveness scales ranging from +1.50 for Milimani to -1.45 for Obunga when all the respondents are lumped together. A closer examination of these values when the respondents are categorized according to either income or rent reveals further information. The low income people and the people who reside in low rent areas seriously underestimated Obunga's attractiveness; the scale values being -2.40 and -2.50 for low income and low rent residents, respectively. Given the fact that some of these people may have lived in Obunga at one time during their stay in Kisumu, they may have first hand information about this area and therefore are able to distinguish it clearly from other low rent areas, a task which may be difficult for other respondents who may not have lived there and so just tend to lump all the "bad estates" together.

Likewise, the scale values for Milimani, the most preferred district, have been inflated by the high income respondents and those respondents who reside in high rent areas. The values are +2.46 and +2.22 for high income and high rent respondents, respectively. An examination of Figure 4.3 confirms this conjecture. The

low income people tend to lump all the most desirable districts together, perhaps due to their lack of knowledge on distinct differences among these districts. This is in contrast to their perception of the differences among the low rent areas; they are fairly spread apart in Figure 4.3. The reverse applies to the high income people.

When asked to rank stimuli, respondents will find some comparatively easy to rank while others may pose serious problems (Gould and White, 1974). Most people may find it easy to rank places they like and dislike, but there will nearly always be a number of areas in the middle to which they are indifferent, and the order in which the middle places are ranked may be a bit blurred. This is evident in this study where the first few and the last few residential areas are clearly distinguishable, with some kind of random noise in the middle (Fig. 4.3). This may suggest that people tend to pay more attention to the extreme attributes and this is evident in their failure to reliably and consistently rank residential districts that are perceived to lie in between the two extremes.

The respondents were not given preconstructed attributes on which to judge the desirability of the 27

residential districts. They were expected to consider the residential bundle in totality — all the characteristics pertinent to a resident's satisfaction with his house, its location, its surroundings, the neighbours and so on. They were requested to list the major factors they considered in discriminating amongst the districts as this would help us discover some of the factors influencing their 'invisible land scapes'. The frequency of the stated factors is given in Table 4.4.

TABLE 4.4: THE FREQUENCY OF STATED FACTORS INFLUENCING STATED RESIDENTIAL PREFERENCE

STATED ATTRIBUTES	FREQUENCY OF MENTION BY STRATA			
	LOW	MEDIUM	HIGH	TOTAL
Construction material (Modern facilities)	127	120	100	347 (39%)
Number and size of rooms	63	97	38	198 (22%)
Security (crime rate)	72	77	42	191 (21%)
Distance to employment	26	44	11	81 (9%)
Refuse collection (Cleanliness)	14	25	16	55 (6%)
Business prospects	23	0	0	23 (3%)

Five major factors were given by the respondents in the low, medium and high rent residential districts which they claimed influenced the structure of their

stated preferences. On the aggregate there is an agreement that construction materials and modern facilities (tap water and electricity) are very instrumental in opinion formation in residential district desirability, and were the most frequently mentioned factors (Table 4.4). Two other important attributes were the perceived number of rooms per dwelling unit and their sizes, and also the perceived general security of the residential districts. The distance between employment centre and residence, together with the perceived cleanliness of the residential districts in terms of garbage collection are also considered important factors. It is important to note that distance to employment points is only mentioned 26 times out of a total frequency of 325 by the residents of the low rent areas. What would be the explanation of this apparent anomaly given that these low rent estates are mainly on the periphery of the town? A clue to the answer may lie in the examination of the nature of employment in these areas. As will be discussed in the next chapter, quite a number of people who reside in the low rent areas are employed within the estate and therefore distance to workplace does not occur to them as an important factor to consider.

It is very significant that the residents of the low rent areas mentioned business prospects as one of

the factors. This may mean that some estates are viewed as potentially suitable for self-employment in what is known as the informal sector. This fact may reinforce our conjecture as to why distance to workplace does not seem to feature prominently in the minds of the low rent stratum residents since the majority of the informal activities are estate based.

There was a need to compare the perceived and the actual physical factors that could have influenced preference. The Generalised Linear Interactive Modelling (GLIM) technique was applied at this stage, taking the attractiveness scale values for each residential area as the dependent variable, in order to test whether the variation in these scale values is a function of the perceived unequal spatial distribution of the physical and social attributes of the residential bundle. The results of this analysis with the relative importance of the factors are given in Table 4.5

The results of this analysis are very similar to the reasons given by the respondents themselves concerning the factors that influence their preference for location as given in Table 4.4. However, among the seven independent variables used, only the number of rooms per dwelling unit, construction materials, and how well known an estate is are the only significant factors influencing locational preference as shown by the regression equation

below ($\alpha = 0.05$):

$$Y = -2.076 + 0.3493 \text{ Room} + 0.9117 \text{ Cons}(2) + 1.1370 \text{ Cons}(3) + 0.0152 \text{ FIRST}$$

(4.8440)
(4.2150)
(3.3255)
(2.9382)

Table 4.5: The relative importance of the factors that influence stated residential preference (All respondents together).

ATTRIBUTES	DEVIANCE (X^2)	R^2	D.F.
The number of rooms	2.86	0.82	25
Construction materials	2.49	0.84	23
Refuse collection	2.48	0.84	22
Presence of municipal houses	2.41	0.85	20
Frequence of first residence at an estate	1.91	0.88	19
Crime rate	1.88	0.88	18
Distance to workplace	1.82	0.88	17

As Table 4.5 shows: the number of rooms per dwelling unit accounted for 82% of the total variance and reduced the variance from a maximum of 15.57 to 2.86. The other two significant factors: construction materials and the extent to which an estate is known further reduce the variance by a total of 5%. Some researchers in Behavioral Geography maintain that the coefficient of determination (R^2) is a less rigorous measure of fit than the chi squared statistic because the former is a relative measure whereas the latter is an absolute measure of fit (Ewing, 1983). It is for this reason that both measures are included in Table 4.5. It is clear from the table



PLATE 5: A typical detached high income house in Okore Estate.



PLATE 6: A section of Nyalenda Estate. Notice the contrast with Okore Estate above.

that though R^2 does not improve appreciably with the introduction of other variables, the X^2 decreases from 2.86 to 1.82 confirming that it is a superior measure of fit.

The concern for space is a very important factor in Kisumu given the fact that a very significant number of households experience overcrowding as will be discussed in the next chapter. An estate whose houses are constructed of permanent material, have spacious rooms and modern facilities and whose environment is clear of filth and crime is more desirable than any without those characteristics. The contrast may be seen in comparing Plate 5 and Plate 6 showing typical houses in Okore estate and Nyalenda, respectively. One other factor that tended to influence the ranking of residential districts in Kisumu was the degree to which a particular estate was known to the majority of the residents. When an estate is either new or obscure in location and size, respondents will tend to underestimate its desirability just because of ignorance. This seems to have been the fate of USAID housing scheme which had just opened its doors to the residents by the time this research was underway, and therefore was not known to many respondents. This factor increased R^2 in the regression model from 0.85 to 0.88.

When the responses of the residents of the low rent areas were analysed separately against the same explanatory variables, the explained variance (R^2) was only 0.76. This may be contrasted with $R^2 = 0.81$ for the high rent area residents. It was noted in Table 4.4 that the respondents from the low rent areas included "business prospects" as one of the factors influencing their preference. In this respect, business prospects must be equated with opportunities for self-employment. Therefore, for those who are inclined for self employment due to the chronic unemployment situation in Kenya, there may be a desire to be near those residential districts where informal activities may thrive. These are mainly the low rent areas. It was impossible to add the variable "informal economic activity per estate" in the model because of incomplete data. Therefore, the influence of this factor, at least in the low rent areas, remains mere speculation until it is tested empirically.

The preference surface of the residential districts of Kisumu is summarized in Figure 1.4. The areas

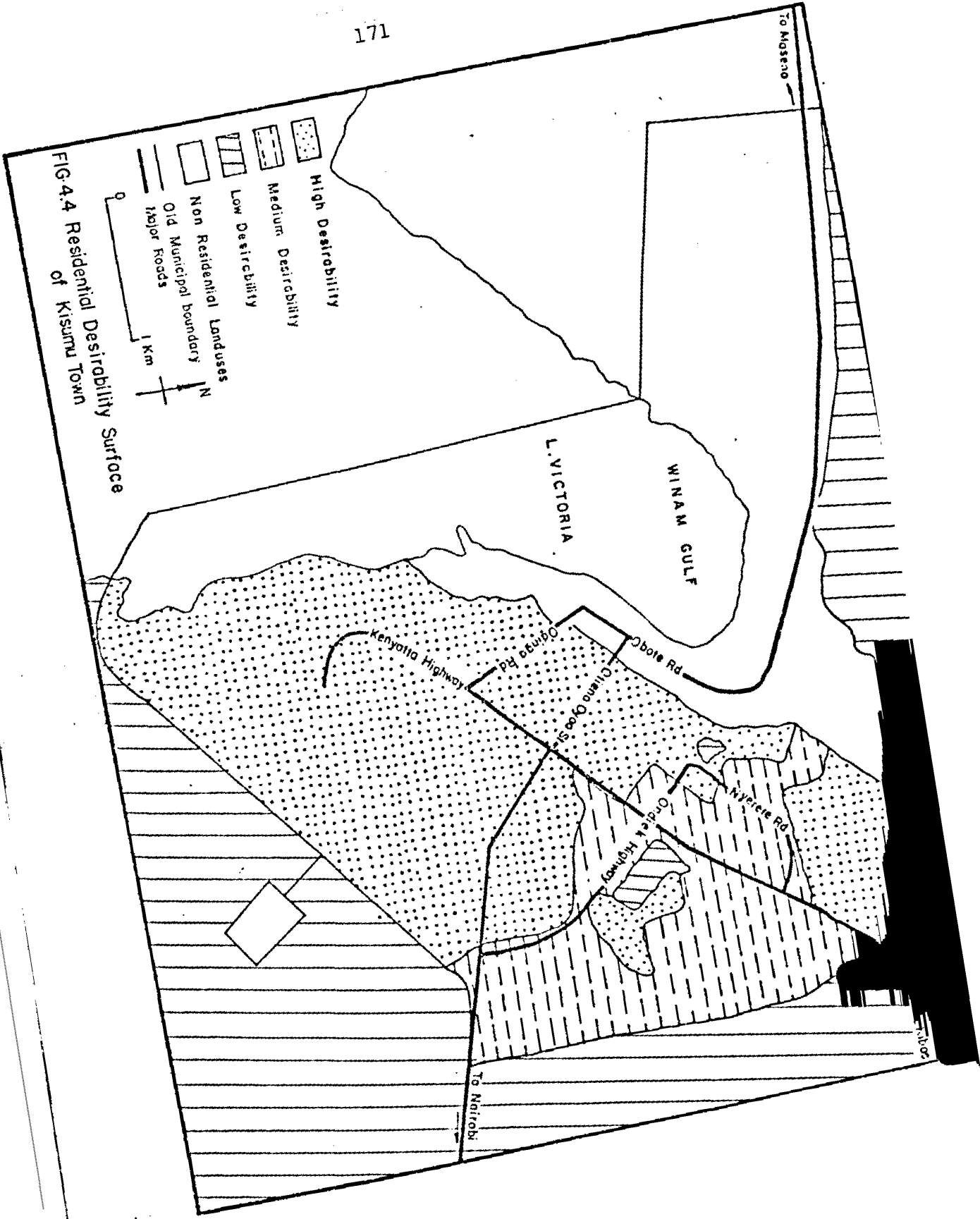


FIG.4.4 Residential Desirability Surface of Kisumu Town

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of high desirability correspond to the high rent areas of Milimani, Town Centre, Tom Mboya, Kodhek, Pembe Tatu, Shauri Yako and Okore. The districts rated as of medium desirability include all the municipal estates whereas the former peri-urban areas are perceived as low desirability areas.

What do all these results tell us? Before attempting to answer this question, we must consider the factors that influenced the respondents' location in the residential districts in which they were found during the research as reported by the respondents themselves (Table 4.6).

TABLE 4.6: THE FREQUENCY OF THE DETERMINANTS OF CURRENT RESIDENCE IN KISUMU

F A C T O R S	FREQUENCY BY STRATA			TOTALS	
	LOW	MEDIUM	HIGH	N	%
No choice	46	47	13	106	18.4
Rent	60	39	7	106	18.4
Spacious rooms	9	34	50	93	16.2
Better facilities	24	42	22	88	15.3
Distance to workplace	28	25	16	69	12.0
Security	20	23	16	59	10.3
Presence of friends/ relatives	17	6	1	24	4.2
Not stated	4	7	19	30	5.2

From Table 4.6 we can observe that for many people, particularly the low rent and the medium rent area inhabitants, there was no choice of residential location; they admitted that they had no alternatives but to accept what came their way. This may be an indication of a tight market situation with very limited supply of houses; it may also indicate mass poverty with very little effective demand. Many low rent area residents conceded that prohibitive rents were very influential in their decision to locate at their present residence. This is another indication that 'choice' and 'preference' are of very limited help in attempting to explain household residential locations. Where people would like to live and where they are forced to live are extremely at variance in this case.

The argument that 'similar' people choose to locate near each other (cited in Harvey, 1975) has been put to question by the findings of this research. Firstly, we would have expected the residents of the low rent areas to aspire for the low rent areas inhabited by people having similar characteristics with theirs. However, it has been shown in the preceding pages that even people in low rent areas aspire to live in the residential areas that have all the modern facilities necessary for decent living. Hence they would prefer to live in Milimani and

avoid Obunga, the most and the least preferred districts, respectively. Why do they not want to conform to the adage 'Birds of a feather flock together'? What then is the justification for stratified development in housing programs and the continued residential segregation? Secondly, the assertion that it is the market which differentiates people residentially is merely to describe and accept the status quo. Such an assertion does not question the processes that lead to multi-market housing situations in a developing country like Kenya. Such a system could not have developed without the guidance from the upper classes and yet to their clear advantage. Alonso (1964) and Muth (1969) argue that the low income residents of Western cities have to pay high rents because they locate near the Central Business District (CBD) where land values are highest whereas their suburban high income counterparts live in bigger houses whose rents are comparatively low due to the low land values on the urban periphery.

The spatial structure of the western cities is not fully replicated in the Third World cities. Though there is some sectoral spatial development in Third World cities (Ngau, 1979) the urban poor are mainly precariously perched on 'worthless' land on the periphery where they pay high rents in relation to their

incomes. Why doesn't the Third World urban land market adjust to this local situation if central location in relation to essential services is the major determinant of the price of urban land?

Many attempts have been made to grapple with these crucial questions, and the nature of land ownership at the urban-rural fringe has been quoted as the major cause of high rents at the periphery of Third World cities, particularly African cities. Most often, the land is still in individual private hands and so the various governments have no control over land prices there.

This structure of land ownership has also been cited as one of the reasons why planning is difficult in Third World cities: that there is very little land in public (state) ownership. This kind of explanation is difficult to accept because in a country like Kenya the state is authorized by law to take land for public benefit as long as prompt and full compensation is paid (Kenya Government, 1970). In Kisumu, this Land Acquisition Act has been used recently to compulsorily acquire over 1300 plots in the Kanyakwar suburb of the town. In an interview with the Town Planner, Mr. Ocharo, it was learnt that this recently acquired land has been zoned as low and medium density residential area. Consequently, the residential houses that will be constructed there

will serve the interest of the upper income groups and not the interest of the deserving majority.

Private ownership of land is not the reason why rents are high at the periphery; it is merely a manifestation of the wider processes at work. Almost no housing analyst in Kenya has pointed to that glaring fact. A politico-economic system that does not stress majority welfare is bound to cater for the interest of a few powerful elites and leave the majority to fend for themselves. Since such a system would be based on the extraction of surplus value by labour exploitation, the majority of the urban poor would be left at the mercy of small entrepreneurial capitalists. The state, by neglecting the housing needs of the majority by building a few high priced houses, drives all the urban poor to the periphery thus inflating the land prices and house rents there. Furthermore, the state, by acquiring urban peripheral land for upper income group interests, aggravates the housing problems already existing in these areas by encouraging overcrowding.

It is common for Third World planners to argue that the rate at which the supply of low rent houses increases depends on the ability of the low income people

to pay. Since the majority of them cannot pay for the high priced houses, there have been virtually no state sponsored housing schemes for the urban poor in the recent past except the controversial site and service schemes.

To merely acknowledge that the low income people cannot pay is to miss the point. To ask why they cannot pay is the beginning of a more useful analysis, an approach that may go further and ask whether it is not for the benefit of the upper classes that many housing sub-markets exist in the urban centres.

To sum up, it may be asserted that the 'invisible hand' that allocates people to different residential areas of a city is not beyond the control of the upper classes. It may be appropriately called the 'invisible hand of the upper classes' because it clearly serves their interest.

CHAPTER FIVEURBAN POVERTY AND ITS IMPLICATIONS FOR HOUSING

In the last chapter it was shown how the existence of different housing submarkets mainly serve the interest of the higher income groups with the urban poor left with very limited room in which to fulfil their preferences. In this chapter, we shall discuss the implications for housing of mass urban poverty.

Before attempting to evaluate the 'solutions' being proposed for the housing problems of the urban poor it is important to examine the 'conventional' perspectives on what the housing problem is. This is important because policies advanced to deal with any developmental problem reflect how the problem is understood and defined by the planners. According to the 1979-1983 National Development Plan, one of the root causes of the housing problems is the high rate of urban population growth. As was pointed out earlier, the rural to urban shift of population intensified immediately after independence in 1963. This was partly a reaction to the colonial urban policy which restricted Africans from settling in cities, and partly a rational reaction to the land situation in the country whereby highly productive agricultural land had been expropriated from the indigenous population by the colonial settlers and dedicated to

mechanised production for export, thus creating landlessness and intensifying mass poverty.

This rural-urban shift was even 'encouraged' by the fact that the first generation of migrants after independence found it relatively easy to secure jobs in the industrial and administrative sectors. Urban population growth results mainly from migration and natural increase, and so if the rapid increase in the urban population was seen as one of the factors contributing to urban housing problems, then the solution would be seen to lie in curtailing migration and educating the people to have fewer children by adopting family planning techniques. The failure of this approach implies that an analysis of what causes migration and what induces people to have many children would be a positive starting point in analysing housing problems.

Another reason that has been conveniently used to account for the urban housing shortfall is the effect of inflation and global economic recession. It is argued that the financial base of most municipal authorities is weak compared to the level of expenditure needed to properly service the urban population, hence the development of urban amenities such as housing has lagged behind the desired level. Furthermore, increases in

building costs aggravate the problem and result in overcrowding and unauthorized construction of unplanned dwellings built of unsuitable substandard materials and lacking essential facilities thus exposing the inhabitants to hazards of epidemics and fire outbreaks. The implication is that if money were available, housing problems would be eradicated.

Akin to the economic emasculation of the Local Authorities is the acknowledgment by planners that a large section of the urban population lacks adequate purchasing power. It has been estimated that only about 30% of all the urban households in Kenya have sufficient incomes to afford minimum-cost housing, and that over 60% earn incomes that fall below the mean urban income (Republic of Kenya, 1979a). This implies that even if the government had to sponsor some public low income housing scheme, the target population would not afford them.

Land availability is also considered as one of the chief problems facing urban housing development and has resulted in the delay of many housing projects.

The foregoing national perspective on housing problems is similar to the perspective taken by planners in Kisumu. Planners here maintain that the lack of

finance is the most important constraint to the housing provision in the town. They add other factors like non-availability of land, land speculation and insufficient income on the part of the urban population. Despite the obvious confusion over the real cause of the problem, Kenya government is committed to a policy of homeownership and the total national requirement was estimated at some 290,000 units during the 1979 - 1983 development period.

The following sections discuss the nature and significance of overcrowding in Kisumu and how the urban residents respond to it, and also how urban housing rents do not reflect poverty among the majority of the urban residents.

5.1 THE NATURE OF OVERCROWDING

As a demographic phenomenon, overcrowding has always been interpreted as a symptom of housing shortage. In the Third World, it has mainly been associated with a housing deficit which results from the official misconception of what housing should be rather than what it is and the resultant insistence on stringent unrealistic standards founded on Western middle class values (Turner, 1966).

What is overcrowding? It must be admitted that there

is no universally accepted definition of overcrowding, though as far as Third World countries are concerned, the United Nations maintain that overcrowding occurs when there is an occupancy rate of 3 or more persons per room (Odongo, 1979). However, due to the enormous differences among countries an attempt to generalise on this term would be an enormous and worthless exercise.

In this study, overcrowding is taken as a situation where more people than the maximum allowed by law are staying in a house. In Kenya, the maximum occupancy rate for a two-bedroomed house is five persons. The problem with this definition is that it does not take into account the size of the house nor does it specify the sex and the ages of the occupants which would be important in assessing the extent of overcrowding. What are referred to in this work as 'demographic' and 'individual' overcrowding are seen as distinct from each other in that we may have a situation where two households are sharing a house without necessarily exhibiting individual overcrowding.

It was hypothesized that individual overcrowding is rampant in low rent areas whereas demographic overcrowding (i.e. sharing by distinct households) is dominant in the medium rent areas, with high rent areas exhibiting little or insignificant overcrowding problem.

The analysis of individual overcrowding involved ascertaining whether the mean number of people per room differed significantly among the three residential strata. The research revealed that there was an average of three, two, and one and a half persons per room in the low rent, medium rent and high rent areas, respectively. The original hypothesis was confirmed as the variations in the number of people per room in the three residential strata are not due to chance. It may be inferred that there is a housing shortage and that the houses built may be too small to cater for the needs of all inhabitants, hence the greater number of people per room.

A family of ten members should not be expected to rent more than one house as it may not be financially capable. Some of the possible causes of overcrowding will be summarized later; for the moment, all we can say is that there is overcrowding in Kisumu's residential areas.

One puzzling anomaly becomes visible when household sizes are compared among various estates (Table 5.1). The apparent anomaly is that the low rent stratum has the lowest mean household size (4.9) whereas the high rent stratum has the highest (6.5), and the medium rent stratum is in between, with a mean household size of 5.7. The mean household size for the town therefore is 5.7 persons. This is close to Omondi's (1981) finding

that the modal class of family size in Kisumu is 4 - 6 persons. The answer to the apparent anomaly may lie in the nature of households, that is, whether some households leave some of their members in the rural areas. This will be elaborated on later.

The analysis of demographic overcrowding also confirm the initial hypothesis that sharing by different households is more dominant in the medium rent areas

TABLE 5.1: THE MEAN HOUSEHOLD SIZES IN KISUMU BY ESTATES AND STRATA

STRATA	ESTATES	MEAN HOUSEHOLD SIZE
HIGH RENT AREAS	Okore	6.1
	Milimani	6.6
	Mosque/Kodhek	6.3
	Mboya	6.8
		$\bar{X} = 6.5$
MEDIUM RENT AREAS	Makasembo	7.4
	USAID	3.7
	Arina	6.6
	Kibuye/Patel	5.1
		$\bar{X} = 5.7$
LOW RENT AREAS	Nyalenda	3.6
	Nairobi Area	4.4
	Kaloleni/Arab	6.6
		$\bar{X} = 4.9$

than in the high and low strata. In fact, the comparison between the high and the low rent areas yielded a

Z - value of 0.79 showing that sharing in both strata do not differ very significantly at the 0.05 level. The differences according to estates may be observed in Table 5.2. According to the table, Makasembo estate exhibits the highest incident of house sharing, with 20% of the households interviewed admitting sharing. What was puzzling about the plan of Makasembo houses was that each house had an extra Chimney, suggesting that the planners anticipated sharing among households and so catered for it.

TABLE 5.2: THE FREQUENCY OF DEMOGRAPHIC OVERCROWDING IN KISUMU BY ESTATES AND STRATA

STRATA	ESTATES	FREQUENCY	PERCENTAGE
HIGH RENT AREAS	Okore	0	0.0
	Milimani	1	3.3
	Mosque/Kodhek	1	3.9
	Mboya	1	4.0
MEDIUM RENT AREAS	Makasembo	7	20.0
	USAID	1	2.5
	Arina	4	10.0
	Kibuye/Patel	6	17.1
LOW RENT AREAS	Nyalenda	0	0.0
	Nairobi Area	2	3.6
	Kaloleni/Arab	6	12.8

However, that does not explain the incidence of demog-

raphic overcrowding in other estates like Arina 10% and Kibuye/Patel (17.1%) which have no extra chimneys.

Much has been written about the assumed effects and functions of individual overcrowding. It is usually associated with two problems in the urban environment. First, it is common wisdom that overcrowding is a health hazard, encouraging the spread of infectious diseases like tuberculosis, cholera and dysentery. This is said to be a problem in overcrowded sleeping conditions with poor ventilation which are characteristics of low rent areas and squatter settlements of the Third World. It has been suggested by some researchers in India, Nigeria and Malaysia that housing conditions 'per se' should not be seen as the exclusive cause of poor health in the slums; other factors like unbalanced diet, inadequate medical facilities, water supply and sewerage must also be considered (Odongo, 1979).

Secondly, overcrowding has been associated with deviant social behaviour like criminality, prostitution and juvenile delinquency, suggesting that overcrowding causes pathological behaviour. The theoretical foundations for this view may be traced back to the 1920s in the works of the Chicago School of Social Ecologists — McKenzie, Park and Burgess — who attempted to explain social behaviour in terms of environmental determinism.

The institutionalized definitions and how they are used to refer to the activities of the poor may lead us to blame the environment 'per se' in causing the behaviour patterns observed in the slums and squatter settlements. It must be stressed that the minority with power in society determines what shall be considered criminal in an attempt to maintain their security and power structure. Consequently, any life-style pattern adopted by the poor for survival is automatically termed illegal or criminal if it tends to threaten the status quo.

Slums and squatter settlements have also been viewed as breeding grounds for political radicalism and violence. The official view in Kenya does not deviate from this as shown by the following excerpt from a speech by Kenyatta in 1972:

"Vagrants and idlers in Nairobi and other towns throughout Kenya were yesterday reminded by President Kenyatta of his call to 'go back to the land' to help the farming community continue developing the country..... 'It is only when we have got rid of vagrants and idlers that we can eradicate robbery and thefts', the president said". (Nairobi, East African Standard, September 28, 1972).

The connection between shanties and violence was

even made more succinct by a former Nairobi Provincial Commissioner who said 'Shanties were harbouring hundreds of criminals. Many of them are often responsible for pickpocketing incidents and night-time robberies'.

(Nairobi, Daily Nation, December 1, 1972). This view stems from the recognition that slum dwellers are deprived and frustrated and so may be tempted to avail themselves 'en masse' to any political demagogue advocating better life for them. Apart from this dysfunctionalist view of slums and squatter settlements, there are also functionalists who put forward a case in defence of slum housing. They see slums as a pragmatic solution to housing shortage and therefore should be preserved and improved rather than eradicated (Mangin, 1967). They view the slum as a 'Zone of transition' both socially and economically. It is sociologically a zone of transition in that the acculturation process takes place there among the new migrants who must be equipped with the right values and attitudes necessary for urban life. However, due to the plurality of Third World cultures evident in one single city, these functionalists fall short in explaining whose culture is being transmitted to the new migrants.

Economically it is a zone of transition, the functionalists argue, because it offers employment opportunities to skilled and semi-skilled urbanites and

so slums should not be seen as a dead end (Odongo, 1979). It is very unconvincing to view slums as solutions to the housing problems of the low income people. No doubt, they are a pragmatic reaction to the tight housing situation by the low income people. However, an adjustment to a bad situation does not necessarily mean a solution to the situation because it does not go to the root cause of the bad situation. The major weakness of the functionalist and the dysfunctionalist approaches to the slums is that they take the slums as datum and merely argue either for or against their existence. They do not attempt to explain why the slums exist in the first place. The crucial issue is to understand what causes overcrowding and not to take overcrowding as an independent variable causing other problems in the city. Overcrowding, as it manifests itself in the city, may be a method of adjustment among the poor to the political economy of the housing market in the Third World.

There is no doubt that overcrowding is related to income distribution and poverty in general, so it would be appropriate at this juncture to say something about the nature of income among the urban residents of Kisumu.

5.2 INCOME AND HOUSING

The estimation of cash incomes is not an easy task in Third World cities because despite the fact that some people engage in self-employment, others combine wage employment with some form of money-earning economic activity. The classification of employment opportunities in Kisumu is summarized in Table 5.3

TABLE 5.3: EMPLOYMENT CLASSIFICATION FOR KISUMU RESIDENTS BY ESTATES

ESTATES	FREQUENCY OF EMPLOYMENT TYPE	WAGE EMPLOYMENT	SELF-EMPLOYMENT	UNEMPLOYED/RETIRED
Okore		19	6	0
Milimani		21	9	0
Mosque/Kodhek		21	4	1
Mboya		21	4	0
Makasembo		30	3	2
USAID		39	1	0
Arina		35	3	2
Kibuye/Patel		27	8	0
Nyalenda		37	11	2
Nairobi Area		49	6	0
Kaloleni/Arab		27	17	3
Site and Service		49	2	0
TOTALS		375	74	10

The problem of estimation is compounded further by the

fact that most people are unwilling to divulge their income even when they have a regular one. For those who are self-employed, the difficulty is even acute because they normally do not keep accounts of their 'profits'. As already explained, thorough attempts were made to get around these obstacles and only two respondents refused to disclose their income.

It is believed in Kenya that on the average, housing absorbs between 15% and 20% of a family's income in the urban areas (Republic of Kenya, 1979a). This is a broad statement without any regard to income distribution or to the kind of dwelling structures that people of various income groups live in. The disadvantage of this generalization becomes clear when we examine Table 5.4 in which is shown the percentage of income that people spend on housing.

TABLE 5.4: THE PERCENTAGE OF INCOME SPENT ON HOUSING BY RENT CATEGORIES

% OF INCOME SPENT ON HOUSING	S T R A T A			T O T A L S		
	LOW	MEDIUM	HIGH	E	% CUMULATIVE %	
Below 9	36	16	1	53	13.0	13.0
9 - 14	56	47	8	111	27.4	40.4
15 - 20	48	28	27	103	25.4	65.8
21 - 26	8	31	31	70	17.2	83.0
27 - 32	1	14	20	35	8.6	91.6
33 - 38	1	6	7	14	3.6	95.2
39 - 44	1	5	8	14	3.6	98.8
Over 44	1	2	2	5	1.2	100.0

According to Table 5.4 the official figure of 15% to 20% of income that people spend on housing is not representative. Only 25.4% of the respondents conform to this official expectation; 40.4% and 34.2% of the respondents, respectively, fall below and above the official expectation. In fact, people spend as high as over 44%. These percentages are spent on rents alone and exclude expenditures on water and energy for cooking and lighting.

It was one of the objectives of this study to investigate whether the mean percentage of income spent by various income groups on housing differed significantly. As Table 5.5 shows, the lower middle income group (i.e. those earning KSh. 1500 - 2999 per month) paid an average of 20% of their incomes on rents, and this was the highest mean percentage paid by any income group.

TABLE 5.5: THE MEAN PERCENTAGE OF INCOME SPENT ON HOUSING BY INCOME GROUPS

INCOME GROUP (KSH. PER MONTH)	MEAN % OF INCOME SPENT ON HOUSING
Lowest (0 - 1499)	17.4
Lower middle (1500 - 2999)	20.0
Upper middle (3000 - 4999)	18.1
Highest (5000 +)	19.7

Only the difference between the lower middle income group and the lowest income group is statistically significant ($\alpha = 0.05$). We must be very cautious in interpreting these results because the type of dwelling structures for which the low income people pay rents are not comparable in any way to the rest; most of them lack the basic urban services. The lower middle income group also lives in relatively poor structures and yet pay the highest percentage of their income on rents.

It is not enough just to quote the percentage of income a particular group spends on housing; it is more meaningful to examine what the actual incomes are because it would be meaningless to state that a person who spends 10% of KSh. 400 per month is luckier than another who spends 25% of KSh. 10,000 per month on rent. This is because what they are left with to spend after paying the rent is the most important thing. Table 5.6 shows the distribution of income by estates. About 21% of the respondents earn less than KSh.1000 per month and they spend at least 20% of that on housing. These people live in the slums and squatter settlements where there is no mass availability of tap water and electricity. So after paying the exorbitant rents, they have to pay for water which they buy from water

TABLE 5.6: THE DISTRIBUTION OF MONTHLY INCOMES BY ESTATES

ESTATES \ INCOME CATEGORIES	LOWEST 0 - 1499	LOWER MIDDLE 1500 - 2999	UPPER MIDDLE 3000 - 4999	HIGHEST 5000+
Okore	0	8	13	4
Milimani	0	0	7	23
Mosque/Kodhek	0	6	18	2
Mboya	0	1	10	14
Makasembo	9	20	4	2
USAID	6	32	1	1
Arina	5	23	11	0
Kibuye/Patel	4	18	12	1
Nyalenda	45	4	0	0
Nairobi Area	20	35	0	0
Kaloleni/Arab	39	3	4	1
Site and Service	6	44	1	0
TOTAL	134	194	81	48

mongers at an average of 35 cents per four-gallon tin.¹

Table 5.6 also reveals a very important phenomenon — not everybody who stays in the low rent areas has a low income. For example, four respondents staying in Kaloleni estate were earning between KSh. 3000 to KSh. 4999 per month whereas one respondent in the same estate

1. There are some water kiosks in these slums owned by private individuals who have managed to get connected to the main municipal water pipe. Whenever there is a water shortage in the town, a very common phenomenon, some individuals capitalise on that and sell to the people untreated water from the lake, rivers and ponds.

was earning over KSh.5000 per month although he was self-employed.

Likewise, some people reside in medium rent houses and yet their incomes are meagre; for example 24 respondents earning less than KSh.1500 per month were staying in medium rent residential districts.

Much has been written about income inequality in Kenya (ILO, 1972; Leys, 1975; Hazlewood, 1979; Sandbrook, 1982). These works have drawn attention to the path of development that Kenya has adopted, and have all called for a redistribution of the national income within the existing socio-political framework though none of them suggests how this can be done concretely and successfully. They are more interested in a modification rather than a change.

The official minimum wage for a non-skilled worker in Nairobi is Ksh.480 per month and much less in a town like Kisumu where it is Ksh.442 (Kenya Government, 1982). ✓

Given his meagre income, if he is employed at all, the escalating prices for essential commodities, and the ever increasing rents, it is important to examine how the poor man responds to this glaring poverty amidst plenty and the implementation of elitist development programs in his endeavours to eke out a living. Understanding their coping responses may be of help in formulating policies that help improve their conditions

within the existing structure in the absence of a radical structural change. There are at least four ways, discussed below, in which the urban poor in Kenya responds to the elitist development policies.

First the poor will adjust to conditions of overcrowding. Because he does not have either a secure job or enough money to facilitate renting a spacious dwelling unit, the urban poor will rent a one roomed unit built without any regards to his general needs. Over 50% of the respondents in the low rent areas lived in single roomed houses. This percentage may have been lowered by the inclusion of heterogenous residential districts like the Nairobi area in the low rent areas.² The congested one-roomed houses usually lack any other amenity apart from a bed space, where all the household functions are held. This may force some members of the household to look for sleeping spaces in the neighbours' houses or even in other estates as was the case with some respondents in Kaloleni and Arab Manyatta. These are common phenomena where parents are staying with their grown up children in single roomed units. However, some parents who are capable, like one herbalist in

2. Nairobi Area is considered heterogenous in that the municipal council allocates land in this area to individuals who then submit their building plans to be approved by the Council. In such situations, a developer can construct an ultra-modern house in an area that is considered as belonging to the poor people. One of these houses is shown in Plate 7.

Nyalenda, rent other rooms in the estate for their children. Apart from just members of the same household tolerating overcrowded conditions, sharing of houses by different households is also very common, particularly in the medium rent areas. Does this mean that the inhabitants of the low rent and high rent do not consider house sharing a viable venture?

Since most inhabitants of low rent areas live in single-roomed units, they do not have space for extra economic activities. Furthermore, they cannot sublet from high income areas primarily because they cannot afford the rent and also because there are not enough rooms in these areas as houses contain whole families together with relatives and domestic workers (McGee, 1979). Therefore, these constraints on the possibility of subletting, a very lucrative business in Kenya today, by the very poor and the rich leave the option to the middle income people who are threatened by inflation and are continually fighting against joining the ranks of the urban poor.

Subletting is mainly rampant in the municipal rental houses, and the extra money generated by this practice is appropriated by the person subletting, who thus evades income tax. However, the extent and impact of this emerging form of informal economic activity needs further research.

The second way in which the low income urban residents respond to the elitist policies in the Third World is to engage in what is called 'informal occupations'. The informal sector, consisting of economic activities that have not received recognition and protection by the government has been estimated to account for 28% to 33% of all those employed in Kenya (ILO, 1972). It has been stressed throughout this work that Kenya's policy of development has tended to encourage the co-existence of the formal and the informal sectors of the economy under the hegemony of the former. This mode of production may be referred to as 'peripheral capitalism'. According to McGee (1979), as classical capitalism penetrates a 'virgin' spatio-economic organization like pre-colonial Kenya, the existing non-capitalist modes of production are restructured (partly dissolved) and thus are subordinated to the predominant capitalist relationships and so, are conserved. The conservation aspect dominates the dissolution aspect and the dominant capitalist mode of production does not act to destroy the restructured mode of production because the latter engages in dependent activities that do not threaten the former. The persistence of this restructured sector (i.e. the informal sector of the Third World) ensures the availability of a cheap surplus labour force needed to keep industrial wages low.

Kisumu is well known for its hawkers, an aggressive breed of men, women and children who confine their activities mainly to the country bus park. Here they peddle wares ranging from stolen overdue drugs to second hand clothes. An increasing number of children engage in the trade despite the existence of the so-called universal free primary education. Their contribution to the family is needed if the family has to afford food and housing.

Another way to augment their income is for the urban poor to use their already overcrowded units as business premises and/or engage in a multiversity of occupations. Many studies in the Third World cities have concluded that a substantial number of the urban poor have employment both in the formal and informal sectors (Hart, 1973). Table 5.7 summarizes the major activities that some of the respondents engaged in. The informal activities listed in the table are only the ones which were being conducted in the residential dwellings; they exclude those activities that the self-employed carry out outside their residences. While 84% of these activities were recorded in the low rent areas, only 13% and 3%, respectively, were recorded in the medium and high rent areas.

In the high rent residential districts of Milimani and Okore in which these activities were recorded, they just involved cloth retail, an activity

that does not require extra space like the distilling and sale of liquor. It was the general consensus of the respondents in the low rent areas that exorbitant

TABLE 5.7: MAJOR INFORMAL ACTIVITIES IN KISUMU'S RESIDENTIAL AREAS

TYPE OF ACTIVITY	NO OF CASES
Distilling/sale of liquor	15
Sale of foodstuffs	13
Tailoring/cloth retail	10
General shopkeeping	9
Prostitution	7
Carpentry	3
Sale of charcoal	2
Barber/Hair stylist	2
Laundry services	1
Sale of miraa (Qat Edulis)	1
Herbalist	1
TOTAL	64

rents and lack of secure, productive and well-remunerative jobs dictated the necessity for converting a residential unit into a part-time business premise. In these circumstances, survival replaces profit-making as the driving force in business. When faced with possible starvation and eviction, the urban poor often have very little respect for bourgeois constraints like

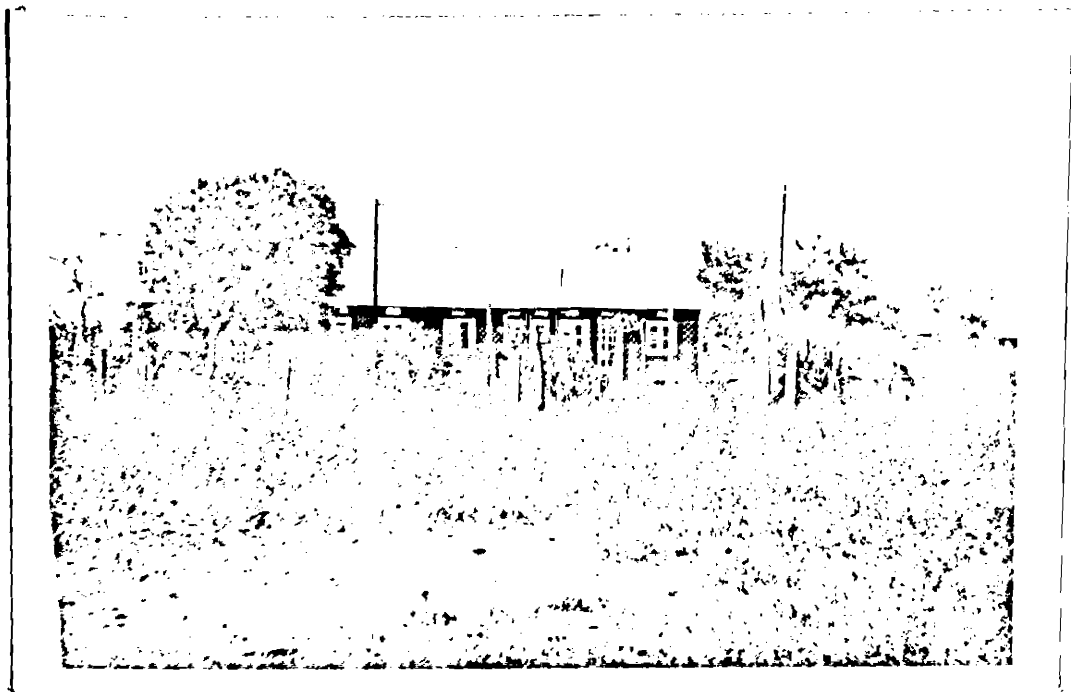


PLATE 7: An ultra-modern house with telephone and electricity at Nairobi Area. This area is normally zoned as low income area but the nature of land ownership here may explain the construction of high rent houses.



PLATE 8: The dawn of vacant land usurpation in Kisumu? The inhabitants are probably squatting on this vacant land between Makasembo and the Ten Swahili Houses.

the 'legality' of an activity, and are guided more by the principles of 'legitimacy' formed around these activities in the low rent areas. Hence, despite numerous harassments by the police, this pattern of life, though functional to capitalism due to the dependency relationships, will continue to gain momentum unless more radical and aggressive alternative programs for poverty alleviation are devised and implemented. The recommendation of the ILO report (1972) that the informal sector should be improved within the existing political and economic structures, has been criticised on grounds that only the most enterprising of the urban poor will gain from it.

The third response is squatting. It has received extensive treatment in Third World housing literature and so will just be referred to in passing here. Squatter settlements are technically defined in terms of legal status (Kayongo-Male, 1980). Therefore, in a narrow sense, squatting refers to residing on land that is not legally one's own. However, "in a broader sense, government planners in Kenya also consider as squatter areas those in which a large portion of the structures are built without regard to legal housing bylaws. The structures, then, are illegal in terms of these housing standards" (Kayongo-Male, 1980 p. 21).

In the general conception of squatter areas therefore, the residential areas surrounding Kisumu — Nyalenda, Manyatta, Pandpieri, Obunga, Nyawita and Migosi — are all squatter settlements. The chief motive behind squatting, where we confine it to usurpation of idle land, is to cut any overhead that rent causes, and so the proportions of self-ownership of the dwellings are expected to be high.

Mass usurpation of land is not very well developed in Kisumu yet, but as Plate 8 suggests we may be in the dawn of a new era of squatting in Kisumu. The inhabitants of the shack in Plate 8 sell charcoal to the residents of the estates nearby.

Finally, the urban poor may struggle to keep their heads above the turbulent urban water by maintaining very strong useful rural links if they are migrants. The importance of rural links is suggested in Table 5.8. According to this table, 87% of the respondents admitted having some property in the rural areas. This is normally in the form of a rural house or some portion of inherited land. The issue of rural land ownership by the urban residents has tended to be overstated and used by the authorities to oppress and harass the poor in Kenya's towns as symbolised by the "back to the land" exhortation.

TABLE 5.8: THE STRUCTURE OF PROPERTY OWNERSHIP IN KISUMU BY ESTATES

E S T A T E	I N K I S U M U		O U T S I D E K I S U M U		O W N S N O T H - I N G
	H O M E O W N E R S H I P	O T H E R	O T H E R T O W N S	R U R A L A R E A S	
Okore	4	0	2	23	1
Milimani	4	3	5	22	3
Mosque/Kodhek	1	4	0	26	0
Mboya	5	2	2	23	1
Makasembo	0	1	0	33	2
USAID	1	1	3	35	3
Arina	0	5	3	38	1
Patel/Kibuye	0	8	1	32	1
Nyalenda	3	2	1	43	5
Nairobi Area	1	1	0	55	0
Kaloleni/Arab	8	7	3	28	12
Site and Service	2	4	3	44	5
TOTAL	29	38	23	402	34

A former Nairobi provincial commissioner was reported to have said:

"..... all those living in the shanties had their homes, and even land back in the reserves but did not wish to stay there. 'The government, therefore, has no alternative but to take them back to their homes'" (Nairobi, Daily Nation, December 1, 1972).

Under normal circumstances, the majority of the urbanites own very small plots of land inherited from the parents, particularly if they are male migrants. Since less than 20% of Kenya is high potential agricultural land, further subdivisions based on a strong patriarchal tradition are very uneconomical however much it may be obligatory. The implication is that even when a respondent admits owning rural property, it may be an economically worthless possession.

Not every respondent admitted owning any rural property. About 7% claimed they had no property in the rural areas. The majority of them reside in Kaloleni and Arab Manyatta (Table 5.8), two areas that have Nubian and Arab influence and whose inhabitants have no claim to any rural part of Kenya. Among those with no rural property are women (There were two women who owned the urban houses they were staying in). This is easy to understand because they are not traditionally entitled to inherit family land or property and furthermore the majority of the female household heads were either divorced or separated, thus exposing them to total dependence on the urban economy.

Much research has been done on the nature of migration in the Third World as it bears on whether the migrants consider themselves as sojourners in the city

or permanent migrants (Nelson, 1976). Rural-urban migration in Latin America is relatively permanent compared to many parts of Africa and some parts of Asia. People who regard themselves as sojourners in the city will seek different kinds of housing, demand fewer amenities and services, behave differently with respect to making friends and joining organizations, and use accumulated savings for different purposes. Migrants' intentions to return home or stay in the city are not always realized, but their behaviour in the city is determined by their intentions regardless of whether or not these expectations are realized.

How does the phenomenon of temporary/permanent migration affect housing? Temporary or uncommitted migrants will be reluctant to invest more than an essential minimum in housing, even if they can afford to spend considerably more. They may decide to rent rather than purchase a dwelling unit or even construct their own in the city. Temporary migrants are normally associated with a pattern of single room rental units, often shared by several male migrants or by two or more families.

Sex ratios have been used in many studies as a proxy for temporary migrations. Can this, then, explain why in Kisumu, individual overcrowding consisting mainly of

men is predominant in the low rent areas and in the squatter settlements? Many inhabitants of these areas leave their families in the rural areas to manage the farm in order to augment their meagre earnings in the cities, a clear indication of urban poverty.

It may be too broad a generalisation to suggest that temporary migrants do not build houses in the cities; some may build squatter shacks to reside in during their stay in the cities in order to avoid paying rents. However, the temporary migrants are most likely to be ill-educated and ill-paid and so may be willing to sacrifice momentary urban comfort and pleasure in order to save money and invest in the rural areas. This may partly account for their low demand of prestigious housing schemes.

Their willingness to invest in urban housing may be very low since most of the urban housing schemes commit them to urban life in order to repay the loans usually over a fifteen or twenty year period. Due to the instability of their job situations, they may not last long in one particular city and therefore their savings on a house in a particular city may be risky.

Whatever the reasons that hinder mass commitment to urban life in Kenya and Africa in general, the ramifi-

cations of this phenomenon on urban planning and policy is unquestionable. The way in which this will influence the degree to which housing tenancy policies are stressed as opposed to home ownership policy has been suggested by a study that compared homeownership in Kampala and Soroti in Uganda (Odongo and Lea, 1977). In that study the authors concluded that the willingness to participate in urban home ownership programs is strongly influenced by whether a person is committed to city life or not. The implication of their study was that massive home ownership programs may be irrelevant in a small provincial town whose inhabitants may still be having strong rural ties.

Therefore, housing programs that do not take socio-economic characteristics of the target population into account are not likely to be effective as will be shown in the next chapter.

CHAPTER SIXHOUSING THE URBAN POOR : REALITY OR ILLUSION?

This chapter concentrates on the challenges of housing the low income urban workers and the suitability of the programs designed to achieve this. It begins by summarizing the main housing objectives of the 1979-1983 development period. An explanation of the basic tenets of site and service and squatter upgrading schemes as prescribed by the World Bank (1974) is then given before an assessment of the application and impact of this approach to shelter provision in Kenya is dealt with. The focus is on these schemes because they are the latest 'twin package' believed to apply to the problem of housing the urban poor in the Third World (World Bank 1974).

It is the stated policy of the Kenya government to encourage urban home ownership, and the majority of the estimated 290,000 urban dwelling units needed during the 1979-83 development period were to be owner occupied (Republic of Kenya, 1979a). During the same development period, the housing policies and objectives were to include:

- i) increasing the stock of housing in the urban areas so as to keep pace with the demand caused by the urban

- population growth;
- ii) ensuring that the houses produced benefit in particular those families in the lowest income groups whose need for shelter is greatest; and
 - iii) maintaining a healthy and safe urban environment free from danger of epidemics and fire.

The housing programs designed to achieve these objectives are trichotomized into low cost housing (mainly the site and service schemes and the squatter upgrading programs intended for the low income people earning Ksh.300 - Ksh.1200 per month), medium cost housing (mainly tenant purchase schemes for people earning Ksh.1300 - Ksh.3000 per month), and high cost housing consisting mainly of mortgage schemes for people earning over Ksh.3000 per month.

It would appear that housing planners show a bias against the urban poor in advocating the construction of houses that are visibly beyond the reach of many. This is suggested by Table 6.1 which summarizes the planned housing construction in Kisumu for the period 1979 to 1988.¹

The estimated costs of the site and service type of houses shown in Table 6.1 mean that the majority of the

1. The amounts marked with asterisks in Table 6.1 are not the construction costs, but the amount of shillings per room per month needed to upgrade the squatter settlements. Source: Van Gemert (1979) p.11.

urban poor will be excluded from participating in these programs.

The location of the 'low cost' housing schemes in Kisumu is given in Figure 6.1

TABLE 6.1: THE PLANNED HOUSING CONSTRUCTION IN KISUMU:
1979 - 1983

YEAR OF CONSTRUCTION	SITUATION	TYPE OF HOUSES	NO. OF HOUSES (H) OR PEOPLE (P)	CONSTRUCTION COST UNIT (1978 KSH.)
1979	USAID	TENANT PURCHASE	71 H	40,000
"	"	TENANT PURCHASE	109 H	50,400
1981-1982	ONDIEK H/WAY	RENTAL	100 H	40,000
1979-1986	NYAGOL ROAD	SITE & SERVICE	86 H	100,000
1980-1986	AGA KHAN RD	PRIVATE	415 H	50,000-100,000
"	"	"	350 H	100,000 ⁺
1980-1986	MBOYA II	PRIVATE	70 H	100,000 ⁺
1980-1986	USAID II	TENANT PURCHASE	70 H	60,000
1980-1986	MANYATTA	UPGRADING	31,000 P	59 ⁺
"	"	INFIL PLOTS	12,037 P	108 ⁺
"	MIGOSI	UPGRADING	6,000 P	59 ⁺
"	"	INFIL PLOTS	3,040 P	108
"	MANYATTA NORTH	SITE & SERVICE	616 H	N.a.
	(NAIROBI AREA)	"	924 H	12,500
	"	"	924 H	16,703
	"	"	308 H	20,996
	"	"	308 H	51,140
1982-1988	NYALENDA	UPGRADING	29,000 P	59
"	PANDPIERI	"	20,000 P	59
"	"	INFIL PLOTS	5,027 P	10

(Source: Van Gemert, 1979.)

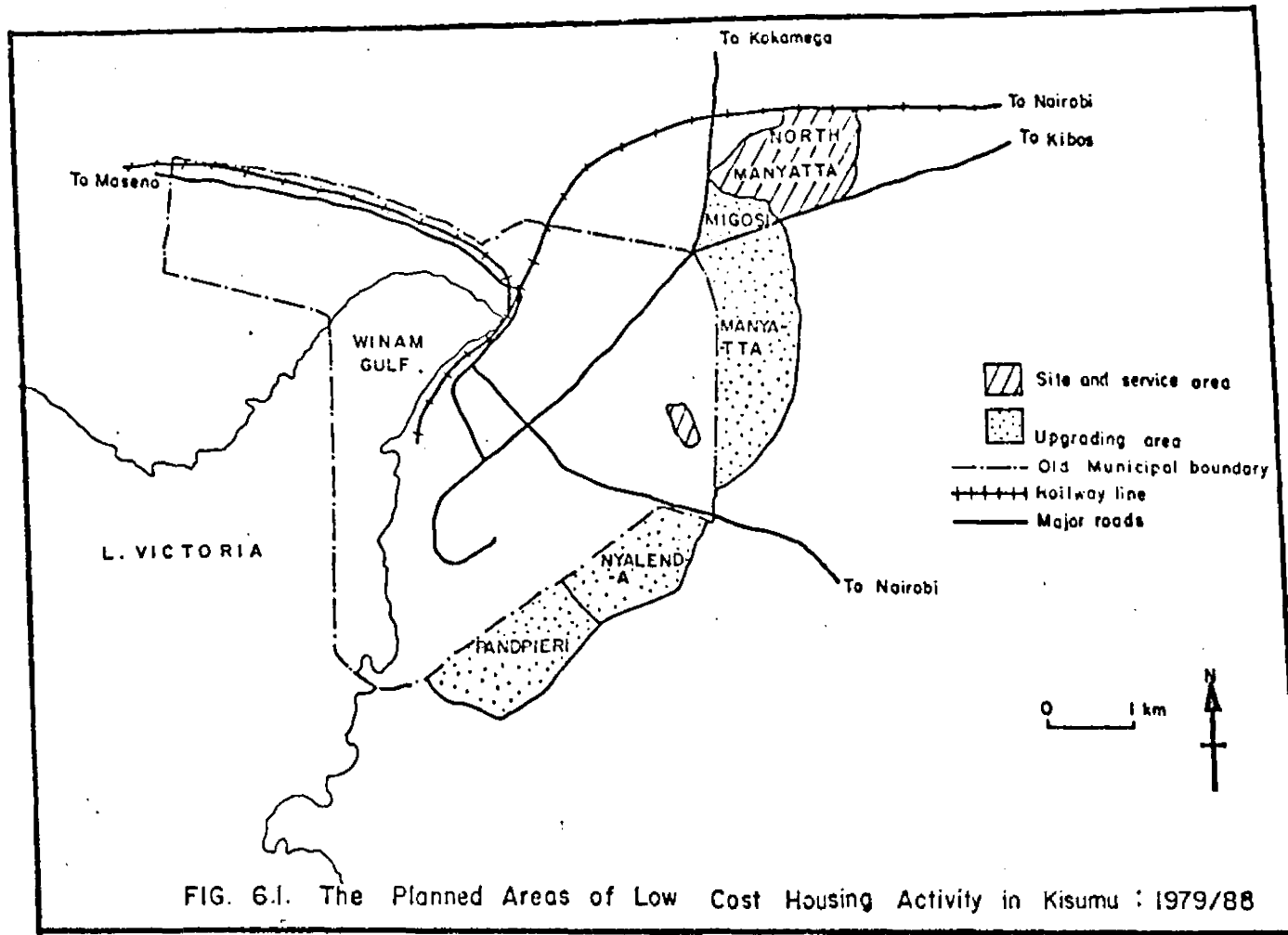


FIG. 6.1. The Planned Areas of Low Cost Housing Activity in Kisumu : 1979/88

6.1 WHAT ARE SITE AND SERVICE SCHEMES?

The site and service schemes approach to urban housing entails the provision of urbanized land and supporting services for the low income communities. Its essential components include building plots, water supplies, waste disposal, access ways and street lights plus several variable components.

This approach to shelter provision is a response to the failure of conventional low cost public housing programs to meet the shelter needs of the low income populations. It has mainly been influenced by the studies of Turner (1968) and Mangin (1967) of the Latin American squatter settlers. Many reasons have been advanced to account for the failure of conventional housing in the Third World to meet the needs of the majority. Some of these are: lack of effective demand due to mass poverty; stagnant economies characterised by explosive urban population growth; and the low national incomes of most Third World nations which make the replication of such massive programs impossible (World Bank, 1974).

The majority of Third World urban dwellers are therefore housed in the squatter settlements. In fact it has been estimated that over 50% of all urban households in Kisumu and Mombasa are housed in squatter areas (England and Alnwick, 1982).

The site and service schemes approach recognizes the endeavours made by the poor to employ and house themselves albeit in an unproductive and inefficient way in situations of extreme scarcity of employment and housing. By stressing progressive housing production over instantaneous housing supply, this approach aims at stimulating maximum private involvement in shelter development, and implies that urban residents have the ability and willingness to house themselves. The serviced plots allocated to the poor are to be developed by the poor themselves into habitable dwelling units over a given period of time using either family or communal labour.

The improvement of unauthorized residential areas has been accepted as an integral part of the serviced site approach to urban shelter. Upgrading constitutes the legalizing and servicing of these areas for residential purposes by providing tenure, minimum infrastructure along with basic community services and employment facilities. The pace at which serviced plot development proceeds is generally too slow to accommodate plans for wholesale resettlement of existing squatter areas, and so in the absence of a concurrent squatter upgrading program the demand for the few available serviced plots may render the whole exercise futile. Upgrading alone, however, is politically unacceptable in most cases because it would not satisfy growth requirements. New plots are obviously necessary to preclude additional unplanned growth and prevent increased

densities in existing settlements from undermining improvements. In sum, both upgrading and new sites development are complementary aspects of an overall serviced site approach which is expected to unify the formerly disjointed efforts of public and private sectors.

6.1.1 The Benefits of Site and Service Projects

According to the World Bank (1974), this approach has many advantages which include:

- i) a great increase in the supply of building plots with urban infrastructure and services at a cost that the poor can bear;
- ii) restraint on the growth of squatter settlements since these serviced plots will absorb both the potential and incumbent squatters;
- iii) increased scope for self-help construction providing dwellings at minimum cost;
- iv) increased security of tenure which is a prerequisite for commitment to community development and an incentive for the improvement of the dwelling unit; and
- v) significantly improved employment and training opportunities for the low income people during the execution and replication of these programs.

The upgrading of existing squatter settlements

by providing infrastructural services and loans for in situ improvements of dwelling structures can also secure the same benefits if executed properly.

6.1.2 The Project Design

The needs of the target population must be understood, and also the repercussions that the meeting of these needs will have on other income groups. The first issue concerns the ability to pay in that if only those who have the money to pay are considered then the poorest stratum of the urban population will tend to be excluded from the program. However, it is considered pragmatic by the World Bank (1974) to choose a fairly large middle stratum of the lower income groups for the start if the costs are to be recovered and the scheme replicated.

The second issue is about the size of the project. This should take into account the growth of the target population over time through natural increase and immigration. If this growth is not catered for, overcrowding and exorbitant rents may escalate.

As far as the design standards are concerned, reference must be made to local conditions, income levels and customs which affect both the demand for services and the cost of supplying them. The standards chosen must

consider flexibility for future upgrading. The selection of an appropriate site is of utmost importance to the success of the projects. Isolated locations should be avoided because access to employment opportunities without substantial travel is important.

6.1.3 Project Financing

The value of land comprises a very important part of the total costs of the project, and most often it is a major part of the government's contribution to the project. A central issue in the preparation of site and service projects is the allocation of the total costs of the project, both capital and current, between the public authorities and the settlers. The World Bank (1974) maintains, as a general rule, that public services which are supplied without special charge to other parts of the community (like primary schools, health centres and primary roads) should be undertaken by the public authorities. It is also customary to allocate the land costs between the public sector and the settlers on the basis of proportionate net land use for the different public and private activities.

Some of the fundamental factors to be considered when charging the settlers include:

- i) The settlers should not generally be charged more than the allocated costs;

- ii) Any subsidies should not be so large as to increase the attraction of becoming a settler to the point where the selection process would be undermined and the benefits transferred to higher income groups; and
- iii) Direct subsidies should not be so high as to prevent extension of the program by the authorities; and indirect subsidies like low interest rates should not be so great as to create similar problems.

The capital costs allocated to settlers are generally recovered in two parts: an initial down payment and a charge to amortize the remainder and interest over a period of years. The size of the down payment must take into account the savings immediately available, the levels of incomes and expenditures which will be needed for dwelling construction. If it is placed too high, the completion of dwellings will be delayed. Some variation in the down payment ratio may also be desirable, lower ratios being applied to smaller plots with fewer services, and higher ratios to those where, for instance, a core unit is supplied. In practice, down payments tend to be in the range of 10% - 20% of the allocated capital costs.

The length of amortization period and applicable interest rate raise further issues. A long

amortization period may help the poorest settlers whereas a short period may enhance a quick expansion of the program. A compromise usually indicates a repayment period of 15 to 20 years. The World Bank (1974) recommends that the interest rate should at least equal the rate at which the public authorities can borrow long-term funds locally plus an allowance for defaults and collection costs. Sometimes a case may be made for charging below the calculated recovery rate during an initial period of three or four years while the dwelling is being constructed, with a compensatory higher charge in later years. This has an advantage because it may be assumed that incomes of the settlers will grow over time.

6.1.4 The Project Organization

There are two schools of thought regarding the organization of these projects. The first is more or less 'democratic' in that it stresses minimal intervention by public authorities. It argues that given land, title and services the settlers will organize themselves properly to produce a favourable living environment capable of being upgraded when need arises. According to this school, therefore, the well-intentioned intervention of experts from another milieu, whether domestic or foreign, is considered counter-productive.

The opposing school stresses the benefits of a highly organized group, and argues that the group spirit may not develop quickly or even spontaneously. It recommends supervised organization by arguing that unsupervised dwelling development particularly where densities are high risks to degenerate into inefficient and unattractive new slums with limited social cohesion. Due to the differences among countries and the varying complexities of squatter settlements, local conditions should be a guide to the appropriate organizational framework.

The problem of the selection of settlers is enormous given the fact that the numbers of people who need to be housed in Third World cities increase rapidly. One way of reducing or restraining the number of applications to manageable proportions is to raise the price which settlers are to pay until the demand matches the supply (World Bank, 1974). This 'rationing by the power of the purse' may exclude the majority of the lowest income people from the sites provided, but it is believed that their interests will be served through trickle down from vacated dwellings of richer groups. Other factors like income security, evidence of commitment to self-help and community development, and the social cohesiveness of the groups which will facilitate

community organization should be considered in the selection of the site and service settlers.

Either a 'first come, first served' procedure or a lottery selection among the applicants who have fulfilled the requirements may be used in plot allocation. The general terms of land tenure whether leasehold or freehold are important because it is a stimulus to the settlers to invest their money in constructing and improving their dwellings.

One problem that must be resolved satisfactorily pertains to the regulation of renting of accommodation by settlers. Despite the fact that it may increase densities and encourage exploitation, renting part of the dwelling unit can help both to relieve pressures in existing squatter settlements and to provide the capital required for extending the dwellings beyond the first core rooms.

In order to avoid or minimise clandestine arrangements for plot re-sale, adequate compensation should be paid to settlers who must give up their sites due to unavoidable reasons. And to avoid any premature sale of plots by the settlers, a system of deferment of full tenure rights till a satisfactory level of dwelling is constructed should be maintained.

6.2 SITE AND SERVICE SCHEMES IN KENYA

It is the government of Kenya's declared policy to house the low income people through the implementation of site and service schemes, and in 1980 these schemes constituted 60% of the entire housing program.

The essence of the policy is the pooling of government funds for infrastructural services and building materials with the participants' resources in savings and family labour. The low income sector is defined in the development plans as that section of the population earning monthly incomes of between Ksh.300 and Ksh.1200. The government's contribution in the form of loans is K£700 per plot, half of which is for infrastructural services and the balance is given out as a materials loan to supplement the allottees' resources in purchasing construction materials to put up a minimum of two habitable rooms in addition to the wet core, that is, a complete habitable room, toilet, bathroom and kitchen.

The implementation of the site and service schemes is the responsibility of the National Housing Corporation in collaboration with the respective municipal authorities. The site and service department falls within the Technical Branch of the corporation. The Technical Branch is headed by the Chief Architect of the Corporation. The structure of the personnel of the

site and service department is illustrated in Figure 6.2

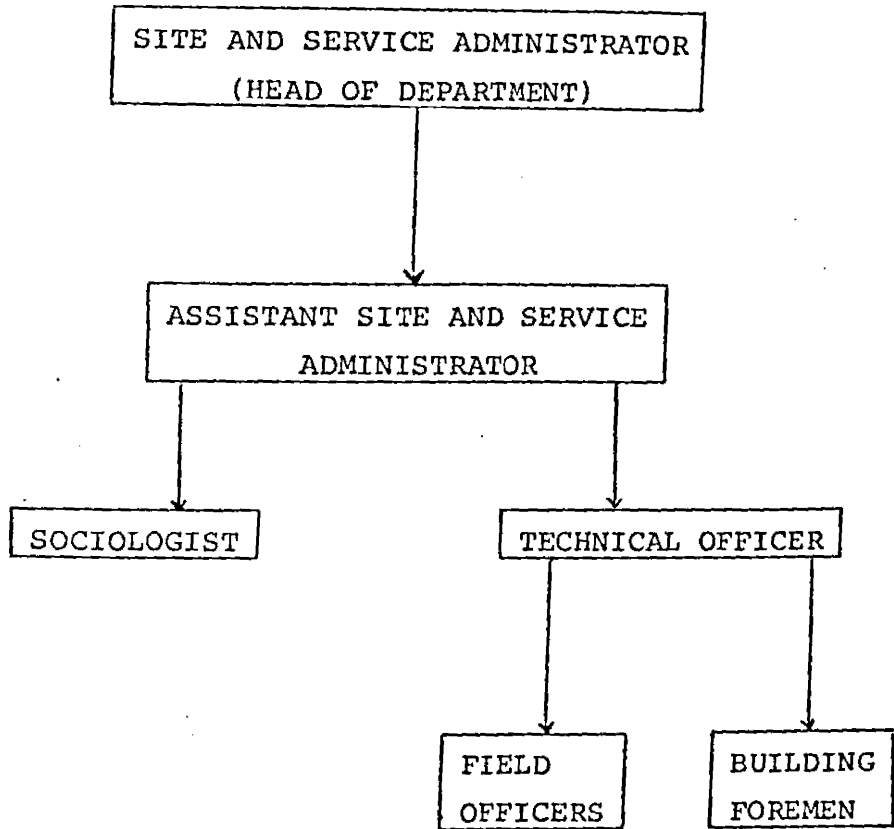


FIG. 6.2. The Structure of Site and Service Schemes Personnel in Kenya.

The department consists of the head office and the field staff, and the head of the department is the site and service administrator. The functions of the department are organized and co-ordinated through the head office. As of 1980, the field staff consisted of seven field officers and six building foremen.

The weakness with this bureaucratic structure is that decisions are centralised in Nairobi. This may not augur well for the many widely-scattered municipal authorities

whose problems may not be necessarily the same throughout the country. Therefore, unnecessary delays may frustrate or even cripple the realization of the stated objectives of site and service schemes.

6.2.1 The Allocation Procedures

The availability of plots is advertised in the local newspapers and the applicants normally pay a non-refundable fee of Ksh.100 for the application forms. The major conditions that applicants must satisfy before being considered for plot allocation are:

- i) The duration of work in the town must not be less than six months;
- ii) Not already owning a house and/or business cum residential plot in the town;
- iii) Have a family income of between Ksh.300 and Ksh.1200 per month;
- iv) Able to pay a minimum deposit of about Ksh.700 together with other Local Authority charges. The monthly repayment is about KSh.158 for 20 years with an annual interest of 6½%;
- v) Must undertake to reside on the plot and not transfer it without official permission; and
- vi) must be less than 50 years old.

If the plots are being developed and allocated

in a cosmopolitan city like Nairobi, applicants are grouped according to provinces and quotas are applied depending on the number of applicants from each province so that no particular region is favoured. The allocation is done by the Allocation Committee. On the other hand, if plots are developed in provincial towns like Kisumu, the site and service department of the National Housing Corporation in conjunction with plot allocation committees of the various Local Authorities screen and select the allottees through balloting.² However, it was learnt that the ability to pay overrides all other considerations.

The allottees are then given about three years during which to construct the number of prescribed rooms. Towards this end, they receive vouchers worth KE350 for buying construction materials.

The National Housing Corporation has found it expedient to sell a certain percentage of the plots in the site and service schemes at current market values. This system, recommended by the World Bank, is expected to have a double-pronged effect on the scheme under construction. First, the profits realized from such a

2. The secret balloting technique is a form of lottery mechanism whereby all the names of the applicants who have satisfied all the conditions are put in a rotating drum and drawn randomly until the number of names drawn match the number of available plots.

sale are used to cross-subsidize the rest of the plots, and second, it detracts the predators from the high income groups from encroaching on the rest of the plots as their needs are officially fulfilled.

The allottee is not allowed to sell his plot within a period of five years from the date of allocation in order to prevent these plots from getting into the hands of more well-to-do persons for whom they are not intended.

In order to ensure that a plot holder's own labour is not misused by constructing dwelling structures that are later demolished, the NHC provides in one of the plots a demonstration house showing the possible ultimate standard expected of the plot holders. In addition, the NHC has on site both technical and practical supervisors in the form of foremen whose duty it is to supervise and also to work hand in hand with the plot holders in the processes of erecting their own houses.

6.3 AN ASSESSMENT OF THE IMPACT OF LOW INCOME HOUSING PROGRAMS

The assessment of the viability of Kenya's official programs for housing the urban poor will be made under two-interrelated sub-headings: the allocation mechanism and the achievement of the major objectives of these schemes.

6.3.1 The Allocation Mechanism

One of the chief conditions for eligibility to participate in these housing programs is family income. The government has placed income limits officially as Ksh.300 - Ksh.1200 per month. Whereas putting such limitations may help in keeping away high income predators who want to prey on these houses, it may also keep away the genuinely needy from participation. There has been a tacit call by the NHC to raise the income limits on the grounds that it is too low and that some of the allottees have no financial capabilities to construct houses on the plots (NHC, 1977/78). Such a call implies that all the NHC is concerned with is to have houses constructed on these plots even if this is at variance with the original objectives of these schemes as a panacea for the housing problems among the urban poor.

The raising of the income limits was also under consideration in the USAID housing scheme in Kisumu which was originally intended for people with a monthly income of Ksh.400 - Ksh.1200. The authorities wanted to raise this to Ksh.500 - Ksh.1600.

It is not surprising that despite the already stringent financial conditions laid by the government which frustrates the aspirations of the urban poor for home ownership, the NHC still calls for more stringent conditions.

This is because with the current organization of these programs, anyone earning below Ksh.2000 per month cannot possibly construct any dwelling unit on these plots because of the cost of building materials. In our sample, about 50% of the respondents were earning a monthly income below Ksh.2000 and so, in reality, would not be in a position to participate in these programs.

As concerns eligibility, only what is asked and stated in the application forms form the basis on which subsequent housing allocations are made. No further research is done to ensure that allocations are done fairly. This weakness was admitted by the Managing Director of the NHC when addressing the Fifth USAID African Conference on Housing in Monrovia, Liberia. He said:

"More often than not little or nothing is known of the 'bona fide' plot holder beyond his pay slip worth and yet much is expected of his latent resources" (NHC, 1977/78 p.38).

A more realistic mechanism would allocate houses to the applicants in the following order of priority:

- i) Households formerly sharing a dwelling unit;
- ii) Households formerly living in poor environmental conditions; and
- iii) Households paying higher rents incompatible with their real incomes.

In order to demonstrate the loopholes inherent in secret balloting, a study of the housing allocation in Nigeria using the same mechanism concluded that:

"64% of the winner household respondents vacated their former dwelling units not because the houses were of poor quality or overcrowded or because they were living there temporarily or sharing with other households, but solely because they won federal housing units" (Sule, 1978 p. 76).

To that group of occupants, no serious housing needs warranted their change of accommodation, but the mechanism used to allocate these houses was unable to detect this. Balloting may also lead to delays as Sule (1978) found in Nigeria where allocations had to be cancelled thrice making the houses idle for three years despite the acute housing shortages. The major snag was that some people had more than two allocations made to them because the process did not restrict people from submitting more than one application forms. Situations where an individual gets two or more plots in a housing scheme have been widely reported in the Kenyan press (The Weekly Review, October 1, 1982 p. 26). One wonders therefore what the real function of the Allocation Committee is if everything is supposedly left to a game of chance.

Public housing, including site and service schemes, is subsidized by the government. Such public subsidies should be reflections of family income, and only those families that cannot pay for themselves should be eligible for them. However, the housing subsidies in Kenya operate in the opposite direction, with subsidies being utilized by the middle and higher income groups. This is evident in Kisumu where the ability to pay rent is the only condition for eligibility for municipal houses. Because of the inherent loopholes, any housing scheme that uses the inhumane secret balloting as the mechanism of allocation is bound to fail in its stated objectives and cause serious scandals. Serious scandals have been admitted by the NHC which allege that "ugly hands of politics", misuse of power, greed and sheer dishonesty have impeded site and service scheme plot allocations (NHC, 1980).

6.3.2 The Impact of Site and Service Schemes

Site and Service Schemes are expected to encourage home ownership, particularly among the low income people. Owner occupation of a dwelling has certain advantages.

- i) It contributes to neighbourhood stability and provides security and emotional satisfaction
- ii) Home owners are expected to maintain their living environment better than renters.

iii) Home ownership may ensure quick recovery of construction costs and therefore may enable a revolving fund to be created thus enhancing more housing production.

One disadvantage is that homeownership may restrict residential mobility and thus result in the deterioration of the housing environment as the houses gradually become inadequate for the needs of the original buyers. Furthermore in certain societies like the Kenyan one, people tend to hold on to houses even if they are no longer staying in them, that is, even when they have either moved away to their rural places of origin or to another town.

Home ownership seems to be popular with the Kenyan urban population today as evidenced by the quantity of application forms submitted whenever a home ownership scheme is advertised. For example, there were over 6000 applicants for the 180 units financed by the USAID in Kisumu which were occupied by January 1982 (The Weekly Review, October 1, 1982).

However, the fact that these people purchase the houses does not mean that they stay in them. Among the 40 respondents in the USAID scheme in Kisumu, only two were owner occupiers; the rest were tenants paying a median rent of Ksh.550 per month.

The same trend was observed in the site and service

scheme on Nyagol Road where out of the 50 respondents only one was an owner occupier, the rest being tenants paying a monthly median rent of Ksh.350.

It was argued earlier in this work that the majority of the middle and the higher income groups can only mainly engage in commercial investment because they lack the industrial capital which is a preserve of multinational corporations. Consequently, investment in home ownership has become a major source of supplementary income for the higher income groups and a few of them own chains of tenant purchase and mortgage houses which they rent to others. It would therefore be fallacious to assume that the policy of home ownership is beneficial to the majority just by examining responses to advertisements.

It is logical to assess the impact of site and service schemes by arguing whether they meet their stated objectives as anticipated by the World Bank (1974). One of the objectives is to provide plots and services at a cost affordable by the urban poor. Table 6.2 shows the basic minimum wages, exclusive of house allowance, in Kenya's urban centres (Kenya Government, 1982). The government recommends that in the absence of free accommodation provided by the employer, the employee is entitled to a house allowance equal to 15% of his

basic minimum wage. According to Table 6.2 the majority of the low income people would be earning below Ksh.1000 per month, and consequently would not be able to pay the minimum of Ksh. 700 needed as down payment for the serviced plots if they have to feed, house and educate their families.

TABLE 6.2: THE BASIC MINIMUM MONTHLY WAGES (KSH.) FOR EMPLOYEES AGED 18 YEARS AND OVER.

O C C U P A T I O N	NAIROBI AND MOMBASA	KISUMU AND OTHER MUNICIPALITIES
General labourer	480	442
Miner, Cook, Waiter	518	460
Night watchman	536	497
Machine attendant	544	507
Machinist	622	582
Copy typist	648	598
Receptionist, storekeeper	741	676
Tailor	816	750
Crawler tractor driver	901	840
Saw doctor	996	931
Cashier, heavy commercial vehicle driver	1085	1020

(Source: Kenya Government, 1982)

The pecuniary impotence of the target group has been cited by the NHC (1977/78) as one of the chief problems riddling site and service schemes. As a logical



PLATE 9: A section of the USAID assisted housing scheme in Kisumu. Can the low income people for whom they are intended afford them?



PLATE 10: Street hawkers in Nyalenda Eastate. Will upgrading end this informal activity?

consequence of this financial incapability of the majority of the allottees, there is a growing incidence of plots surreptitiously changing hands to the higher income groups. The National Housing Corporation (1980) calls this an 'evil necessity' without which hardly any housing development would take place in the site and service schemes. It is clear that in such situations, the original allottees do not benefit as they neither construct the dwellings on the plots nor can they afterwards afford to rent the houses constructed by the higher income people on these plots. In fact, in Kenya today, the majority of those who reside in the site and service schemes and the USAID assisted housing intended for the low income groups are mainly the middle income people owning cars and other houses in the town. For instance, out of the 40 respondents of the USAID houses in Kisumu only 6 were earning below Ksh.1500 per month, and out of the 51 respondents of the Kisumu site and service scheme only 6 had a monthly income of below Ksh.1500. Therefore, one of the objectives of site and service schemes which is to restrain the growth of squatter settlements is not realized since the majority of the low income people cannot afford to live outside the slums and squatter settlements. Once the original allottees have sold their plots they either go back to the existing squatter settlements (thus raising squatter densities)

or squat in other places (thus encouraging the proliferation of other squatter settlements).

Site and service schemes were devised to encourage self-help or autoconstruction in the provision of the living environment. In this way it was expected that the allottees would be encouraged and guided to be more inventive and innovative in utilizing cheap local building materials. However, in Kenya, certain Local Authorities have a negative attitude toward this approach to shelter provision, and so insist on the use of only permanent construction materials recommended in the stringent colonial Grade II Building By-laws (NHC, 1980). If the low income people are encouraged to utilize local materials and the labour abundant in these cities, they will not only be increasing the stock of affordable houses but also creating employment in these cities. This aspect of self help and mass job creation has been lacking in Kenyan site and service schemes where building contracts are awarded to the established construction firms instead of stimulating community development and reducing building costs.

A fairly flexible approach to this problem of standards and building materials has been tried in the site and service schemes in Upper Volta with sizeable success. There, each participant was allowed either to

build according to one of the nine models provided or to design his own provided he adhered to basic technical standards in order to minimise any environmental hazards. As many as 60% of the allottees selected one of the proposed models (Centre for Housing and Planning, UNO, 1978). Local materials were used in the construction of houses.³ The benefit of this approach is that it increases the incomes of the low income people who are engaged in the manufacture of the local building materials.

Community development or self-help is important among the urban poor for at least two reasons. First, their residences lack public services and they themselves lack the financial resources to acquire these services on an individual basis. Secondly, the urban poor lack the ability to influence government decisions particularly about resource allocation. Because their residences are often unplanned, the planners do not consider them for resource allocation in case this attracts more people to the already overcrowded areas. The willingness of the squatter settlers to contribute labour to build their own houses has been documented for Kisumu by Kayongo-Male (1980). She discovered that 89% of her respondents in Nyalenda, 98% in Pandpieri and 73% in

3. Compacted earthblocks of humus-free soil with a 5%-30% clay content were used for the construction of walls and foundations. Self-help groups and small building firms manufactured three types of blocks with varying percentages of cement content to be used in the construction. Experiments were also made with the use of brushwood for roofing which was a combination of traditional materials and modern construction techniques.

Manyatta were willing to contribute labour to construct their own houses. She also found that a sizeable percentage of her sample — 74% in Nyalenda, 87% in Pandpieri and 51% in Manyatta — were committed to community development and were actually contributing either labour or money towards self-help projects in these areas. It is this willingness of the people to work collectively that should be tapped by the housing planners of site and service schemes if the financial costs borne by the individual have to be minimised.

It is logical to assume that temporary urban residents may not be committed to community development. The same applies to tenants. However, in Kisumu, Kayongo-Male (1980) discovered that only 25% of her respondents in Nyalenda, 7% in Pandpieri and 17% in Manyatta intended to eventually move out of their respective areas. Therefore, before the success of a site and service scheme can be evaluated, it would be imperative to estimate the number of people who are not likely to be committed to the development of their community.

Community development or organization among the urban poor must be encouraged and guided. This task needs a highly trained and adequate personnel. The size of the site and service personnel of the NHC is therefore

grossly inadequate and may be one of the reasons why there are delays in most of the programs throughout the country. Therefore, what the National Housing Corporation refers to as "built-in impediments" of the site and service schemes may be just the problems of conceptualization and implementation of these programs. If they are designed and implemented within the existing socio-economic structure with its inequitable income distribution, then site and service cannot be more than just a palliative and should therefore not be viewed as a solution to the housing problems of the urban poor.

There is now a great pre-occupation with squatter upgrading schemes. This is the improvement of the dwelling unit in situ, and is akin to the 'incumbent upgrading' in western capitalist societies in which local residents undertake physical improvements of their properties and the neighbourhood in general. Squatter upgrading is a recognition of the fact that though the squatter settlements are unplanned, they represent assets both in social and financial terms and so must be improved and legalised and not demolished. The provision of secure tenure is an essential incentive for people to invest in and improve their houses by themselves. The scheme pre-supposes that the majority of squatter inhabitants are owner-occupiers, committed to the improvement of their living environment on a self-help basis. At the

time of the collection of data for this work, data collection sponsored by the World Bank was underway in the Kisumu squatter areas as a guide to the upgrading program. Therefore, upgrading is still in its infancy in Kisumu and so as yet very little can be said about it.

The magnitude of the people who will be affected by squatter upgrading in Kisumu is given in Table 6.3. It may be assumed that the structures referred to in Table 6.3 as 'beyond repair' will have to be demolished. The question that remains is: What will happen to those whose dwelling units will be demolished?

TABLE 6.3: THE AREA, POPULATION (1978) AND HOUSING STOCK IN KISUMU'S SQUATTER SETTLEMENTS

DISTRICT	AREA IN HECTARES	POPULATION (1978)	TOTAL HOUSING STOCK	% IN GOOD CONDITION	% BEYOND REPAIR
Manyatta	180	31,000	1455	20.0	23.0
Nyalenda	120	29,000	1373	8.8	35.0
Pandpieri	137	20,000	1160	6.2	46.0
Migosi	45	5,000	253	31.0	9.0

(Sources: Waweru and Associates, 1976; Van Gemert, 1979)

If the program is not executed properly, it may bring suffering rather than relief to many families. The squatter upgrading in Lusaka, Zambia has been considered a failure because the World Bank fixed the costs to be

borne by the participants at a level beyond their means and so the default rate arrears increased as the scheme progressed (Hansen, 1982).

The success in community development is expected to be more impressive in upgraded areas than in the site and service schemes. Whereas participants in any new site and service area come from various parts of the city and so may have no special attachment to the development site, the families in an upgraded area, having presumably lived in their own homes for years, have established social relationships with their neighbours and so can easily work together. The implication is that squatter upgrading may be a more viable mechanism of alleviating squalor in the squatter settlements than site and services schemes. The former approach benefits the target group directly and is less vulnerable to the predatory tendencies of the higher income groups.

Any analysis of squatting that does not incorporate the macro-processes in society may end up suggesting the treatment of the symptom while the disease becomes cancerous and chronic. Any improvements in the squatter areas should not have the negative effect of attracting more people to the squatter areas. Therefore, the piecemeal treatment of poverty in the Third World by applying the conservative prescriptions and proscrip-

tions of the World Bank cannot solve the problems since they stress the reforms within the present structure of world economy (Sandbrook, 1982). Development programs, of which housing programs are a subset, must be designed to reduce the structural factors that leave people with no alternative but to migrate to cities and squat. So unless the wider societal inequalities are redressed, the proper housing of the urban poor will continue to be elusive.

CHAPTER SEVENTHE SUMMARY AND CONCLUSIONS

This study was aimed at investigating the exact nature of the housing problems in urban Kenya in general, and Kisumu town in particular. This was to help account for the apparent ineffectiveness of the curative measures proposed and executed by planners particularly those geared towards solving the housing problems of the low income urban residents.

This chapter begins by re-stating the major findings of this study. It then proceeds to identify the implications of these findings to the housing policies pursued in Kenya. Before suggesting some avenues for further research, some recommendations for action by economic and housing planners are presented.

7.1 THE SUMMARY OF MAJOR FINDINGS AND THEIR IMPLICATIONS FOR HOUSING POLICIES.

The first hypothesis was designed to investigate the extent to which the housing market in Kisumu is imperfect in relation to the flow of information on the vacant housing units. The sources of information were dichotomized into formal and informal sources and their areal variations were tested using the difference of proportions test. It was found out that the formal sources of information were significantly more dominant

in the high and medium rent areas than in the low rent areas at the 0.05 level. Conversely, the residents of the low rent areas rely more on the informal sources of information than the residents of both high and medium rent areas. This finding reiterates the findings in other Third World cities that low income people tend to cluster around relatives and friends for economic and social security (Lloyd, 1979). Therefore, the classical economic concept of a "free market" which assumes a uniform flow of information to the potential customers cannot be said to apply to the housing market in Kisumu. In fact, it has been argued that there are separate housing markets in the town catering for various socio-economic groups. The most advantaged of these groups in this set-up are the high income groups who have a wider information field than the other income groups and therefore have a wider choice field.

Due to the nature of housing as a spatially fixed commodity and its relatively inelastic supply, it should not be treated as a pure good whose value is determined by the interaction of demand and supply. The housing market has a political economic aspect to it. Hence the people whose interests should be taken care of by the state, the urban poor, are left to fend for themselves and are at the mercy of private landlords whereas the political and economic elites use the scarce national resources

mainly for their own benefit.

Given the imperfect urban housing market, the third hypothesis aimed at determining whether various income groups have similar perceptions of what makes a decent residence. The respondents were asked to rank the 27 residential districts in Kisumu from the most to the least preferred, and also to state their criterion for preference.

Thurstone's Law of Comparative Judgment Case V was applied to the data to estimate the scale values for each residential district. These scale values were then used as the dependent variables, and a computer package, GLIM, was used to estimate the relative importance of each of the physical and social independent factors that could have been used by the respondents in differentiating the residential attractiveness of each of the districts.

The scale values generated showed that all the respondents consider Obunga and Milimani as the least and the most desirable districts, respectively. There are some stereo-typical views on residential districts among both the high and the low income groups discovered in this study. The high income groups tend to lump all the 'bad estates' together but are capable of clearly distinguishing the relative desirability of the

high rent districts. The lower income groups on the other hand, also tend to lump the high rent estates together whereas they are capable of distinguishing between the individual estates in the low rent stratum. The major conclusion we may draw from the analysis of the third hypothesis is that we should be cautious in inferring residential preference from the actual spatial location of the residents. To what extent do the majority of the urban residents choose where to reside?

The disparity between where respondents live and where they would prefer to live becomes quite obvious in this study, particularly among the low income groups.

That all socio-economic groups have a general perception of what constitutes a decent residence becomes clear in this study. Urban residents consider the size and number of rooms as an important attribute of a residential unit. The construction materials are also important as they tend to correlate with the necessary amenities such as tap water and electricity.

The extent to which a residential district is known to the urban residents also influences their preference because they would not know how to rank an obscure district. That there is a general consensus as to what constitutes a decent residence contradicts some old views

that people understand the implications of their socioeconomic status and therefore would prefer only to live in an area that reflects that status.

Many people particularly the low income groups had no choice in deciding where to reside. Where they were found staying was, according to their knowledge, the only vacant dwelling place. Otherwise the exorbitant rents elsewhere restricted their choice. This may imply either a shortage of houses or mass urban poverty. Revealed preference may, therefore, be mythical and irrational. It should not be used as a basis for constructing different types of houses for various income groups, but just as a surrogate measure of what different income groups can afford.

The implications for housing of mass urban poverty have also been dealt with in this work. One of the most serious results of poverty is urban overcrowding. Overcrowding was dichotomized into individual and demographic types. It was hypothesised that individual overcrowding (i.e. excess number of people per room) is more dominant in the low rent areas whereas demographic overcrowding (i.e. the sharing of a dwelling by households) is more prevalent in the medium rent areas. The difference of means test was used to analyse individual overcrowding, and the result was that the mean

number of people per room in the low rent areas is statistically higher than the mean number of people per room in other strata at the 0.05 level. However, the mean household size in the low rent areas is lower than in the high and medium strata. This may be explained by the fact that some of the low income people tend to leave their families in the rural areas to engage in agricultural production so as to supplement the meagre urban earnings. The higher income groups on the other hand, tend to have the whole of their families in town.

The analysis of demographic overcrowding, using the difference of proportions test also confirmed our conjecture that the sharing of dwelling units is more prevalent in the medium rent areas than in the low and high rent areas. It has been argued in this work that overcrowding is definitely related to income distribution and poverty. It was discovered that at least 34.2% of the respondents spend over 20% of their incomes on house rents. This may necessitate sub-letting so that the renter can raise extra money to balance the high percentage of his income which is spent on housing. The respondents of the low rent areas may not sublet because most of their dwellings consist of single-roomed units. In order to generate extra cash, they often engage in informal economic activities which may often be carried out in the same room used for residence.

It has been argued that there are at least four ways in which the urban poor in Kenya responds to the poverty generated by elitist development policies.

These are:

- i) They have to adjust to conditions of overcrowding;
- ii) They engage in informal economic activities such as the brewing and selling of beer, prostitution and woodwork;
- iii) They may be forced to squat on vacant urban land; and
- iv) They may also maintain rural ties and invest there to supplement their incomes and thus consider themselves as temporary urban residents.

These responses to poverty have been shown to have serious implications for housing.

The impact of low income housing projects — site and service schemes and squatter upgrading schemes — has also been dealt with. The allocation mechanism, the conditions for eligibility, the design and organization of these projects have been shown to be the real causes of their lack of effectiveness. It has been argued that these projects as proposed by the World Bank (1974) cannot achieve their objectives if conceptualised and executed within the existing socio-economic and political framework of most Third World countries. This is because the unequal distribution of income in these

countries render the target group incapable of owning these houses, and so the houses usually end up in the hands of the higher income groups.

Squatter upgrading schemes which are supposed to accompany site and service schemes are argued to be comparatively capable of benefitting the target population since they involve the improvement of the houses in situ and so may encourage self-help.

The major weakness of the housing programmes, particularly the ones designed to alleviate the housing problems of the urban poor is that they aim at reforms rather than meaningful radical transformations. Hence, they have concentrated on symptom treatment by not incorporating the whole political and socio-economic milieu in their attempts to eradicate housing problems.

The policy of urban home ownership which is currently being stressed in Kenya may end up benefitting only the higher income groups if the issue of the capability of the lower income groups is not grappled with. If there are housing subsidies, then they should be aimed at benefitting the needy. In other words, planning policies should incorporate the tenets of social justice if the inequalities have to be reduced.

7.2 THE RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In the absence of deep structural changes, the

implementation of the following recommendations by the economic and housing planners would help in alleviating (not curing) the housing problems identified in this study.

1. There should be a review of the building standards and codes so that the western middle class architectural values may not frustrate peoples' efforts to construct shelter for themselves.

In Kisumu, a flexible approach to shelter provision would even encourage the utilization of the skills of the students at the Ramogi Institute of Advanced Technology (R.I.A.T.) and the Kisumu Technical School in providing cheap but reasonably durable building materials.

This approach may help alleviate the problems of the high cost of building materials. After all, asbestos which the authorities use for roofing has been linked with cancer and so may even be a health hazard.

Connected with this recommendation is the fact that there should be a revision of (or an explicit statement on) urban land policy which must of necessity minimize private urban land ownership. The unavailability of land has been primarily cited as one of the chief impediments to planned urban growth.

2. It was disheartening to learn that the only condition of eligibility for the Kisumu municipal houses is the ability to pay. There should be an introduction of

income/rent ratio in public housing so as to subsidise the low rents that would be paid by the low income residents. In other words, the rents for public housing should not be fixed, but should reflect the distribution of income. The rents should be set at say 20% of one's total net income depending on the size of the house and the available amenities.

3. The formation of a parastatal Housing Bank that lends money only to the owners of low income housing may stimulate the low income people to form housing co-operative societies for the purpose of acquiring housing loans. This would mean that an individual does not have to be recommended by his employer before being considered for a loan to construct a house on a plot allocated to him. This would also minimize the problem of collateral for loans, a serious handicap among the urban poor.

4. The National Housing Corporation should have a proper research branch that would enable it to come up with a viable housing policy. At the moment it seems that the Corporation does not have full autonomy in conceptualizing and executing its own programmes as implied by its Managing Director:

"One hopes that one of these days someone in a position of power and possessing practical courage will preach the need for a more

diversified approach to the provision of houses for Wananchi (NHC 1977/78 p. 4).

However, there should be no conflicting approaches by the Corporation and the Ministry of Works and Housing.

There are several avenues for interdisciplinary research in housing in the Third World. This is because the problem of mass accessibility to decent urban shelter continues unabated despite the fact that it has been recognised that poor housing is the most visible urban malaise in these countries.

One of the areas that needs to be researched thoroughly is the significance of the apparent effect of rural ties on urban home ownership and commitment to urban life. This would help in the formulation of housing policies with a proper mix of home ownership and tenancy.

In this work, one of the substantive findings is that there is a lot of sub-letting particularly in the medium rent areas. Further research should be conducted into the economic importance and impact of sub-letting as a way in which the medium income people respond to the relationship between insufficient income and high rents. Related to this would be the attempt to determine the pattern of subletting; whether it is a general phenomenon or whether it involves mainly relatives. Once its benefits and drawbacks have been

determined, the housing planners can then respond to it in their architectural designs.

As concerns the impact of site and service schemes on the alleviation of low rent housing shortage, what has been alleged is that plots surreptitiously change hands and that the majority of the residents in site and service schemes are tenants (Mwonge, 1982). What needs to be done is to determine the extent to which this amounts to subsidising the higher income groups in home ownership. This would help discover and seal the loopholes so that only those to whom plots are allocated are allowed to develop and stay in them.

Lastly, there have been numerous calls for research into the use of appropriate technology and local materials in housing construction. In countries like Sudan, there have been efforts to utilize local materials like adobe (unbaked, sun-dried brick) and asfadobe (a hybrid of earth and asphalt) in constructing houses, with the advantage of maintaining low construction costs. There needs to be much research into how local materials can be used, and to this end village polytechnics, Institutes of technology and other institutes of higher learning can be useful.

THE APPENDICES

APPENDIX A

HOUSING IN KISUMU TOWN: A GEOGRAPHICAL STUDY
OF DEMAND, SUPPLY AND POLICY

- A. Name of Estate
- B. Sample Number
- C. Date

I. GENERAL INFORMATION

- 1. For how long have you been a resident of Kisumu.....
- 2. Where were you born?
 - i) Country.....
 - ii) Province.....
 - iii) District.....
 - iv) Location.....

3. Which places outside your birth place have you stayed before coming to Kisumu (End with the place you were immediately before coming to Kisumu)?

<u>Place</u>	<u>Duration</u>
i)
ii)
iii)
iv)
v)

4. (a) How did you get accommodation when you first arrived here?

- i) Stayed with a relative
- ii) Stayed with a friend
- iii) Employer provided residence
- iv) Built own residence
- v) Any other (specify)

(b) Where was this? Name the estate.....

5. How long did it take you to get your own house
(beginning from the time you could afford one)?.....

6. How did you get the information about the vacancy
of your first residence?

i) Through mass media (T.V., radio, newspaper)

ii) Through office of estate agents

iii) Through notices on the spot

iv) Through relatives

v) Through friends

vi) Any other (specify)

7. How many different parts of Kisumu have you lived
in since you came here?.....

<u>Place</u>	<u>Rent</u>	<u>Year</u>	<u>Duration</u>
i).....
ii).....
iii).....
iv).....
v).....

8. What have been the major causes of your shifts?

i)

ii)

iii)

iv)

v)

9. How did you get the information about the vacancy of your current residence?

- i) Mass media
- ii) Office of estate agents
- iii) On the spot notice
- iv) Friends
- v) Relatives
- vi) Any other (specify)

10. What were the major determinants of your choice of the present residence?

.....

II. ECONOMIC/DEMOGRAPHIC/HOUSING CHARACTERISTICS

- 1 (a) Do you own this house? Yes/No
- (b) Do you own other houses/premises in town? Yes/No
- (c) If yes, where?
- (d) Do you own other property i) In the rural area.....
- ii) In other towns.....
- (e) If yes, what is the nature?.....
-
- 2 (a) What is the monthly rent for this house? KSh.....
- (b) What percentage of your income is this?
- 3 Where do you work? Name street/Road.....
- i) Town centre
 - ii) Industrial area

- iii) Within this estate
- iv) Outside the estate (specify)
- v) Outside the town (specify)

4. What kind of work do you do?.....
.....

5. What is your monthly income? Ksh.

6.(a) Do you get house allowance? Yes/No

(b) If yes, how much? Ksh.

7 (a) Does any member of your household engage in money-earning activity? Yes/No

(b) If yes, how many are they and what are their incomes?

i) Wives KSh.

ii) Children KSh.

iii) Relatives KSh.

iv) Friends KSh.

(c) What kind of work does each one of them do?

i) Wives

ii) Children

iii) Relatives

iv) Friends

8 (a) Is this house partly used as a business premise?
Yes/No

(b) If yes, specify the nature of the business and who carries it out:

- i) Nature of the business
- ii) Who runs it
- 9. How much do you get from the business per month?
KSh.
- 10. Where do you get the goods you trade in?
.....
.....
- 11. How old are you?Sex: Male/Female.....
- 12. How many bedrooms does this house have?
- 13. How many people stay in this house?
- 14 (a) How many households stay in this house?.....
(b) What is the breakdown of their sizes?
 - i)
 - ii)
 - iii)
 - iv)
 - v)
- 15 (a) Does everybody who stays in this house sleep
here? Yes/No
- (b) If no, where do others sleep?
.....
- (c) How many do not sleep here?
- 16. Rank the following residential areas in order of
preference:

<u>Estate</u>	<u>Rank</u>
1. Patel Flats
2. Milimani ✓
3. Tom Mboya ✓
4. Nyawita
5. Arina ✓
6. Nyalenda
7. Kaloleni
8. Pandpieri
9. Shauri moyo
10. Ondiek ✓
11. Nubian
12. Mosque
13. Pembe Tatu ✓
14. Shauri yako
15. Bandani
16. Migosi
17. Lumumba ✓
18. Obunga
19. Site and Service
20. Makasembo ✓
21. Kibuye ✓
22. Manyatta
23. Kodhek Flats ✓
24. Okore
25. Town Centre
26. USAID houses
27. Ofafa

17. What are your criteria for preference?
.....
.....

18. Does this house have: a) Water Yes/No
i) Individual meter
ii) Communal meter
b) Electricity Yes/No.....

19. The kitchen facilities i) Separate
ii) Communal
iii) Absent

20. The toilet facilities: a) Flushed: i) Individual
ii) Communal
b) Pit/Bucket: i) Individual
ii) Communal

21. What is the frequency of refuse collection by the
municipal council?

22. The shopping facilities:
i) shopping complex (Centre)
ii) Single shops
iii) Scattered kiosks

23. What serious complaints do you have about this
estate?
i)
ii)
iii)

iv)

v)

24. Give a short general description of the house and the estate (This is done by the interviewer)

i) House

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

ii) Estate

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

APPENDIX B

THE INTERVIEWS WITH:

- i) THE SENIOR ASSISTANT PROGRAMMING OFFICER, NATIONAL HOUSING CORPORATION, NAIROBI.
 - ii) THE DIRECTOR OF THE HOUSING DEVELOPMENT DEPARTMENT, KISUMU
1. Which residential areas belong to your Corporation (or department) and when was each started and finished?
 2. What socio-economic class of urban residents do you mainly cater for and why?
 3. What are the chief conditions that must be fulfilled by the would-be occupiers:
 - (a) Income bracket
 - (b) Minimum deposit
 - (c) Monthly payments
 - (d) Duration of stay in the town
 - (e) Family size
 - (f) Any other
 4. What are the characteristics of the houses you construct in terms of:
 - (a) Tenure policy
 - (b) Type of housing: detached, semi-detached, flats etc.
 - (e) The number of rooms.

5. What are the major reasons for the choice of each of the characteristics?
6. (i) What factors do you consider in the spatial location of residential areas?
 - a) Site characteristics etc.
 - b) Proximity to employment centres, the availability of infrastructure etc.
- (ii) Which is the most important for final decision?
7. What is your current total stock of houses in the town?
8. How do you allocate your stock of houses?
9. What is your annual rate of increasing the housing stock?
10. How do you project the future demand, and how effective is your method?
11. What are the major sources of capital for your housing investment?
12. What do you consider as the chief problems that you encounter in your endeavour to provide housing in the town?
13. How have you been combating these problems and how successful have you been?
14. How would you evaluate the role of your Corporation (or department) in solving the housing problems in Kisumu?

APPENDIX C

THE INTERVIEW WITH THE ACTING DIRECTOR OF HOUSING AND SOCIAL SERVICES (A DEPARTMENT OF THE KISUMU MUNICIPAL COUNCIL)

- 1 (i) Which are the chief agencies of housing supply in Kisumu?
(ii) Can you rank them in order of importance?
- 2 (i) How do you forecast housing demand in the town?
(ii) What key methods do you use in meeting this demand, and how successful are they?
- 3 What do you consider to be the 'housing problem' in Kisumu? Is it unaffordability, quantity, quality etc.?
- 4 (i) What is the current total number of Municipal housing units?
(ii) What is your major source of capital for housing provision?
(iii) What is your annual rate of increasing the municipal housing stock?
- ✓ 5 How many housing units does the town need every year to keep pace with the annual population increase?
- ✓ 6 What are the conditions required before one is eligible for a council house and why?
- ✓ 7 How do you allocate the vacant municipal housing units?
- 8 (i) Do you experience the problem of 'absentee tenants'?
(ii) If yes, how do you deal with it?

- 9 How can you assess the role of your department in solving the town's housing problems?
- ✓10 What chief problems does your department encounter in the implementation of its objectives?
- 11 What are your short-term and long-term objectives, and how do you plan to achieve them.

APPENDIX D

THE INTERVIEW WITH:

- i) THE TOWN PHYSICAL PLANNER
- ii) THE NYANZA PROVINCIAL PHYSICAL PLANNER

- 1 What criteria do you use for the allocation of various land uses?
- 2 What criteria are used for the relative location of various residential areas (e.g. high, medium, and low income residential areas)?
- 3 How effective are the land use zoning principles in the town?
- 4 How do you explain the apparent anomaly in the Migosi area where expensive houses are constructed in an area formally classed as a 'low income' residential area?
- 5 (i) What chief problems do you encounter in land use planning, particularly planning for the residential areas?
(ii) How do you solve them?
- 6 (i) What are your short-term and long-term plans for the town, particularly for housing provision?
(ii) How do you intend to achieve your objectives?

THE MATRIX OF SAMPLE PROPORTIONS (ALL RESPONDENTS)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	-	.48	.72	.85	.79	.14	.05	.05	.05	.22	.41	.28	.66	.38	.41	.02	.04	.30	.02	.07	.12	.38	.11	.65	.66	.62	.21
2	.52	-	.66	.87	.84	.18	.10	.12	.11	.24	.35	.28	.68	.33	.31	.08	.10	.26	.06	.14	.20	.34	.10	.67	.69	.51	.23
3	.28	.34	-	.79	.71	.04	.04	.03	.06	.10	.21	.15	.45	.21	.24	.04	.06	.22	.05	.09	.13	.29	.07	.44	.52	.42	.12
4	.15	.13	.21	-	.22	.02	.04	.01	.02	.05	.14	.08	.21	.12	.09	.01	.03	.13	.00	.03	.04	.16	.03	.14	.20	.12	.05
5	.21	.16	.29	.78	-	.05	.03	.04	.03	.07	.18	.11	.23	.12	.12	.01	.04	.16	.02	.02	.06	.21	.04	.18	.22	.17	.06
6	.86	.82	.96	.98	.95	-	.41	.18	.26	.80	.85	.76	.86	.81	.81	.31	.62	.81	.20	.56	.76	.79	.49	.82	.83	.83	.80
7	.95	.90	.96	.96	.97	.59	-	.26	.20	.83	.86	.85	.90	.89	.84	.30	.65	.83	.20	.64	.84	.82	.55	.90	.89	.87	.84
8	.95	.88	.97	.99	.96	.82	.74	-	.61	.83	.86	.83	.89	.89	.84	.25	.71	.84	.18	.80	.82	.81	.72	.91	.88	.87	.82
9	.95	.89	.94	.98	.97	.74	.80	.39	-	.84	.87	.88	.88	.87	.83	.27	.72	.82	.15	.77	.83	.82	.70	.90	.90	.86	.84
10	.78	.76	.90	.95	.93	.20	.17	.17	.16	-	.67	.62	.85	.68	.67	.17	.28	.53	.08	.21	.41	.62	.21	.85	.87	.82	.47
11	.59	.65	.79	.86	.82	.15	.14	.14	.13	.33	-	.45	.74	.53	.52	.13	.16	.35	.05	.18	.22	.48	.14	.71	.74	.65	.34
12	.72	.72	.85	.92	.89	.24	.15	.17	.12	.38	.55	-	.84	.64	.64	.13	.27	.54	.10	.20	.40	.61	.19	.82	.80	.76	.45
13	.34	.32	.55	.79	.77	.14	.10	.11	.12	.15	.26	.15	-	.13	.20	.08	.07	.16	.03	.09	.10	.25	.09	.40	.47	.39	.16
14	.63	.67	.79	.88	.88	.19	.11	.11	.13	.32	.47	.36	.87	-	.57	.08	.19	.43	.06	.18	.26	.53	.16	.75	.77	.70	.34
15	.59	.69	.76	.91	.88	.19	.16	.16	.17	.33	.48	.36	.80	.43	-	.08	.09	.36	.06	.19	.21	.47	.11	.84	.85	.73	.25
16	.98	.92	.96	.99	.99	.69	.70	.75	.73	.83	.87	.87	.92	.92	.92	-	.76	.87	.24	.84	.89	.85	.77	.96	.95	.96	.86
17	.96	.90	.94	.97	.96	.38	.35	.29	.28	.72	.84	.73	.93	.81	.91	.24	-	.84	.15	.54	.69	.86	.40	.96	.95	.91	.74
18	.70	.74	.78	.87	.84	.19	.17	.16	.18	.47	.65	.46	.84	.57	.64	.13	.16	-	.07	.21	.38	.77	.12	.80	.83	.78	.39
19	.98	.94	.95	1.00	.98	.80	.80	.82	.85	.92	.95	.90	.97	.94	.94	.76	.85	.93	-	.87	.86	.92	.83	.95	.97	.97	.91
20	.93	.86	.91	.97	.98	.44	.36	.20	.23	.79	.82	.80	.91	.82	.81	.16	.46	.79	.13	-	.75	.79	.44	.90	.95	.90	.77
21	.88	.80	.87	.96	.94	.24	.16	.18	.17	.59	.78	.60	.90	.74	.79	.11	.31	.62	.14	.25	-	.79	.21	.91	.87	.88	.62
22	.62	.66	.71	.84	.79	.21	.18	.19	.18	.38	.52	.39	.75	.47	.53	.15	.14	.23	.08	.21	.21	-	.13	.75	.79	.70	.26
23	.89	.90	.93	.97	.96	.51	.45	.28	.30	.79	.86	.81	.91	.84	.89	.23	.60	.88	.17	.56	.79	.87	-	.87	.91	.88	.81
24	.35	.33	.56	.86	.82	.18	.10	.09	.10	.14	.29	.18	.60	.25	.16	.04	.04	.20	.05	.10	.09	.25	.13	-	.56	.34	.13
25	.34	.31	.48	.80	.78	.17	.11	.12	.10	.13	.26	.20	.53	.23	.15	.05	.05	.17	.03	.05	.13	.21	.09	.44	-	.28	.11
26	.38	.49	.58	.88	.83	.17	.13	.13	.14	.18	.35	.24	.61	.30	.27	.04	.09	.22	.03	.10	.12	.30	.12	.66	.72	-	.12
27	.79	.77	.88	.95	.94	.20	.16	.18	.16	.53	.66	.55	.84	.66	.75	.12	.26	.61	.09	.23	.38	.72	.19	.87	.89	.68	-
Scale-value	.61	.47	.89	1.50	1.27	.62	.79	.96	.91	.14	.25	.01	.79	.19	.22	.19	.70	.03	.47	.63	.30	.23	.74	.74	.82	.59	.17

269

APPENDIX F

THE EXPECTED PROPORTIONS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	-													
2	.55	-												
3	.38	.33	-											
4	.18	.15	.27	-										
5	.25	.21	.35	.59	-									
6	.89	.86	.93	.98	.97	-								
7	.91	.89	.94	.98	.98	.56	-							
8	.94	.92	.96	.99	.98	.83	.56	-						
9	.93	.91	.94	.99	.98	.75	.79	.48	-					
10	.77	.72	.88	.94	.93	.19	.19	.20	.22	-				
11	.64	.58	.80	.89	.80	.15	.12	.15	.14	.34	-			
12	.73	.68	.83	.93	.90	.26	.17	.19	.10	.44	.60	-		
13	.42	.37	.53	.76	.68	.12	.10	.10	.12	.16	.29	.21	-	
14	.66	.61	.81	.87	.86	.20	.14	.12	.13	.30	.46	.42	.72	-
15	.65	.59	.74	.90	.86	.19	.12	.18	.20	.35	.48	.40	.83	.48
16	.96	.95	.95	.99	.99	.67	.72	.76	.75	.85	.88	.87	.90	.92
17	.90	.87	.90	.98	.95	.39	.32	.30	.30	.73	.82	.70	.93	.79
18	.71	.67	.76	.88	.82	.19	.20	.14	.20	.49	.66	.47	.85	.59
19	.98	.97	.99	.99	.99	.80	.75	.70	.71	.90	.95	.92	.98	.95
20	.89	.86	.88	.97	.98	.45	.33	.20	.24	.68	.82	.79	.90	.83
21	.81	.77	.90	.97	.96	.24	.18	.16	.20	.60	.77	.60	.89	.74
22	.64	.59	.73	.86	.78	.20	.20	.21	.17	.36	.54	.40	.72	.49
23	.91	.88	.94	.96	.97	.51	.46	.30	.35	.79	.86	.79	.90	.86
24	.44	.39	.55	.87	.84	.16	.11	.08	.09	.12	.30	.16	.61	.25
25	.41	.36	.46	.80	.78	.17	.10	.10	.10	.15	.27	.21	.52	.24
26	.51	.45	.57	.87	.81	.17	.14	.14	.16	.23	.36	.27	.60	.31
27	.78	.74	.85	.95	.92	.32	.26	.21	.22	.51	.66	.56	.83	.64

(P' VALUES)

15 16 17 18 19 20 21 22 23 24 25 46 27

.92 -
.85 .31 -
.66 .12 .23 -
.95 .73 .87 .93 -
.81 .20 .45 .80 .20 -
.80 .10 .30 .63 .14 .36 -
.53 .15 .17 .23 .08 .22 .20 -
.90 .24 .58 .87 .15 .57 .80 .86 -
.15 .03 .04 .23 .05 .10 .10 .25 .06 -
.16 .05 .05 .18 .03 .05 .16 .21 .10 .46 -
.28 .04 .08 .23 .02 .15 .10 .34 .11 .65 .59 -
.65 .15 .29 .57 .09 .24 .40 .71 .19 .87 .80 .78 -

APPENDIX G

THE OBSERVED θ VALUES (θ'_{jk})

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	-																										
2	46	-																									
3	32	36	-																								
4	23	21	27	-																							
5	27	24	33	62	-																						
6	68	65	78	82	77	-																					
7	77	72	78	78	80	50	-																				
8	77	70	80	84	78	65	59	-																			
9	77	71	76	82	80	59	63	37	-																		
10	62	61	72	77	75	27	24	24	24	-																	
11	50	54	63	68	65	23	22	22	21	35	-																
12	58	58	67	74	71	29	23	24	20	38	48	-															
13	36	34	48	63	61	22	18	19	20	23	31	23	-														
14	53	55	63	70	70	26	19	19	21	34	43	37	69	-													
15	50	56	61	73	70	26	24	24	24	35	44	37	63	41	-												
16	82	74	78	84	84	56	57	60	59	66	69	69	74	74	74	-											
17	78	72	76	80	78	38	36	33	32	58	66	59	75	64	73	29	-										
18	57	59	62	69	66	26	24	24	25	43	54	43	66	49	53	21	24	-									
19	82	76	77	90	82	63	63	65	67	74	77	72	80	76	76	61	67	75	-								
20	75	68	73	80	82	42	37	27	29	63	65	63	73	65	64	23	43	63	21	-							
21	70	63	69	78	76	29	24	25	24	50	62	51	72	59	63	19	34	52	22	30	-						
22	52	54	57	66	63	27	25	26	25	38	46	39	60	43	47	23	22	29	16	27	27	-					
23	71	72	75	80	78	46	42	32	33	63	68	64	73	66	71	29	39	70	24	48	63	69	-				
24	36	35	48	68	65	25	18	17	18	22	33	25	51	30	24	12	12	27	13	18	17	30	21	-			
25	36	34	44	63	62	24	19	20	18	21	31	27	47	29	23	13	13	24	10	13	21	27	17	42	-		
26	38	44	50	70	66	24	21	21	22	25	36	29	51	33	31	12	17	28	10	18	20	33	20	54	58	-	
27	63	61	70	77	76	27	24	25	24	47	54	48	66	54	60	20	31	51	17	29	38	58	26	69	71	70	-

APPENDIX H

THE EXPECTED θ VALUES (θ_{jk})

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	-																										
2	48	-																									
3	38	35	-																								
4	25	23	31	-																							
5	30	27	36	50	-																						
6	71	68	75	82	80	-																					
7	73	71	76	82	82	48	-																				
8	76	74	78	84	82	66	48	-																			
9	75	73	76	84	82	60	63	44	-																		
10	61	58	70	76	75	26	26	27	28	-																	
11	53	50	63	71	63	23	20	23	22	36	-																
12	59	56	66	75	72	31	24	26	18	42	51	-															
13	40	37	47	61	56	20	18	18	20	24	33	27	-														
14	54	51	64	69	68	27	22	20	21	33	43	40	58	-													
15	54	50	59	72	68	26	20	25	27	36	44	39	66	44	-												
16	78	77	77	84	84	55	58	61	60	67	70	69	72	74	74	-											
17	72	69	72	82	77	39	34	33	33	59	65	57	75	63	67	34	-										
18	57	55	61	70	65	26	27	22	27	44	54	43	67	50	54	20	29	-									
19	82	80	84	84	84	63	60	57	57	72	77	74	82	77	77	59	69	75	-								
20	71	60	70	80	82	42	35	27	29	56	65	63	72	66	64	27	42	63	27	-							
21	64	61	72	80	78	30	25	24	27	51	61	51	71	59	63	18	33	53	22	37	-						
22	53	50	59	68	62	27	27	27	24	37	47	39	58	44	47	23	24	29	16	28	27	-					
23	73	70	76	78	80	46	43	33	36	63	68	63	72	68	72	29	50	69	23	49	63	68	-				
24	42	39	48	69	66	24	19	16	17	27	33	24	51	30	23	10	12	29	13	18	18	30	14	-			
25	40	37	43	63	62	24	18	18	18	23	31	27	46	29	24	13	13	25	10	13	24	27	18	42	-		
26	46	42	49	69	64	24	22	20	24	29	37	31	51	34	32	12	16	29	8	23	18	36	19	54	50	-	
27	62	59	67	77	74	34	31	27	28	46	54	48	66	54	54	23	33	49	17	29	39	57	26	69	63	62	-

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