

UNIVERSITY OF NAIROBI

DEPARTMENT OF GEOGRAPHY

THE ROLE OF CO-OPERATIVES IN RESIDENTIAL HOUSING  
PROVISION: A CASE STUDY OF THE CITY OF NAIROBI.

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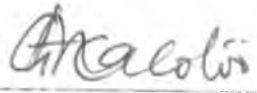
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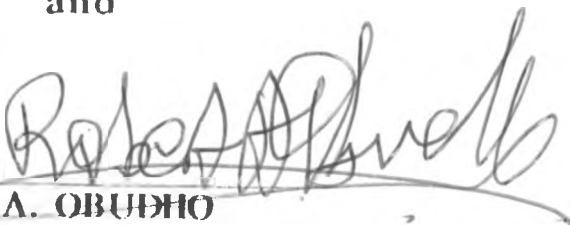
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## DEDICATION

*To my husband, Godfrey Gatara, whose love and patience have never failed, and to my daughter, Steffie, for her great tolerance.*

## LIST OF ABBREVIATIONS

CBD	Central Business District
CBK	Coffee Board of Kenya
CF	Co-operative Finance
CHFS	Co-operative Housing Finance Scheme
CON	City of Nairobi
CSA	Co-operative Societies Act
CSO	Co-operative Societies Ordinance
DOCD	Department of Co-operative Development
EABS	East African Building Society
Eqn	Equation
FHRP	Ford House Rehabilitation Programme
GOK	Government of Kenya
HABRI	Housing and Building Research Institute
HFCK	Housing Finance Company of Kenya
HRDU	Housing Research and Development Unit
ICA	International Co-operative Alliance
ICO	International Co-operative Organisation
ILO	International Labour Organisation
KCC	Kenya Co-operative Creameries
KGGCU	Kenya Grain Growers Co-operative Union
KMA	Kenya Medical Association
KNFC	Kenya National Federation of Co-operatives
Kshs.	Kenya Shillings
KUSCCO	Kenya Union of Savings and Credit Co-operatives
LDC's	Less Developed Countries
MDC's	More Developed Countries
MOCD	Ministry of Co-operative Development
MOPWH	Ministry of Public Works and Housing
NACHU	National Co-operative Housing Union
NCC	Nairobi City Council
NHC	National Housing Corporation
NHFA	National Federation of Housing Associations
SACCOs	Savings and Credit Co-operative Societies
TSO	Technical Services Organisation
UN	United Nations
UNCHS	United Nations Centre for Human Settlements
USAID	United States Agency for International Development

## ABSTRACT

Housing has been a major problem in the Less Developed Countries' (LDCs') urban centres. Due to the high populations found in these centres, especially in the big cities, the housing condition has been worsening. A high proportion of these populations consists of the urban poor and/or the low income earners and a significant proportion comes from women-headed households. The various channels used to house, especially the low-income earners in these cities are inadequate and they end up providing housing and the associated facilities to the middle income and a part of the high income earners. These methods include conventional housing by the local urban authorities and sites and services schemes. An appropriate framework for housing particularly the low income earners in the developing urban centres is the co-operative society.

This study examines the role of co-operative societies in the provision of adequate urban residential housing especially for the low income people in Nairobi. When looking at the city as a whole, the case may not look very desperate but when specific low income residential areas are examined, the plight of the poor becomes clear. Therefore, co-operative housing as a means of housing the low income dwellers in the city, has been examined. Both primary and secondary data were used to meet the objectives of this study. Simple random samples of co-operatives and co-operators, have been used for the study. 5 co-operatives were selected and 20 members from each co-operative were

interviewed. Tables have been mainly used to present various data. Percentages and proportions have also been used. Chi-Square ( $X^2$ ) test of significance has been mainly used to test the various hypotheses of this study. Other methods used to analyse the data are crosstabulations and regression analyses. It has been found that all the socio-economic characteristics of people considered in this study influence participation in and also the performance of co-operative housing.

The factors that have influenced the performance of the housing co-operatives in the have been scrutinized. The socio-economic characteristics of the urban residents and other co-operative factors have been considered. All these have been found to influence participation in, and performance of, co-operative housing.

The socio-economic characteristics of people considered in this study include, income, education, household size, age and sex, while the co-operative factors are co-operative financing, land costs and availability, building costs and by-laws, local authority services and co-operative management. These characteristics and factors have been found to be interrelated with income and, therefore, co-operative financing, the two being the major influential factors of co-operative housing.

The study has concluded that co-operative housing has a great potential now and in the near future. Nevertheless, it faces challenges in the process of providing urban residential housing at

the lowest possible cost. Various recommendations have been made to the Government of Kenya (GOK), co-operatives individuals and NACHU. They should, therefore, contribute positively towards more effective residential housing production to meet the existing and the anticipated demand. The challenges presented here are finance oriented, which means even much more to the urban low income earners.

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considered responsible for any errors and other shortcomings which remain in this work, these are solely my responsibility.

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## CHAPTER ONE

### THE INTRODUCTION

#### 1.1 General Background

Housing is increasingly a major problem in the Less Developed Countries (LDCs). The problem has become even more serious with the advent of population growth and less rapid economic growth. In the period from 1991 to the year 2000 all urban areas in Kenya for example require a total of 643.837 housing units. Out of these units, 275.241 would be needed in Nairobi (Syagga and Kiamba, 1992). With the latter situation the urban poor population which falls within the low income group continues to face shortage of adequate housing. Co-operative housing could contribute more to the solution of the housing problems in Kenya. This also applies to other LDCs and especially to the urban centres.

Despite considerable overall growth in the economies of these countries, there seem to be no possibilities of greater concentration in an expanded housing development programme (Mikael and Svensson, 1989). Together with rapid urbanisation, therefore, this has caused an increasing demand for housing projects. Governments in LDCs have been involved in policies which could reduce this demand, aimed at reducing population influx into these urban centres, for example. However, these have had little success. Emphasis should be laid on the study of the housing sector especially in the urban areas in order to come up with a realistic housing policy. This could

assist in the production of more affordable housing to meet the existing and the anticipated demand.

In Kenya, for example, private housing development has mainly been concentrated on middle and high income types of housing. The main developers, the Housing Finance Company of Kenya (HFCK), the East African Building Society (EABS), commercial banks and many others, are mainly concerned with mortgage loan financing to individual owner builders and private companies. They have, therefore, not managed to reach the bulk of the urban population, that is, the low income groups. On the other hand, the provision of public housing by the local authorities such as the Nairobi City Council (NCC), has not been an advantage to these groups either.

The contribution of self-administered urban communities is, therefore, important to the housing situation in Kenya's urban areas. An appropriate framework for such an organisation is the co-operative society. This study reviews the housing policy and other factors which could guide housing production to higher levels through co-operatives. The factors that affect provision of housing through co-operatives have been scrutinized. These have enabled the analysis of the role of co-operatives in housing production for the city residents, the main thrust of this study.

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## 1.2 Statement of the Problem

Housing shortage in Nairobi city has been observed in the last three decades or so. The acute and ever increasing shortage of housing units has been caused mainly by the city's high population growth rates as well as the migration of people from the rural areas to the city. Housing development in the city has been mainly handled and continues to be so by private and commercial housing developers, NCC and housing co-operatives. In spite of the progress made so far in the production of residential houses in the city, co-operatives have contributed little to this effect. The housing problems continue to be manifested through the extreme shortage of urban housing units needed to settle the ever-increasing population, the high rental prices, overcrowding in public and private rental units and the mushrooming of uncontrolled squatter settlements and slums. This study, therefore, portrays the extent to which certain factors have influenced the provision of residential housing through co-operatives. These factors have been responsible for the housing situation currently being experienced in the city. Co-operative societies, therefore, have a great role to play in order to improve the situation.

The housing policy in Kenya has had a great influence on the urban housing situation. Historically, the discouragement of African peoples' urban stabilisation in the colonial era helped to reduce the housing problems in the city. Thus fewer people needed housing

within our urban centres. Following post-independence relaxation of the apparent restrictive conditions however, massive rural-urban migration flows have continued to perpetuate the housing problem. Natural increase of the population in our urban areas has continued to mitigate any attempt to reduce rural-urban migration influx. Thus, the problem of housing shortage must be addressed by among other approaches, encouraging people's efforts to obtain and own houses in urban areas, since other approaches have failed to eradicate the housing problem.

One way of achieving communal housing solution is through the co-operative movement. Co-operative housing could permit rapid growth in housing units. This study attempts to evaluate the role of co-operatives in housing provision to Nairobi residents. The unanswered questions are thus: Do co-operatives have a role to play in the provision of housing units in urban areas? To what extent have such co-operatives succeeded? What factors have influenced their performance? Is the growth of provision of housing units through co-operatives in conformity with the needs of the urban poor? as well as related ones. A solution has been attempted by addressing some of these questions in this study. Data on the factors influencing co-operative development of residential housing have been synthesized. This is in order to come up with a clear guideline on how co-operatives could boost the overall development of urban housing.

### 1.3 The Objectives of the Study

The broad objective of this study is to examine the role of co-operative societies as a means of producing residential houses to urban dwellers. The specific objectives of the study are to:

- a) examine the housing policy in urban areas and its influences on co-operative housing with particular emphasis on Nairobi city,
- b) evaluate the role of co-operatives in the provision of urban residential housing in the study area.
- c) examine factors influencing the provision of urban residential housing units through co-operatives in the study area; and
- d) suggest ways and means of improving the performance of co-operatives in providing urban residential housing units particularly for low income urban residents.

### 1.4 The Scope

This study starts by tracing the history of the housing policy from the pre-independence to the present time with a view to finding out its effect on the housing demand and supply in the city of Nairobi. The policy had a significance role to play in the development of housing co-operatives throughout this period. The housing policy has also played an important part in influencing the production of

residential housing through co-operatives. This study also considers the Kenyan Building code in terms of the building standards of set.

The role of co-operatives is evaluated by scrutinizing factors such as, financing problems, socio-economic characteristics of people, land costs and availability. These factors are shown to be inter-related with income being the major factor influencing participation in, and therefore, housing production through, housing co-operatives. Thus, both the co-operators and the non-co-operators have been considered in this study with a view to finding out the effects of these factors on the participation in co-operative housing.

Finally the role of the National Co-operative Housing Union (NACHU) as the organisation that mainly assists primary co-operatives has been reviewed in the light of offering alternative methods to the construction of affordable residential housing for low income groups of people. More flexible conditions are considered, aimed at reducing the costs of construction involved. This would help co-operatives to cheaply construct houses for their members. Also NACHU has been viewed as an important vehicle of making housing co-operatives more productive by offering more services with regard to education, training and other related matters, even to be involved in more housing co-operative membership. The foregoing aspects are examined in this thesis.

## 1.5 Research Hypotheses

This study will test the following hypotheses for validity:

1.  $H_0$ : There is no significant difference between income and participation in co-operative housing.

$H_1$ : Alternative.

2.  $H_0$ : There is no significant difference between education and participation in co-operative housing.

$H_1$ : Alternative.

3.  $H_0$ : There is no significant difference between household size and participation in co-operative housing.

$H_1$ : Alternative.

4.  $H_0$ : There is no significant difference between age and participation in co-operative housing.

$H_1$ : Alternative.

5.  $H_0$ : There is no significant difference between sex and participation in co-operative housing.

$H_1$ : Alternative.

6.  $H_0$ : Age and household size of a co-operator do not influence the amount of income earned per month.

$H_1$ : Alternative.

7.  $H_0$ : Age and household size of a non-co-operator do not influence the amount income earned per month.

$H_1$ : Alternative.



## 1.6 Literature Review

The existing literature highlights some aspects of the housing problem, especially in LDCs. Policy issues affecting the provision of housing in urban areas are also cited. Different types of co-operatives are given. Several authors have also been cited on the viability and/or performance of co-operatives in housing production. This includes some aspects of the provision of both low-cost and high-cost housing units. This literature also forms the background information on co-operative housing. It shows gaps in knowledge in this field and these, thus, form the base of this study.

The problem of inadequate housing particularly for low income earners in urban areas of LDCs has received a lot of attention. ILO (1964) described how some of the principal co-operative housing schemes came into being and how they were operated in certain countries. Most of the interesting achievements in the field of housing were noted and attention was drawn to the factors which had led to their success or failure. This was in the hope of helping, in particular, LDCs in providing information on the great advantages and savings to be derived from the successful use of co-operative techniques in housing. It regretted that the shortage of accommodation compels many people to live in unhygienic dwelling units. The availability of housing facilities influences the workers' standards of output. Their standards fall with housing shortage. From the workers' point of view, and that of the low income families

in general, the real problem amounted to the question as to whether it was possible for the mass of workers, alone and unaided, to acquire decent housing of their own if they set the reasonable proportion of their income for that purpose. In view of the gravity of the problem, there is need to investigate the principal methods which might be encouraged in an endeavour to arrive at a satisfactory solution to the distressing problems resulting from a shortage of housing. One such method is through co-operative societies.

Abrams (1964) presented problems involved during the process of producing housing especially in urban centres. He stressed on the general problem of housing in these urban centres and gave case studies from which most of the factual material in his study was shown. He concluded that the housing problem in LDCs is there because of important basic factors such as ignorance of the problem, lack of ideas on how to deal with it and the low priority given to housing by the international agencies which could help. He argued that the greatest obstacle to progress in housing in these countries is lack of finance. The basic capital finance, skills and materials are lacking. Smith (1971) wished to study the social and economic elements of housing in general. He admitted that there always exists a housing problem mostly due to the misunderstanding of its cause. He, however, agreed that the problem is a complicated one. Turner (1972) said that the solution to this should be in terms of greater national commitment. Due to the problem of inadequate resources, a

call was made to all LDCs to carefully study how to spend the limited resources of money and materials in the very best way. His study on housing the people did not exploit the importance of co-operatives in housing. Although his study presented the housing problem in a very realistic manner, he did not address himself to the details of the performance of housing co-operatives in the LDCs' urban centres.

Burns and Grebler (1976) addressed themselves to the analysis and policy of housing in a comparative framework. The authors sought to identify the actual position of the housing sector in various national economies and the factors which had been its principal determinants. Furthermore, they attempted to define the optimal share of housing in the use of resources. They looked at the problem in terms of the low and degrading standards of the housing occupied by the great majority of people in urban areas. Such housing was said to be punitive and violated the standards set by the public agencies and lacked the amenities taken for granted in advanced societies. Greater emphasis on low cost housing should meet the first priority in the urban centres of LDCs. However, the cause of this can be attributed to the hyper-urbanisation problems as presented by Ahimaz and Williams (1976) in their study which showed an overview of the urbanisation problem and its setting. They assessed the importance of housing and discussed the concept of self-management. However, they concentrated on housing for small-scale rural development although they noted that large scale movement of people

from rural areas to urban centres had caused a persistent search for shelter by low income population groups that existed at the margins of the urban labour force.

Housing in LDCs is, therefore, characterised by some factors which make the housing problem hard to deal with. Abrams (1964) argued that the housing problem was seen as one of the minimum needs and, therefore, viewed with a very narrow context. Housing involves not only shelter but also access to jobs, sanitation facilities, security and education. Thus the magnitude of housing is alarming as presented by Stren (1978), who wrote on the urban housing policy in Kenya and Tanzania. In spite of this, we have to consider housing solutions in terms of finances and construction materials. There is an urgent need for the housing solutions particularly because many people lack steady and adequate income. Housing co-operatives is one way through which such problems can be alleviated.

The housing policy in any country affects the supply of houses. However, Tribe (1972), in his work on housing development in Kenya, noted that the analysis of the housing policy should not be separated from the totality of policy and development trends in a country. Busaka (1985) discussed explicitly the underlying social implications of Kenya's urban housing policy on small households. He examined the fate of such households in the face of the GOK's housing priorities and the pattern of housing development in the urban areas. He argued that Kenya's housing policy virtually dwells on the provision

of housing geared towards home ownership as the type of tenure. He noted that in Kenya's housing sector, there has been an absence of attempts to insert policies and developments observed into an overall framework of socio-economic structure of the country.

Earlier, Jorgensen (1968), sought to elaborate on the implementation of financing of housing in Kenya as a policy as far as co-operative societies were concerned. He viewed this policy as stressing the importance of co-operatives in reaching such a goal. He gave the guidelines towards co-operative housing. He did not, however, go into the details of the problems experienced by housing co-operatives in terms of land cost and availability, building material costs and construction standards. Syagga (1978) gave the history of the housing policy in Kenya and stressed the importance of a clear suitable post-independence housing policy. However, he noted that the housing policy in Kenya today has presented problems in relation to standards of housing as stipulated in Kenya's building code, financial constraints and land costs and, especially, in trying to achieve the goal of home-ownership. Ichoya (1974) wished to find out a suitable housing policy for the city and stressed the importance of revising Kenya's housing policy.

The problem of inadequate housing has been Kenya's development problem for a long time. GOK has, therefore, put some effort in trying to supply houses especially to the urban residents. Essentially these efforts have failed to reach the majority of the

urban population. The private sector must be seen to supplement these efforts (Syagga, 1978). Private developers, on the other hand, have not succeeded either. The minority urban rich is the group which has been able to meet their housing needs without much problem. A majority of the rest of the urban population is, therefore, left out to live in poor conditions because they cannot afford to own houses. The co-operative system is a way through which such and other problems could be solved.

According to Gatabaki-Kamau (1985) a co-operative society is a legally incorporated group of people, generally of limited means pursuing an economic purpose in which membership is voluntary and control democratic. In her paper on the development of co-operative housing in Kenya, she presented several features of housing co-operatives as organisations through which people are able to provide for themselves housing under co-operation. A housing co-operative is a legally constituted and recognised body with power to do all those things which a limited company can do, she noted. The principle of one man one vote is crucial to the running of co-operatives. This ensures democratic control. Members are supposed to make approximately equal contribution to share capital on which they receive a fixed rate of interest. Profits are, however, not supposed to be distributed according to members' business with the co-operative. Membership is voluntary and all the members are free to withdraw whenever they deem it fit or if the organisation ceases to

meet their needs. As well as its economic purpose, the organisation is supposed to have a social purpose mainly the provision of good housing for its members and other social amenities.

Hands (1975) attempted to explain what housing co-operatives are, how they started and evolved, what succeeded and what failed abroad and how they could be developed to play an effective role in tackling a country's housing and associated social problems mainly in the MDCs (particularly in Britain). He emphasised the importance of the co-operative principles as presented by the International Co-operative Alliance (ICA) in 1966 as a framework through which co-operatives could meet people's socio-economic needs. He added that anyone seeking a solution to economic or social needs through housing co-operatives should not ignore these principles and, especially, the ideas behind them.

Co-operatives can be primary or secondary (NFHA, 1978). Primary co-operatives are those owned and controlled by the members. Secondary co-operatives are those whose members are the primary co-operatives. An equivalent of this classification are the "daughter" and "mother" co-operatives in Sweden. Housing co-operatives could be classified as producers' and consumers' movements, depending on the goals of each co-operative. ILO (1964) argued that the type of co-operation aimed at satisfying the need of housing in the wide sense has always had a two-fold character embracing both production and consumption. This depends on

whether people join together with a view to becoming occupants or whether they band together on a co-operative basis and operate undertakings to produce dwellings for others. Co-operatives dealing with housing can be influenced by local customs, laws and socio-economic factors and, therefore, they can be classified according to these specific factors (Gatabaki Kamau, 1985).

Co-operative housing is presented as a cheaper solution to the housing problem of low income people by Abrams (1964). He argued that man should be encouraged to provide himself a home. The importance of people's contribution and, therefore, their satisfaction is given by many authors. UN (1967) considered the social aspects of housing and urban development and accepted the principle that the optimum economy in urban and social development occurs when the opportunities and resources provided both encourage and secure optimum contribution from people in form of participation in planning, initiative in implementation and employment of savings and labour. This principle can be applied well to the housing situation in urban areas through co-operative societies. Also in the LDCs where people are the greatest and most available resources, this principle is particularly important.

Fitcher and Turner (1972) set an hypothesis that when urban dwellers control their major decisions and are free to make their own contribution in the design construction and management of their housing, both this process and the environment stimulate individual



and social wellbeing. They argued that on the other hand, when people have no control over or responsibility to key decisions in the housing process, dwelling environments may instead become a barrier to personal fulfilment and a burden to the economy. Pride in achievement, the sense of competence and satisfaction stemming from direct personal action is a subjective state not reducible to money terms (NHFA, 1978). Direct action in fulfilling housing needs can contribute as much to physical improvement of adequate housing conditions. Hands (1975) showed how housing co-operatives are a reliable way through which people can be housed. These societies, therefore, help people to collectively own and control one of the fundamental human rights - housing - on the basis of mutual other than individual gain or control. Further, it has the potential of curing one of the common ills in society - the alienation and loneliness of individuals in the mass of humanity.

In order to encourage co-operatives in LDCs, mechanisms must be created among and within co-operative societies to obtain land and for easier financing. Ways must be found for resolving the disputes that arise among co-operatives and for managing and/or supervising the enterprises. This could be done through the formulation of regional as well as national federations as advocated by Abrams (1964).

Through housing co-operatives, tenants have control over their own affairs (NFHA, 1978). They can make decisions that affect the

management of their own housing. They can also invest their own time and efforts to ensure that their homes are properly maintained and that value for money is achieved when paid work is done. Thus, the investment of a tenant's own time and efforts in maintaining the property he occupies commensurate with the satisfaction of housing needs. Olewe-Nyunya (1986) provided an area of research on the meaningful relationship between education of co-operative members and the management of their co-operatives. However, he noted that through these co-operatives tenants could escape from exploitative capitalistic landlords. Turner (1976) advocated for housing by people and noted that tenants of such houses could be responsible for what is built and how it is used and maintained.

However, the provision of housing through co-operatives is not without problems. Mikael and Svensson (1989) carried out a comparative study on the housing co-operative movement in Kenya and Sweden. They identified the major problems particularly in Kenyan co-operatives as lack of education on technical and administrative matters, lack of affordable land and lack of financial resources. Muller (1978) presented the national framework in which housing co-operatives must be considered, that is, the framework of low cost housing and that of co-operative development. She cited the problems of lack of affordable land and lack of financial resources. However, Ayako (1976) sought to present possible issues, methodological approaches and conceptual framework of research on

co-operatives. He emphasised the low quality of co-operative management and stated that the success of a co-operative as a tool for development was minimised by the low quality of management which characterised most Kenyan co-operatives. He suggested that the specific objectives of research on co-operatives would be to identify the factors which contribute to their performance. This is the essence of this study. Noor-Mohammed (1976) went into the details of the problem of auditing of accounts in Kenyan co-operatives. His paper focused on the problem of delay in auditing of books of accounts of co-operative societies. He noted that knowledge about delays in audit invited corruption from staff and committee members of co-operatives. He noted that the standard of book-keeping had been poor. He attributed this to shortage of staff and in particular that of audit staff. He suggested that there was need for government intervention in the area of financial management. GOK should focus on primary co-operative societies with a view to strengthening their staffing, increasing and controlling members, exerting on overall policy and reinforcing strict government control over financial matters. He advocated for greater government supervision other than greater co-operative autonomy.

Gatabaki-Kamau (1985) presented a paper on the details of housing co-operatives' performance, but did not recognise the effects of the socio-economic characteristics of members as influencing the role and the operations of co-operatives in housing. She was also

particular about the issue of fund management. Members, she noted, were unable to manage the scarce funds they raised due to illiteracy and lack of money for employing accountants. Muller (1978) gave a critical analysis of the success of housing co-operatives in Kenya. She suggested that more attention could be given to the formation of building groups among low income urban workers and the creation of a non-profit housing development agency which could guide self-help and co-operative efforts among the population. She gave the conditions for good management and the elements of a well managed co-operative. The decision-making about the conduct of the society's affairs should be in such a manner that the confidence and commitment of the members is maintained over a number of years. The co-operative is also required to maintain an elaborate financial and membership administration which is necessary in order to make regular supervision and control over the utilisation of funds possible. The handling and planning a housing co-operative society include all the tasks which an experienced building contractor has to fulfil. The management committee ought to know in advance which activities, costs, fees and charges are to be expected at different stages of the housing project. This is to ensure that the general members are informed and adequate planning of time and manpower, income and expenditure can be done.

Obudho (1992), presented a paper which discussed the role of housing co-operatives in the provision of urban housing in general

and in particular reference to Kenya. He identified the advantages of this practice and the problems which are faced by housing co-operatives before discussing the alternative measures which could curb some of these problems. However, the author did not emphasize the role of co-operatives in low-cost housing production. In this context, therefore, some of the problems experienced by most co-operatives which are cost - and finance - oriented were not recognised. These difficulties include, the high construction standards and cost of building materials, which face particularly the low income housing co-operatives. The author, therefore, did not examine other social and economic factors which influence participation and success of co-operatives as a channel of producing urban housing.

Olewe-Nyunya (1986) also identified the two elements of education and management as important issues and problems facing co-operatives. These problems are especially faced by LDCs whose resources are scarce. This makes the provision of housing units through co-operatives less effective in LDCs. In MDCs there are advantages of available human and financial resources. Co-operatives are, therefore, able to supply even high cost housing. An example of these, presented by Mikael and Svensson (1989), is Sweden.

However, a majority of the bulk of the urban population in LDCs falls under low income category (Tribe, 1972). The housing policy in

Kenya must, therefore, lay emphasis on low cost housing (Syagga, 1978). Nevertheless, it is apparent that some aspects of Kenya's building code are against what constitutes affordable (low cost) housing units for the majority of urban residents (Ondiege, 1981). This has resulted in the building of illegal housing to form squatter settlements in the city of Nairobi.

While Hagger, (1978) advocated for room-based co-operatives which would enable low income households to purchase and own homes, Busaka (1985) called for more space for small households in urban areas, considering factors other than economic ones. However, there is that group of urban residents practically with no income as identified by Kher and Parameswar (1976) who discussed urban housing in the Indian context. Their objective was to present the problem of lower cost housing as a national decision-making process and to provide a system to arrive at decisions on norms of standards and cost of various components and sources of lower cost housing complex. However, this was not done in the housing co-operative framework. To those with no income, a review of the building code should be made to provide better solutions in terms of cheaper building materials and access to land. This should be achieved on co-operative basis. In Kenya the provision of high cost housing has been more successful than that of low cost housing (Gatabaki Kamau, 1985). Some members of the Asian community and minority of the African urban rich have been able to obtain such housing through co-

operatives more easily. This study is set to evaluate the role of co-operatives in housing provision for urban residents. Emphasis is laid on the housing policy and other factors which affect the provision of residential housing through co-operatives. Thus, it has considered the factors that influence the provision of co-operative housing units in greater depths and used statistical tests for greater evidence and to present the findings in a more precise form.

### 1.7 Justification of the Study

The literature reviewed above has displayed gaps in knowledge on the current housing problems in urban areas, particularly with regard to the role of co-operatives. These problems are especially acute in the city of Nairobi and should receive serious research attention as proposed.

Abrams (1964), Turner (1972) and Stren (1978) are among the authors who have observed that co-operatives can contribute to a solution to the housing problems. However, they have not considered adequately some of the crucial housing policy issues and other factors that have affected housing provision through co-operatives. It should be noted that provision of housing is not only through housing co-operatives. Co-operatives like the Savings and Credit Co-operatives (SACCO) have come up to provide housing units for their members, an example of which is cited in this study. This study hopes to fill these gaps.

Some of the authors cited above, for example, ILO (1964) and Hands (1975), had looked at the co-operative housing with greater emphasis on their operations and performance within MDCs. Other authors, including, Abrams (1964), Muller (1978), and Olewe-Nyunya (1986) concentrated on the frameworks within which housing and co-operatives operated. Although their studies were useful in these respects, these authors did not go into giving us the details of the implications of characteristics of co-operatives determining their performance.

Furthermore, some authors cited gave the details of the housing problem in general and specific aspects of co-operative housing, on which this study expounds. Busaka (1985), was concerned about the fate of small households within urban centres while Jorgensen (1968) gave general guidelines towards co-operative housing. Syagga (1978) gave the details of the housing policy in the national framework while Ondiege (1989) was concerned about land problems in relation to aspects like housing.

It is hoped that the findings of this study shall improve the performance of co-operatives in housing production in Nairobi city and other developing urban centres. This would be a result of various policy issues and other factors suggested at the end of this study, to be taken seriously by the policy makers. At the same time these should be applicable to other urban areas of similar characteristics particularly in the LDCs' urban centres. Eventually,



this would improve the housing situation in the developing areas in general. This study should also contribute to urban geographical information on housing co-operatives and thereby contribute towards improvement on urban housing policy.

It is also hoped that this study will be an improvement of the earlier methodologies which have been used by other authors who have studied co-operative housing. Instead of the usual descriptive methodologies, statistical tests have been used to find out the significance of some factors that affect housing production through co-operatives. It is hoped that this study has paved a way for more geographical studies on co-operatives and especially those that aim at producing housing for their members.

The city of Nairobi has been chosen as the study area on the basis of some crucial factors that make it a suitable study area in Kenya. It can be noted that Nairobi is the capital city of Kenya, and at the same time the largest urban centre in the republic. It accommodates most of the industrial, commercial and administrative activities of the country. It has, therefore, attracted many immigrants in search of job opportunities while it has offered working opportunities to a great proportion of the urban population in the country. In order to deal with the problem of inadequate housing, GOK, individuals and private organisations have come in. Their efforts have, however, failed to find a suitable solution to the housing problem in the city. A call has, therefore, been made for mutual

efforts in dealing with the problem. As noted before, the high population growth being experienced has created more need and demand for housing units in the city than any other urban centre of the country. Co-operative housing is an avenue through which individuals can mutually benefit in terms of owning houses in the city.

The study area includes the area inside the municipal boundaries and that immediately surrounding the boundary. The latter forms a commuter zone to the city. It can provide more and cheaper land for the construction of cheaper housing units. The study, therefore, considers particularly residential housing units provision through co-operative efforts.

## 1.8 Conceptual Framework

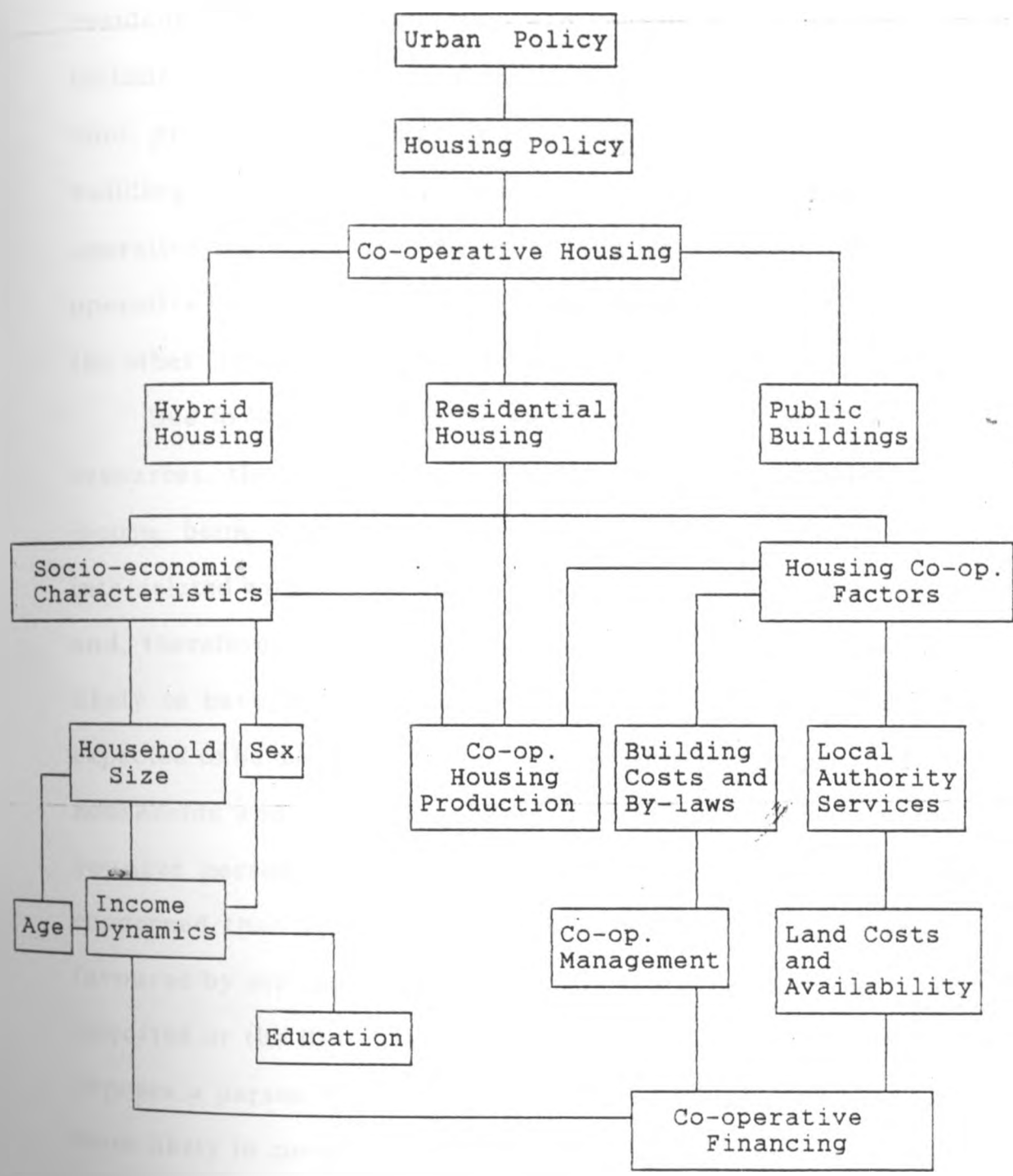
The urban policy in any country has very crucial implications for the housing policy in that country. It determines both the demand and supply of housing in the urban areas. The housing policy, which is within the overall urban policy, in turn guides the supply of the housing units in these urban areas. It determines the means of supplying these housing units, the quality and the number of houses to be produced. The housing supply to the existing and the evolving demand is determined by the housing policy. Due to the rapid urban growth in terms of population increases, several approaches have come up to meet the demand of all types of housing -

residential and/or public. In the city of Nairobi for instance, the problem of housing has continued to increase with time. This has been due to the massive immigration from rural areas and other smaller urban centres. GOK and the private developers have continued to produce houses for city residents. However, their efforts have not helped to eradicate the problem of shortage of housing units in the city. Co-operatives have come up in trying to provide housing for city residents.

However, several factors have tended to influence the progress of co-operative housing. These include the socio-economic characteristics of residents and other housing co-operative factors. These contribute to the overall productivity of residential co-operative houses.

Co-operative housing is of essential interest in this study as related to the overall urban policy. Residential housing is of crucial importance in this study as opposed to the other forms of housing and is, therefore, centrally considered in the involvement of co-operatives in housing provision to the city residents. Co-operative housing is influenced by the socio-economic qualities of the people to be housed. The characteristics which have been considered in this study in great depths include income dynamics, education, household size, age, and sex. These factors are inter-related as shown in Figure 1.1.

FIG 1.1 A CONCEPTUAL FRAMEWORK OF HOUSING PROVISION THROUGH CO-OPERATIVES



Source: Compiled by author, 1993

As well as these factors, the co-operative factors influencing residential housing production are considered at length. These include the financing of co-operatives, the costs and availability of land, provision of services by local authorities, building costs and building by-laws, and co-operative management. Income and co-operative financing are, therefore, the major determinants of co-operative housing production and are shown to be inter-related with the other factors considered in this study.

Due to limitations set by short time and inadequate financial resources, the above factors will be considered with finance and income being the central focus. Income can be shown to be interrelated with factors like household size, age, sex, and education and, therefore, with co-operative financing. A small household is likely to have more income in terms of less domestic uses and is expected to be more involved in co-operative housing than the large households and, therefore, effect greater housing production. A younger person has also similar advantages as far as income is concerned than his older counterpart. More educated people are favoured by job opportunities and, therefore, more income than less educated or the illiterate people. At the same time, education level exposes a person to wider knowledge in housing development and more likely in co-operative housing as shown in this study. It can also be viewed that younger people have more financial potential for co-operative housing than their older counterparts. Yet males and

females can be compared in terms of their ability to commit their financial and human resources to co-operative housing. In this case women, in particular, have been proved to be less committed to co-operative housing especially when considering the women-headed households due to their financial limitations.

On the co-operative factors, finance forms the base for success of co-operatives in this study. Land-costs and, therefore, the availability of land is a major obstacle to co-operative housing projects. The higher income co-operatives have better access to land than their lower income counterparts due to the former's financial advantage of earning more income. This is also similar to the case of building costs and building by-laws. The stipulated by-laws in the Kenyan Building Code favours higher costs and too high for the low income co-operators. Servicing this land is an important aspect of land costs and availability and, therefore, to co-operative financing. The more available land for construction in Nairobi is un-serviced and servicing such land on private basis is very costly. Local authority services are scarce and, therefore, the co-operatives have to meet such costs thus, overloading the co-operative finances. Finally, management is considered as an important aspect in co-operative housing. Lack of management skills and/or mismanagement of co-operatives lets down most co-operative efforts in their endeavour to provide residential housing. This goes hand in hand with misappropriation of co-operative finances in the case of

mismanagement. At the same time, lack of managerial skills for hiring or employing outsiders in the important posts of housing co-operatives like accountants takes up quite a lot of co-operative funds into wages or salaries and exposes the co-operative to the risk of financial mismanagement.

The conceptual framework (Figure 1.1) is used in this study.

## 1.9 Operational Definitions

This study has used several terms which are crucial to the understanding of the study findings and therefore the understanding of the whole text. These are defined as appropriately used in this section.

### 1. Housing

This term is used in the study to refer to the process of providing houses especially to co-operators within Nairobi. The term housing unit(s) is used in this study to refer to the stock of complete houses built in this case by co-operatives. Therefore, the term house(s) is interchangeably used with housing unit(s). In the earlier sections of this text, shelter is also used to mean just about the same with housing.

## 2. Co-operative(s)

This is a group of people (or an organisation) which operates under specified rules and procedures of co-operative principles as specified by the International Co-operative Alliance (ICA). It is meant to benefit individuals and/or households who/which cannot obtain money or property on their own. It is, therefore, meant to meet people's needs mutually. The term co-operative society is used interchangeably with co-operative or society. Housing co-operatives are therefore organisations meant to benefit members by producing houses built through joint effort. Co-operative housing is, therefore, the process of producing houses through co-operatives.

## 3. Co-operators

These are members of co-operative societies with an aim of benefiting from these societies. Co-operative housing members are, therefore, termed as co-operators in this study. Those who are not members of any housing co-operative are referred to as non-co-operators.

## 4. Co-operative Officials

These are the people who hold important positions in co-operative societies. These include, the chairman, secretary and other committee members. In this study, they exclude anybody employed by that particular co-operative who is not its member. The term co-operative leader is also used, in some cases, in place of co-operative officials.



## 5. Finance

This is property in terms of cash money. This term is used to refer to any money owned or used by any co-operative society. Co-operative financing is, therefore, the availability and use of money to meet the needs of the co-operative in terms of housing. Funds is used interchangeably with finance and financial resources.

## 6. Income

This is an important term used in this study to refer to the total amount of money available to an individual and/or household. In this study, monthly income is an important term in judging the amount of money earned per month and, therefore, the affordability of housing. Thus there are three groups of people in this study according to their income levels categorised as low, middle and high income earners according to the amount of income earned per month. Hence there are low income, middle income and high income earners.

## 7. Policy

It is usually an official guideline for any aspect of development. The housing policy mainly used in this study refers to the philosophy and methodology of housing (Macoloo, 1984). In this study, it is the guideline towards producing and/or supplying housing units to Nairobi residents.

## CHAPTER TWO

### BACKGROUND TO THE STUDY AREA

#### 2.1 Introduction

The City of Nairobi has been chosen as the study area. This section gives a brief background to the study area in relation to its location, size, history, land use and the housing situation. Furthermore, this section gives the background to the study topic in this study area. Therefore, the major housing policy issues are given with a view to tracing the beginning of the co-operative movement in housing.

#### 2.2 The Study Area

##### 2.2.1 Location and Size

Nairobi, one of the eight provinces of the Republic of Kenya, is the smallest in area, occupying about 690 square Kilometres. The city is located at the foothills of Mt. Kenya and the Aberdares, which are rich agricultural umlands. Nearly half of the Kenyan population live within close reach, essentially increasing the chances of in-migration to the city. This has, therefore, contributed to the housing problem in the urban area (Okuku, 1991), hence its choice as the study area.

The city lies  $1^{\circ} 19'$  south of the equator and  $36^{\circ} 59'$  east of the prime meridian. In terms of distance, it lies some 480 Km from Mombasa at the shore of Indian Ocean and 340 Kms. from Kisumu at the

shore of Lake Victoria. Thus, it occupies an almost central position relative to the major towns in Kenya (Figure 2.1). The study area includes Nairobi Municipality and the areas immediately after the Municipal boundary (Figure 2.2). These are areas which essentially accommodate a great number of commuters to the city. Consequently, it could be said that this area has a lower density than the areas closer to the CBD, hence it would be cheaper for co-operatives to build residential houses for such commuters in order to get enough capital to construct their own housing closer to the CBD and nearer to their employment areas. In these outskirts, among them being the Ruiru and Ngong-Kiserian areas, there is much more space in terms of land for housing. This land is also much cheaper in terms of costs for those co-operatives mainly composed of low income earners to utilise. Thus the importance of these areas cannot be ignored in this study in terms of land availability and costs.

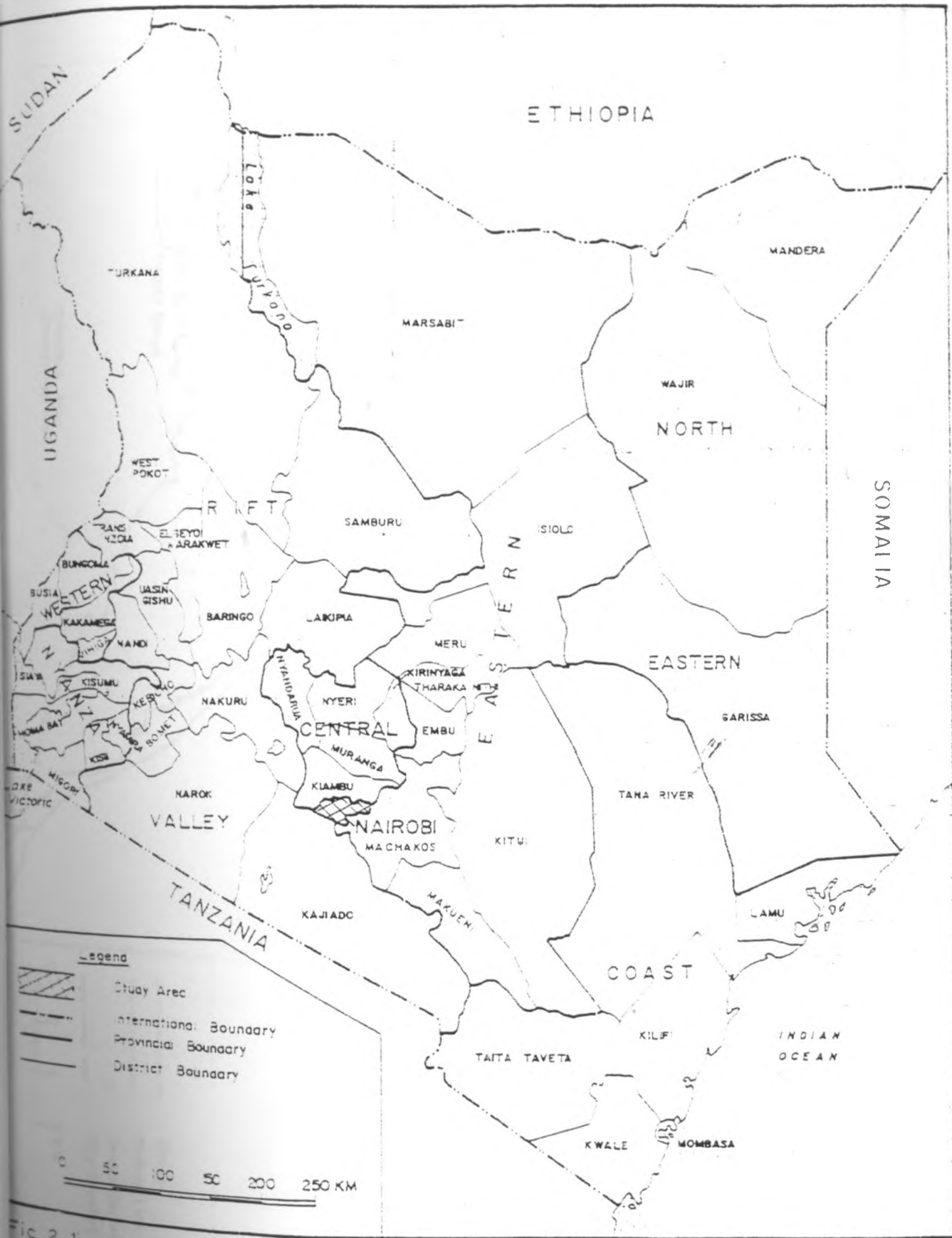
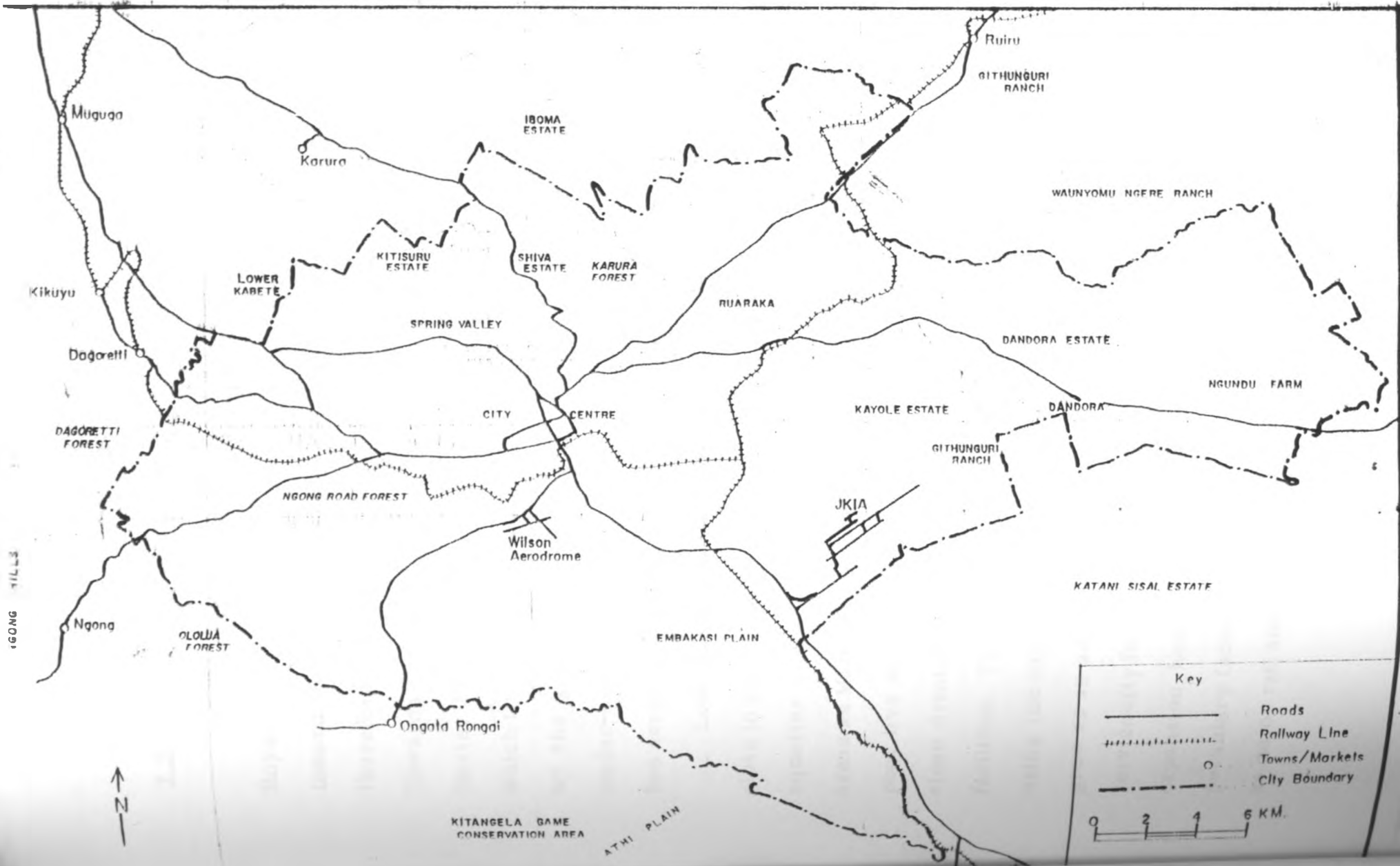






Fig. 2.1 Location of City of Nairobi in Kenya.

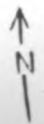
Source: Survey of Kenya.



Key

	Roads
	Railway Line
	Towns/Markets
	City Boundary

0 2 4 6 KM.



### 2.2.2 Historical Background

The history of Nairobi dates back to 1896 when Sgt. Ellis of Royal Engineers established a transport depot near the Safari Camp toward the end of the year. The only inhabitants were Maasai and, therefore, very few residential houses were needed and/or existed. Towards the end of the Second World War, in the early 1940s, Nairobi Master Plan for the colonial capital argued for social segregation which the present lay-out exhibits. The plan was heavily conditioned by the government policies in existence then. This led to gross under-estimation of future growth of the city (Ichoya, 1974). This has serious consequences on the housing supply today.

Low income groups of people could and can only afford to live close to the CBD in poorly constructed residential houses (slums and squatter settlements). Examples of such settlements include such areas as Mathare Valley, Kibera, and Korogocho in the city. Here the poor live without the most basic facilities. These facilities include, clean drinking water, proper sanitation and medical and schooling facilities. These residents could be better housed co-operatively using the little available resources (Plate 1). The city continued to grow as an administrative centre, thereby, consolidating itself as a service city for the surrounding European settler enclave. The city's expansion has, therefore, been fostered by both locational and pecuniary factors. The city is central to all means of transportation as major rail and air routes converge there and to all parts of the



Plate 1: Mathare Valley. (This part of mathare valley in Nairobi demonstrates the poor conditions under which many of the city residents are living).

country the continent of Africa and outside. This is one of the factors which has over the years attracted new industries thereby leading to an even faster expansion of the city.

The city's umland is rich agriculturally and produces food for the city's increasing population. Together with this, the umland has become important to the housing situation in the city. It forms a progressively crucial residence for the city's commuters. These are also cheaper areas for the construction of residential houses for these commuters as seen earlier. Housing co-operatives could, therefore,

take advantage of this fact for greater efficiency of constructing houses for residential purposes.

The city has also culminated into primate city with all the attendant socio-economic problems - high migration rates, high population growth and hence chronic housing shortage etc. The implications for high population increases in the city and therefore increases in households include, increasing demand for, housing units, building, recreation, commercial and industrial land, housing and other social services such as schools and hospitals. This study advocates for co-operative based efforts to provide for the demand of low cost housing. The finances needed to do so have not been available from the GOK, yet individual efforts can be better utilised through co-operative societies.

### 2.2.3 Land Use

Various types of land-uses exist within Nairobi which accommodate all its functions. It has differentiated into the CBD, industrial area, public and private open spaces, public and government land and buildings, residential areas and residential underdeveloped land (Opinya, 1982).

Housing is the major land-use in the city. The present population of the city is housed basically in the three main residential zones based on differences in income levels. Upper Nairobi is an area of low density high income population lying to the west and north of



the CBD. It comprises many of the former well known expatriate residential areas such as Woodley, Kileleshwa, Lavington and Muthaiga. Parklands, Eastleigh and Nairobi South is an area of medium income medium density population consisting of owner occupier housing (many owned by Asians). Karen and Langata to the south and south east are also high income low density residential areas typified by large housing, gardens and paddocks. These are areas in transitional phase in that several middle income estates often occupied by civil servants are growing to absorb the population spilling from the other areas.

Eastlands is the marginalised urban fringe to the east and away from the CBD. It is a low income densely populated area with the core region of the old NCC housing areas and new institutional housing estates. These includes Race Course, Ngara, Shauri Moyo, Pumwani, Mathare Valley, Eastleigh, Kariobangi, Kaloleni, Bahati, Jericho, Mbotela and Dandora. Mathare Valley to the East and Kibera to the west of the city form the most famous and largest uncontrolled urban settlements in the city. The populations of these areas (and others like Korogocho and Kawangware) are characterised by the uncontrolled spontaneous mushrooming of squats (often bulldozed by the NCC). These have been caused by low income migrants fleeing from the rapidly rising costs of living in the city by fleeing into the cardboard city along valleys close to the CBD (Lillis, 1992).

It is notable that the medium and some section of the high income groups of the city residents occupy the housing facilities which should accommodate the large groups of the low income population. These housing facilities include those provided by the local authority (NCC). Therefore, low income people have not benefited from the NCC residential houses. Most housing co-operatives which have built or intend to build houses have considered constructing houses which could be termed as high to middle cost and which may not be afforded by lower income people, the group which most need housing in the city (Ichoya, 1974).

#### **2.2.4 The Housing Situation**

The housing situation in the city of Nairobi is characterised by accumulated deficits and deterioration. Housing services are inadequate. There is extensive proliferation of squalid and congested hutments and poor sanitation. The product of high population growth rate, high immigration rate, overgrowing housing deficit and low housing supply, high market rents and the maldistribution of the national wealth, is the shanty settlements.

The majority of people living in the urban areas are low income earners, but due to disparities of the past, it does seem evident that high-cost housing is generally in greater abundance in the city than low cost dwellings. Rent paid by low income people in this city is totally out of proportion to their wages and salaries. GOK cannot find

adequate resources to meet this demand (Opinya, 1982). Building standards are also unrealistic and costly, thereby excluding the majority poor. Individual efforts are, therefore, needed in contributing to their housing welfare. Co-operatives are, therefore, important in mobilising individual efforts which could cater for both the high and low-income earners. This study evaluates the provision of residential housing on co-operative basis. These co-operatives have not been fully utilised despite the many internal and external problems they are facing. However, they still have great potential in housing especially the urban residents.

### 2.3 Background to the Study

This section scrutinizes the background to the study topic, and, therefore, traces the co-operative movement from the pre-independence to the post-independence period. Thus, the housing policy here guides us into tracing the importance of housing co-operatives in Kenyan urban areas. Hence the housing policy issues important to this process of co-operative housing are briefly underlined. The major features of the housing problem especially in Nairobi are given. The city has been worst hit by the housing problem. This problem has been shown to be a principal result of too few housing units of standards appropriate for low income people (Harris, 1970). The major vehicles of housing provision to city residents are also briefly given.

### 2.3.1 The Housing Policy

In the pre-independence period, the concern for African housing in urban areas in Kenya was apparent and an administrative approach to the problem of African urban housing was important. There was a pre-disposition toward control in the African areas and a consequent failure to enunciate meaningful policy guidelines for the rapidly growing urban areas (Stren, 1970).

The report of the Development Committee of 1946 recommended employee stabilisation in urban areas in order to boost industrial development. This in turn meant the provision of adequate and suitable housing. The African worker, if he could live decently with his wife and children in the city, would give a greater return for his cost. Therefore, the provision of housing by local authorities at sub-economic rents was important. Although there arose a stricter enforcement of legal obligations of employers to their workers, there was a provision made to build in towns in temporary materials and the establishment of semi-rural "garden villages" outside the municipality (Stren, 1970).

The idea of home-ownership was apparent although housing co-operatives had not shown up. There were problems with the conventional housing provided by the local authorities at sub-economic rents because the rents paid by the Africans did not meet the combined fixed and recurrent cost borne by the authorities. Africans could not afford economic rents on dwellings built at

reasonable standards. The Vasey Report of 1950 proposed that African-owned housing should be encouraged instead of these subsidised rental schemes which would be necessary only in the short-term. This, it argued, would open the door to a stable African urban population (Busaka, 1985). The continued heavy public subsidization would be financially impossible. At the same time, the employer built schemes could only be marginal (Stren, 1970).

The Carpenter Report later advocated for the provision of tenant-purchase and builder-owned schemes in order to discourage rental schemes and encourage housing ownership in urban areas. By 1955, suggestions for full participation of Africans in town life were clearly stated by the East African Royal Commission Report. Therefore, lower building restrictions were recommended and the encouragement of employer-built as well as African-owned housing for rental, individual free hold title for plots (Stren, 1970).

During the colonial era, therefore, the urban housing shortage was not adequately addressed by the colonial government. However with the relaxed restrictive conditions of African stabilisation in urban areas, high urbanisation rate and, therefore, a more acute housing problem in the city were important features. A greater demand for African family housing was apparent due to the rapid increase in the number of African urban households. Therefore, the increasing demand for African urban housing became a major issue. The government sought the reduction of the cost of housing per

family. It was thought that the proper use of cheap local building materials in construction would reduce the housing cost and, therefore, the major realistic vehicle of providing residential housing was through site and services schemes (Stren, 1970).

The essence of site and services schemes was pooling together of the government limited funds by providing infrastructural services and a small materials loan together with the participants' resources of finance and family labour (Plate 2).



Plate 2: Mathare North Site and Services Scheme (This residential area was meant for the low income group. However, this objective has not been met because these schemes have been taken up by the middle income groups, Macoloo, 1984).

The beginning of the importance of co-operatives in housing was clearly seen during the early post-independence period when GOK encouraged the inducement of private capital by encouraging housing co-operative societies. It was hoped that individual households could acquire houses mutually. However, problems have invaded the co-operative movement and, therefore, these have frustrated the realisation of the stated objectives (as considered in this study).

## 2.3.2 The Co-operative Movement and Housing in Kenya

### 2.3.2.1 The Historical Background of the Co-operative Movement in Kenya

The initiative for co-operative enterprise has roots in the early years of the colonial rule. It originated through the efforts of former white settlers who formed mainly agricultural co-operatives for the purposes of marketing large-scale farmers' produce and the provision of farm requirements (Mwandihi, 1988). The co-operative movement in Kenya can, therefore, be traced back to 1908 when the first group of settlers organised themselves into a society in Rift Valley province. Subsequently other collective groups of the same type emerged in Central, Eastern and Nyanza provinces. These groups were, however, not registered as co-operatives until 1931

when the first Co-operative Societies Ordinance (CSO) was enacted. Those societies organised by Africans were, however, not founded until in the 1930s. These were also slow in development due to lack of encouragement from the colonial government. The 1931 CSO did not allow the indigenous Africans to participate in co-operative activities. Africans were also barred from growing important cash crops like coffee, tea and tobacco. The CSO of 1931 served mainly the Europeans and the affairs of the existing co-operatives were looked after by the Attorney General. However, there was no department solely responsible for the development of co-operatives.

The recommendation by an expert to the colonial administration of 1944 argued for the incorporation of small farmers into co-operatives. This was followed by the decision to replace the 1931 CSO with the 1945 CSO. Subsequently the Department of Co-operative Development (DOCD) was established and created in 1946. During this time, the DOCD was moving from one ministry to another. Between 1945 and 1960, it moved from the Ministry of African Affairs to the Ministry of Agriculture Animal Husbandry and Water Resources. Next it moved to the Ministry of Commerce and Industry then to the Ministry of Marketing and Co-operatives. The DOCD was also transferred to the Ministry of Housing then to the Ministry of Co-operatives and Social Services. The department attained its own ministry - the Ministry of Co-operative Development (MOCD) - in 1974 after the government was fully convinced that the co-operative



movement had a vital role to play in economic and social development in Kenya. In the pre-independence era, the movement was never given any prominence nor afforded the significant recognition that it deserved (Ouma, 1988).

In 1946, the Registrar of Co-operatives was appointed. The new legislation above all granted the opportunity for Africans to form their own co-operatives. While the legislation marked the origins of African organised co-operatives, those formed remained financially weak due to restrictions on handling cash crops. A larger number of co-operatives were registered in 1950s when Africans were allowed to grow cash crops for the first time. This was the period of intense nationalistic activities among Africans, which to some extent inspired them to take more initiative in the co-operative sector. By mid 1950, there were about 200 recognised co-operative societies with the number reaching 1030 by the time of independence.

It should be noted that co-operatives formed prior to independence were as a result of government initiative. The idea was to make them a tool for the introduction of cash crops to African small-holders. Co-operatives were also to be used for collection and marketing of surplus food crops from African areas and then sell them cheaply to the emerging salaried labour force in the growing urban centres.

However, it was not until after independence that the impact and the vital role of the co-operative movement was recognised (Ouma,

1988). To begin with, co-operatives were promoted partly because of the need to fulfil political promises made during the struggle for independence. Examples of these include co-operatives formed in the white highlands to purchase land from departing settlers and also to provide marketing services to the newly settled farmers in the settlement areas. The co-operative society was considered the best machinery for mobilising and raising the much needed capital for the acquisition of businesses and farms which were formerly owned by non-citizens. It was thus considered needful that a separate ministry solely responsible for the development and guidance of the expanding co-operative movement should be created.

It was during this period that the DOCD was under heavy pressure from politicians for registration of new co-operatives. This was politically motivated to win votes and it was, therefore, necessary that the CSO of 1945 be repealed because it was loose and did not offer the required measures and regulations. The Co-operative Societies Act (CSA) was then passed in 1966 (Ouma, 1988). However, there was a very rapid growth of co-operatives between 1963 and 1966 in particular when not less than 200 societies were formed each year. It was, therefore, the passing of a CSA in 1966 that resulted in a number of de-registrations and liquidations which led to the decline in the rate of increase of the number of societies.

The early rapid registration of societies was not based on economic or technical considerations. As a result, most of them failed

because they operated in uneconomical units, were poorly managed and there was general lack of education and training on how the members, committee members and staff should organise themselves and manage society affairs. The decline in registration of societies after 1966 was because technical considerations were increasingly taken into account before registration.

However, under the post-independence CSA, the Commissioner for Co-operative Development is given wider powers of control including approval of the budget of co-operative societies, removal of management committees which have failed to manage the affairs of their societies satisfactorily and so on.

The pre-independence history of the co-operative movement in Kenya shows a great impact of the colonial era. The colonial government had realised that it could get a lot of raw materials and food production if it employed co-operative elements in the development of Kenya's economy and especially if the standards of living of the populace were raised. The LOCD was, therefore, concerned with promoting, controlling, and educating members as well as the public on the need and usefulness of co-operative efforts with particular emphasis on the rural areas.

The establishment of the East African School of Co-operation formed the basis and foundation upon which the co-operative movement in Kenya was to grow to its present strength. However, the impact of the Mau-Mau activities and consequently the state of

emergency was great on the co-operative movement. The movement was struck by lack of suitable people to fill vacant posts created by those who were either killed or had run away. Lack of educated staff and capital were very severe problems. These hindered progress in the movement. The lawyers were known to draft co-operative by-laws having taken the samples from the Co-operative Department for proposed societies. This shows that large sums of money were spent on unproductive purpose (Ouma, 1988).

After independence, the co-operative movement was seen by the GOK as an important vehicle for the introduction of African socialism and the strengthening the common ties between people from different regions in Kenya. It was only recently however, that the movement began to find its own identity and to appreciate its specific role in economic and social development. The development and growth of the co-operative movement owes its success partly to the technical assistance and expertise received from friendly countries especially the Nordic governments. This is particularly so because they send advisors and students from Kenya can go and study co-operative management in the training institutions of these countries. through the scholarships they offer (Ouma, 1988).

Agricultural co-operatives have been over the years quite successful. However, other activities such as savings and credit, consumers, housing, building and construction, small scale industries and fisheries co-operatives have come up (Mwandihi, 1988).

Nevertheless, co-operatives in Kenya are still mostly agriculturally oriented. Their main activities include crop marketing, animal products, farm purchase, and multi-produce co-operatives. However, Kenyan co-operatives had on the whole have had a steady growth. Between 1903 and 1983, the number of registered co-operative societies had risen from 1030 to 2186, and membership had risen from 200,000 to 1.8 million respectively. In 1987, there were about 3,500 active co-operative societies with a membership of about 2 million. Furthermore, it is estimated that one out of two Kenyans are directly or indirectly deriving their livelihood from co-operatives (NACHU, 1989).

#### **2.3.2.2 The Organisational Structure of the Co-operative Movement in Kenya.**

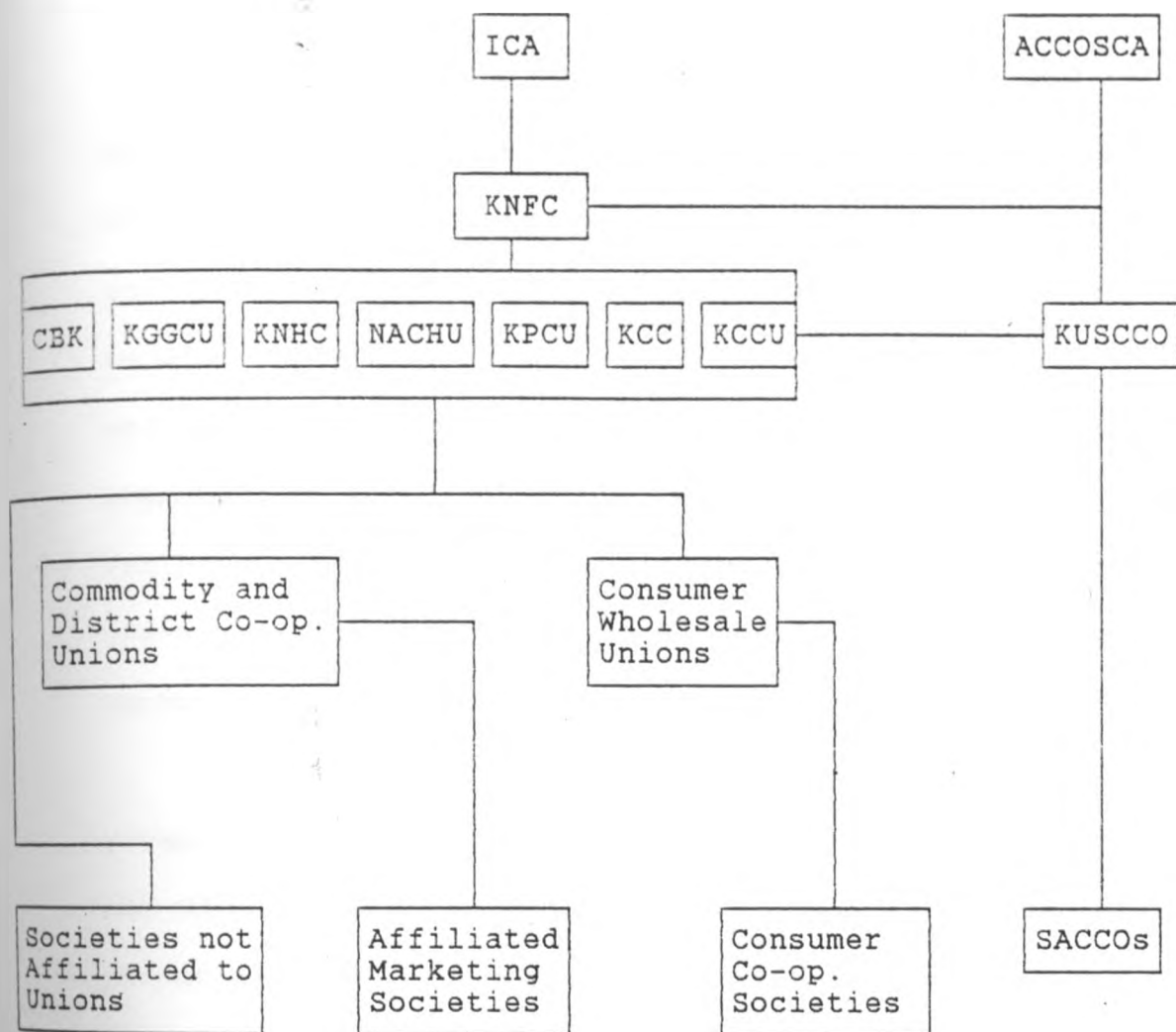
The co-operative movement in Kenya is organised into four successive layers. This forms a four-tier hierarchy which comprises of the primary societies at the bottom layer, followed up the hierarchy by unions and then the countrywide co-operatives and at the apex is the federation of Kenyan co-operatives (Figure 2.3).

Primary co-operative societies are those whose membership is composed of, and restricted to, individual members who have a common interest (Ouma, 1988). Co-operative unions have membership normally composed of primary co-operative societies. Although more than one union may exist in the same district, the GOK encourages

primary societies to affiliate to the district co-operative union. District co-operative unions have become the focal point of co-operative activity in Kenya (Awiti, 1988). This is evidenced by the centralisation under the district unions of the same functions such as book-keeping, bulk purchases of farm products and stationery, credit and savings facilities and education of staff and committee members. The idea is to achieve greater efficiency and improve the services to members of the primary societies has also been realised that government guidance and control is provided more effectively at the district level, which is in conformity with the current district focus strategy.

In the case of some agricultural commodities, there are country-wide co-operative unions which act as umbrellas of all the district unions handling the particular commodity. Examples of these include the Kenya Co-operative Creameries (KCC), The Coffee Board of Kenya (CBK), the Kenya of Grain Growers Co-operative Union (KGGCU) and the Kenya Union of Savings and Credit Co-operatives (KUSSCO). The KUSSCO which was registered in 1973 has the main objective of catering for the common interests of the Savings and Credit Co-operatives (SACCOs) basically by promoting organisation and development of sound SACCO societies. This is by way of fostering education and training, assisting in the improvement of internal management, and arranging for a system of protecting SACCO funds, facilitating inter-lending of surplus funds between SACCO societies

FIG 2.3 THE STRUCTURE OF THE CO-OPERATIVE MOVEMENT IN KENYA



Source: Adopted from, Nalo (1988) pp.106.

KEY

- ICA International Co-operative Alliance
- ACCOSCA Africa Confederation of Co-operative Savings and Credit Association
- KNFC Kenya National Federation of Co-operatives
- CBK Co-operative Bank of Kenya
- KGGCU Kenya Grain Growers Co-operative Union
- KNHC Kenya National Housing Corporation
- NACHU National Housing Co-operative Union
- KPCU Kenya Planters Co-operative Union
- KCC Kenya Co-operative Creameries
- KCCU Kenya Credit Co-operative Union
- KUSCCO Kenya Union of Savings and Credit Co-operatives
- SACCOS Savings and Credit Co-operatives

etc.

The Kenya National Federation of Co-operatives (KNFC) is an apex body to which all types of co-operative organisations are affiliated (Awiti, 1988). The membership comprises mainly of district unions country-wide co-operatives and primary co-operative societies. KNFC also acts as a bridge between co-operatives in Kenya and the International Co-operative Organisation (ICO). The KNFC was registered in April 1964 due to the felt need for an apex body to synthesize co-operative opinion, standardise practice, promote Co-operatives and reduce the possibility of misapplying resources through duplication and multiplication.

KNFC is charged with the responsibility of safeguarding and promoting the co-operative interests, improving the performance of the affiliated organisations, to fulfil functions and make available resources and services which would exceed the normal capacity of the individual member organisations. The aim is to improve the level of utilisation of the total available co-operative resources.

An important aspect of the leadership role of KNFC in the co-operative movement is that it is responsible for ideological aspects of the movement. KNFC is also meant to serve as the mouthpiece of the movement. In accordance with the objectives set for it, KNFC to date has established a printing press, and supplies stationary to its members. In addition, it provides a number of other services including auditing, education and training, coffee factory improvement services etc.



So far it is in the area of education and publicity that KNFC has had a major impact among its members. at the co-operative college and more so in the field have had the effect of creating more awareness among members regarding their rights and obligations. In addition KNFC reaches co-operators through the quarterly magazine, "Mshiriki Wa Kenya".

### 2.3.2.3 Co-operative Investment

It is only in 1964 that the first two SACCOS were registered. By 1984 the number of this type of societies had soared up to 1,022 with a membership of 600,000, accumulated savings of Kshs. 2,700 million and Kshs. 2,200 million loaned out to members. The emergence and growth of SACCOS in the post-independence period has actually been a spectacular feature of the growth of the co-operative movement. It has changed the overall pattern of co-operative growth which was largely dominated by agricultural co-operatives? It has been even reported that Kenya ranks top in Africa in SACCOS (Mwarania and Mutugu, 1986). This is in terms of membership, value of assets, volume of savings, loans to members and population penetration. The primary objective of SACCOS is to provide savings and credit facilities. It is out of the savings mobilised that credit is extended to the members on softer terms than what is offered by the existing financial institutions. Thus the SACCOS make a very significant contribution towards providing local development capital and

reducing the need to borrow from outside the co-operative sector as far as the development of the movement is concerned (Mwarania and Mutugu, 1986). Table 2.1 shows that SACCOs have become important mobilisers of savings in Kenya's economy.

Table 2.1 Growth of SACCOs (1971-1984)

	1971	1975	1980	1984
No. of Societies	129	230	731	1,158
Savings in Millions (Kshs.)	8.0	118.0	898.0	3,300
Loans to members Millions(Kshs.)	5.0	92.0	724.0	2,700

Source: Mwarania and Mutugu (1986), p.22

About 60% of the total investment in Kenya is currently undertaken by private investors and about 30% of this is generated by co-operatives. Members of the co-operative societies as well as the societies themselves have been able to invest in a variety of economic activities over the years using credit from co-operative institutions. Credit obtained by individual members has been utilised in investment activities such as land purchase, small businesses, housing and education. Co-operative societies and their members have shown large potential in investment programmes as shown by the existing ones below.

Table 2.2 Investments by Savings and Credit Co-operatives

SACCO	Value (Kshs.) Millions
Posta	135.064
Harambee	131.742
Ukulima	86.792
Tembo	30.000
Kenya Police	12.000
Reli	12.755
Kenya Bankers	13.600
Magereza	23.778
Mwalimu	8.000
Ardhi	4.800
Mombasa Port	4.985
Wanandege	7.614

Source: NACHU (1989), p6

One of the weaknesses of the investment programmes of many co-operative societies and unions in the country was the fact that most of the time the investment decisions were made by the management committees members alone without approval from the general members. For a long time there was also no established machinery to ensure that members of the primary co-operatives enjoyed the profits or dividends from the investment undertaken by the societies or unions.

To rectify this situation, MOCD formulated policy guidelines, rules and procedures to guide co-operative institutions in their investment decisions with effect from 1986. In addition to safeguarding the interest of primary co-operative members in the investment programmes undertaken. These investment guidelines stress the need for co-operative institutions to give priority to those investments which directly or indirectly improve the services required by the members.

#### 2.3.2.4 Urban SACCOs

It is the urban SACCOs that constitute the majority of SACCOs in the country. They are usually formed by wage-earners and are found to exist in almost all government ministries, parastatals, companies and educational institutions. These urban SACCOs, therefore, embrace most of the salaried employees of the public and the private sectors of the economy. The members can obtain loans to put to a variety of uses of direct economic and social uses to the borrowers and their families. The most common uses have been, purchase of houses, small-holder farms, commercial plots and premises, starting small businesses, building homes, paying school fees, and settling medical bills. The societies themselves have also been investing in projects which also bring economic and social benefits. The common projects include commercial buildings for renting purposes, educational and recreation facilities.

Although the growth of SACCOs in Kenya has been rapid and generally successful, the principal constraints are that the loans are short-term (up to 3 years) and for a maximum of three times the borrower's shares and the savings deposits. However, with a larger and longer term loan of 5-7 years members could make significant housing investment in urban areas. Yet more membership should be encouraged among the informal sector workers, since nearly all of them are based on employment, thus excluding the informal sector.

### 2.3.3 Housing co-operatives

Housing co-operatives are quite a recent phenomena in comparison with the general co-operative movement in Kenya. The importance of the housing co-operatives in the development of the Kenyan society has been far less notable than the impact of co-operatives in other sectors like agriculture. The colonial urban policy encouraged home-ownership by Africans and allowed them to build houses which they could afford. Thus the indigenous entrepreneurs started constructing houses from temporary and semi-permanent materials. This was, therefore, an important atmosphere to the development of indigenous housing co-operatives in Kenya (NACHU, 1989).

The first housing co-operatives were established in 1948 by the religiously based Ismailia community in Nairobi and Mombasa. These societies have been rather successful because they were able to plan

and build houses for their members not long after they were created. Today their functions are, maintenance of houses plus the administration and organisation of members. The Ismailia co-operative societies have up to the present constructed very many housing units. The first African housing co-operative was registered in 1965 (NACHU, 1989). This is much later because the Africans had not been allowed to stabilise in the urban areas although the housing problem was not severe and there was the combined effort of the GOK and the private sector, co-operative efforts were essential in handling housing for the Africans in urban areas. Since 1965, there has been a tremendous increase in the number of housing co-operatives. However, the large number of the housing co-operatives developed for low income groups have not been very successful. They have faced financial, technical and administrative problems. They have been especially lacking the financial means of development thus rendering most of them dormant (NACHU, 1989).

With relevant financing institutions such as HFCK, National Housing Corporation (NHC), and also the Ministry of Public Works and Housing (MOPWH), housing co-operatives are expected to perform better. SACCOs show an important parallel with housing co-operatives. These are worker-based in many cases now acting as the organisation base for housing co-operatives. Due to lack of appropriate land and expertise, what is required now is a workable policy on development of housing schemes especially in the urban

areas. This policy should take into account the needs of the relevant income groups especially the low income groups and must consider the best and fairest method of allocation and distribution of available houses.

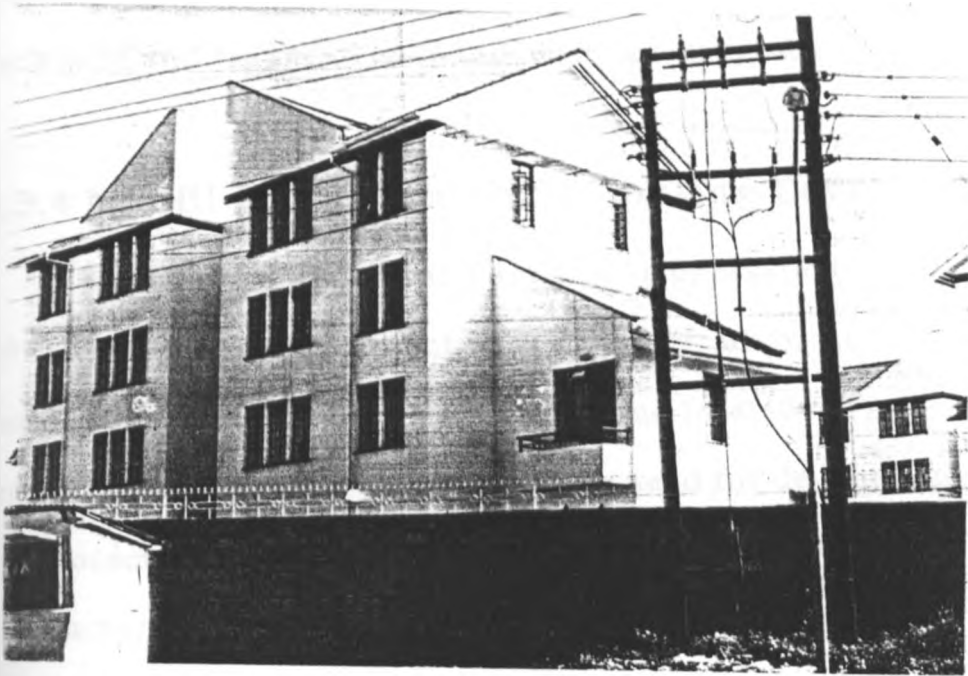


Plate 3: Harambee SACCO Houses. (These magnificent houses did not favour the co-operative members).

In the past, large urban schemes have been undertaken by the government and foreign donors. With the formation of the National Co-operative Housing Union (NACHU) in 1979, the co-operative movement has moved into greater housing development in an attempt to increase local participation in housing construction and provide citizens with one of their basic needs (NACHU, 1989).

The National Co-operative Housing Union (NACHU) is the apex union to which housing co-operatives are affiliated. Its objectives are to promote housing programmes for co-operatives especially through SACCOs, and the use of appropriate housing technologies. Through NACHU, the government could have an access to providing technical and financial assistance for housing development.

### 2.3.4 NACHU and Co-operative Housing Development

NACHU is a Technical Services Organisation (TSO) formed in 1979. It was formed to act as a primary advocate and sponsor of housing co-operatives at the national and local level, in the urban and rural areas. This is in response to the need for decent housing among low income Kenyans. Many families live in substandard conditions characterised by inadequate shelter, overcrowding, poor sanitation, insufficient water and without community services especially in urban areas (NACHU, 1989).

Although housing co-operatives are a relatively recent innovation in Kenya, compared to the other sectors of the movement, it is growing very much due to the changes in the socio-economic profile in response to the economic growth. In designing housing programmes, consideration should be given to both traditional housing programmes for housing co-operatives and the use of the existing societies, in particular the SACCOs. This structure provides a solid organisational base, a potential market and the necessary



human resources that can put up housing and the associated infrastructural services. In order to increase the provision of housing, NACHU assists co-operatives by encouraging them to explore all possible development alternatives available including self-help and the production of their own building materials (NACHU, 1989).

NACHU has assisted housing co-operative societies in financial, and construction matters. NACHU's attempt to encourage more recruitment of co-operators should be emphasised (NACHU, 1989).

NACHU aims at promoting housing co-operatives and organising housing programmes for co-operatives particularly through SACCOs. Planning and developing feasible housing projects for consideration by investors such as NHC, EABS, HFCK, and others is also an important objective of the Union. NACHU determines the suitability of land for housing before purchasing and scrutinizes house and site plans and costing on all projects in housing undertaken by societies. Finally, the union educates primary society members' committees and staff on all co-operative housing matters. (Nalo, 1988)

NACHU's major programme is concerned with the formation and endorsement of housing co-operatives, establishing the by-laws, and preparing the registration of the societies which is done by the MOCD. NACHU is meant to give support to the already existing co-operatives. To these co-operatives which have already commenced activities, for example by initiating a savings programme of acquiring land, the union intends to provide expertise to assist the co-operatives to

develop successful projects. This is in response to the lack of expertise to carry out housing projects among housing co-operatives. Especially among the low income people, with such support, low income co-operatives can persist and save more funds for their housing projects. To such co-operatives, NACHU helps in designing affordable and implementable programmes of housing projects which utilise the initiative, the resources and creative energies of local communities, individuals and co-operatives. The Union also advises and assists housing co-operatives on all aspects such as planning, development and management of housing and other building projects.

NACHU determines all housing requirements of prospective membership by establishing feasible plans for satisfying those requirements. These requirements include costs, the financial sources and repaying loans. NACHU acquires land for development and designs projects which will cater fully for the needs of low income co-operative members. These should be within their economic means and should be designed to meet social, financial and cultural preferences. NACHU requires that co-operative housing projects be workable and viable for them to be implemented successfully. The project cost should be related to members' affordability. In order for NACHU to offer prompt and effective services towards these housing projects, the projects must aim at eventual members' ownership and ease of development.

Societies are, therefore, expected to submit their projects' requirements for review and further advice accordingly by NACHU. The affiliate societies are required to submit their applications for allocation or reservation of public land through NACHU. This is in order that the Union determines first the financial viability and readiness of the member society to undertake the housing project. In order to carry out such an exercise, the union requires that the society submits whatever information required on the financial status of the society. NACHU nominates only those societies that are ready to embark on viable projects. It has also been agreed between the Department of Lands and NACHU that any application submitted directly to the department by any housing co-operative society should be referred to NACHU in order that the latter may advise the department on the ability of the applicants to develop the land. This procedure is with a view to avoiding confusion, speculation and duplication of costs and so that the real benefits of co-operative housing are derived by the members of the housing co-operative societies.

Where member societies wish to proceed with the purchase of privately owned land, they may consult with NACHU. This guideline streamlines and co-ordinates acquisition of land and availability of land and development funds. It was, therefore, agreed between the Department of Lands and the Union that public land for co-operative housing would be allocated to only those member societies

recommended by the Union. The department does not, therefore, consider any application for co-operative housing projects from NACHU affiliates unless such co-operatives submit the application through NACHU.

NACHU also performs the duty of assisting housing co-operatives to upgrade the already existing housing areas. In many municipalities and in the city, there are areas of unplanned development which are expanding rapidly. These are the areas which house the majority of the urban low income groups which lack adequate housing facilities and live in sub-standard housing conditions. In some, residents have formed co-operatives to purchase the land with a near future intention of improving their houses and services. NACHU provides estate upgrading assistance to such co-operatives including expertise in socio-economic research, engineering, planned finance, materials production and estate management. An example of such a co-operative is Kariobangi in the city. All this is because moving away from the settled land would mean purchasing more expensive plots for house building. At the same time conventional house-building is almost impossible by low-income groups because of the costs involved. The only appropriate solution to such settlements is to upgrade the existing houses which would cost much less and would be more convenient on co-operative basis.

One such programme under NACHU is based on self help. This is an important element of housing low income groups of urban

residents. This is because it would help a co-operator earning say, Kshs. 1,000 per month to afford a house on a shared plot with water borne sanitation and provision for future extension and/or upgrading. In some cases, depending on the availability of funds, a percentage of units in an upgrading project for example is set aside for members to build themselves. Members who qualify for such a project can be loaned materials manufactured on site. The member provides his own labour or hire local skilled "fundis" to do the labour for him. NACHU also assists in savings. As seen earlier, savings form an integral part in capital formation and, therefore, local savings mobilisation is very important to housing co-operatives. The Co-operative Housing Finance Scheme (CHFS) for housing co-operatives is meant to enable savings made within primary housing co-operatives to be re-lent for project development using NACHU as an intermediary.

In this way, funds mobilised for housing can be used most effectively in; comprehensive co-operative housing projects analysis and planning. Short-term financing is meant to construct houses on member society's plots. This financing programme through NACHU also encourages self-help programmes especially among the low income people. NACHU is also encouraging building materials production centres. Therefore, the financial programme under NACHU enables savings within housing co-operative societies and ensures that funds mobilised from these co-operatives are used in the most

effective way. NACHU frequently organises training workshops for housing co-operatives and SACCOs towards sound management of their projects and other affairs. The training is meant to give the committees and other members sound understanding of the various steps involved in the initiation and implementation of successful housing projects. With more funds, experts could be invited to talk specifically to housing co-operatives on more technical issues. Co-operative education should be given priority in NACHU programmes. This would enable co-operative members to understand the basic co-operative principles and, therefore, the rights of the co-operators. NACHU should pay more attention on co-operative matters like establishment and maintaining books of account, monthly payment, and delinquency procedures, collection and maintenance of reserves and organisation of savings schemes.

The majority of NACHU's projects are designed to benefit the low income earners with incomes below Kshs. 3,000<sup>00</sup> per month and units expected to cost between Kshs. 45,000 and Kshs. 145,000 per unit inclusive of infrastructural costs, land, fees, interests and other expenses. NACHU, therefore, directly or through a developer acquires land and finances and develops housing units which are then allocated either to members of existing co-operatives or to co-operatives which NACHU has promoted (NACHU, 1989). However, NACHU faces some problems in its operations. Notably, membership comprises of mainly the poor and at times the illiterate people who

may not conceive of their rights and obligations in making choices between alternatives offered to them by NACHU. Secondly, the Union faces difficulty of training primary societies with a view to improving their services especially in understanding how SACCO societies invest in housing co-operatives. The problem of high housing standards is a threat to NACHU's success in helping primary housing co-operative whose membership constitutes mainly low income earners. The prevailing housing standards seem not to allow the construction of affordable housing to most members. The expansion of NACHU's activities and its membership has created a constraint in the management education and financing of these co-operatives.

The housing situation in the major urban areas of Kenya, particularly in Nairobi has been based on the environment reviewed in this chapter. We are, therefore, set to investigate the factors that have influenced the co-operative movement in residential housing production. The methodology used is presented in the following chapter.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

The methods used to collect and analyze data in this study are presented in this section. Details of the sampling methods which were used, including the sources of the collected data are also presented. The various procedures which were used to test the hypotheses of this study are explained. The collected data were analyzed and interpreted to meet the major objectives of the study. The procedures used have also been outlined in this section. It is noted that, the  $X^2$  test, crosstabulations (and other summary statistics) and regression analysis have also been outlined in this section.

#### 3.2 Data Collection Procedures

##### 3.2.1 Primary Data

Primary data were collected through direct field interviews, personal observations, and through the use of standardised questionnaires. Three types of questionnaires were used in this study. The first type of questionnaire (Appendix 1), addressed to co-operators, aimed at obtaining information about various co-operative members and their experiences in their housing co-operatives. Various socio-economic characteristics, that is, income, education, household size, age and sex of the co-operators were obtained



through the use of this type of questionnaire. Housing and other problems faced within their respective co-operatives were also sought through this questionnaire. Direct interviews were carried out with the guide of this questionnaire and, therefore, various suggestions from the interviewees on the improvement of residential housing supply through housing co-operatives were listened to and recorded during the various field interviews.

The second questionnaire (Appendix 2) was addressed to non-co-operators and was meant to assist in obtaining the socio-economic qualities (cited above) of persons in the city who did not belong to any housing co-operative society. Their various reasons for this were recorded with emphasis laid on their, attitudes towards joining housing co-operatives, awareness of the operations of these co-operatives, and suggestions on improving the attractiveness of these co-operatives.

The third questionnaire (Appendix 3), addressed to at least one co-operative leader in each of the housing co-operatives, sought information on the general running of these co-operatives with particular emphasis on the factors that influence the level of co-operative houses and, therefore, the problems involved in making such achievements. Two of this type of questionnaire were posted to co-operative officials who were hardly available for interviews. The rest were used during the interviews held with the corresponding co-operative officials.

There were three methods used to locate the respondents during the field study period. First, names and addresses were obtained from NACHU for the selected group of co-operators. Also NACHU directed the author to the offices (if there were any) of some of these co-operatives to which the selected persons belonged. From these offices, one was able to trace the co-operative leaders who were either interviewed and/or asked for the directions to any of their selected members. In most cases, after locating one member, one was able to ask for the residence of the other members in the same co-operatives. In some cases however, it was very difficult to locate some members. Nevertheless, after several attempts, an alternative member was picked to replace such a member. This was done by choosing the closest neighbour of such a member, who was also a member of the same co-operative. In some cases, postal addresses were used to send questionnaires to some members of co-operatives. This method, however, proved very inefficient after getting very little response from these members. The exercise of direct interviews was repeated for the people who did not respond to the questionnaires sent. Nevertheless, some members were unwilling to avail themselves for interviews, and for such a group, replacements with other respondents were made as in the above case. These procedures, however, ended up wasting a lot of resources and time.

Field photographs were taken to represent the clear situation of the housing problem in the study area, in relation to the co-operative housing in Kenya.

### 3.2.2 Secondary Data

Secondary data were obtained from past studies and recorded information on co-operative issues particularly on housing in general and other related information. This information was obtained from the various libraries in the city. In particular, the University of Nairobi main and minor libraries were used including the then Housing Research Development Unit (HRDU), now, Housing and Building Research Institute (HABRI) library. NACHU materials were also used plus information on the various housing co-operatives. Details of the housing co-operatives studied were also cross-checked with the NACHU records. General information on co-operatives and housing was also sought from the Government Printer articles<sup>74</sup> which had to be bought. These included the Co-operative Societies Act (CSA) and the Housing Act. Other records used were obtained from the Ministry of Co-operative Development (MOCD), Ministry of Public works and Housing (MOPWH), the Nairobi City Council's (NCC's) Department of Housing and Social Services and that of Housing Development. material from Kenya National Archives Library was also used.

### 3.2.3 Sampling Techniques

Sampling was necessary and inevitable in this study. Generally, too short a time may not allow a researcher to consider in details the whole population of any study area. Secondly, the resources available may not enable one to do so. In this case, the time within which data collection was to be carried out was too short for the whole population in the study area to be considered as per the short time given to collect data and considering the high population of the city. At the same time there were hardly enough resources to carry out the exercise. Nevertheless, it was important that sampling was done very cautiously to ensure that the samples studied were fairly representative of the population from which they were drawn. This also ensured unbiased samples. The sample statistics obtained could, therefore, be comfortably used to make inferences to their population parameters.

In this study, a sample drawn from the population of all the housing co-operative societies operating within the city was obtained. A list of 108 societies was obtained from NACHU headquarters, Nairobi. From this list, only about 20 co-operatives were found to be actively involved in co-operative housing according to the information sought from NACHU. It was decided that a quarter of this number could be fairly representative of the rest of the active co-operatives in the city. Therefore, a random sample of five co-operatives was obtained as follows. Serial numbers from 1 to 20 were given to the co-

operatives as appearing in the list provided. These numbers were also written on small papers and folded, each number representing one corresponding co-operative. These papers were mixed together and five of them were picked randomly. These numbers were used to identify the five co-operatives which were studied.

The second sample consisted of co-operative members. This sample was obtained from a list of members from the five co-operatives. Contact addresses of the selected co-operatives were got from NACHU. The co-operative officials of each of these co-operatives were visited in turns. From each of these co-operatives a list of all the members was obtained. 20 members were randomly selected from each of these co-operatives, using a table of random numbers as follows. Serial numbers were given to the co-operators as appearing on the lists. Reference to the table of random numbers was made to select 20 numbers which represented 20 members from each of the co-operatives. In cases where some members had withdrawn their membership from the co-operatives, their serial numbers were ignored and only the active members were considered. A total sample size of 100 was finally obtained. Contact addresses for the co-operators selected were sought from their respective officials. After locating one member, it was easy to locate the other members especially those residing in the same estates. In some cases, questionnaires were posted to some members, although this proved a less effective method of getting response from the selected co-

operators. In other cases efforts to trace the co-operators were fruitless and replacements had to be made by choosing the next serial number to the replaced respondent.

Another sample was drawn from a population of all the city residents. The second sample (above) was used to guide the selection of this third sample to ensure more representativeness. The residential area clusters of the second sample, consisting of co-operators, were used to locate non-members of co-operatives in order to ensure that there was no bias. These clusters were, Huruma-Kariobangi North, Kariobangi South-Umoja-Buruburu, Kibera, Nairobi west-South B and South C, and Eastleigh. Each cluster was used to select 20 adults. A total of 100 people from this group was selected randomly by presenting a question to anybody found within these residential areas as to whether he or she was a member of any housing co-operatives. A "no" answer meant that such a person was to be considered in the sample of non-members. This procedure was followed with a view to comparing, under approximately the same environment, the characteristics of co-operators and non-co-operators in the city. This in turn assisted in determining the socio-economic factors influencing participation in co-operative housing.

### 3.3 Data Analysis Procedures

#### 3.3.1 The X<sup>2</sup> Test

The hypotheses in this study have been tested using the chi-square (X<sup>2</sup>) test. This test has been used in this study because the data collected were categorical - mostly grouped according to the various socio-economic characteristics of the interviewees. These data include the socio-economic characteristics of co-operators and the non-co-operators in the city. These socio-economic characteristics were income groups, education levels, household size, age and sex.

The X<sup>2</sup> test is also a method for determining whether the difference between the observed and the expected frequencies of data are greater than are likely to have occurred by chance. Whether or not this is the case is determined by comparing a measure of the discrepancy between the observed and expected frequencies (the calculated X<sup>2</sup> statistic) with the discrepancy that is likely to occur by chance as a result of a sampling at a given probability level (the tabulated X<sup>2</sup> statistic).

The X<sup>2</sup> statistic is given by the formula:

$$X^2 = \sum \frac{(O-E)^2}{E} \dots\dots\dots(\text{Eqn 3.1})$$

Where,

O is an observed frequency, that which actually occurs

E is an expected frequency, that which would occur if the postulated null hypothesis really applied to the full, and

$\Sigma$  = summation sign.

The calculated  $X^2$  statistic is, therefore, the sum of the differences between the observed and the expected frequencies squared divided by the expected frequencies.

This study used the  $X^2$  test involving more than one sample and more than two categories to test the significance of differences between these samples. Contingency tables involving more than one sample and more than one category were, therefore, presented.

SPSS computer programme was used to obtain the various crosstabulations using the method "CROSSTABS" in the "DESCRIPTIVE" methods of data analysis. Crosstabs of income by education, household size, age and sex, were ran on the computer for both co-operators and non-co-operators (see appendices 6 and 7 for summaries of the crosstabulations). Crosstabulations showed the various relationships of the socio-economic characteristics of people and were used to bring out the major features of co-operative housing in the next two chapters of this study. These crosstabulations were also effectively used to construct contingency tables for  $X^2$  tests.



The appropriate tabulated  $X^2$  statistics for the various hypotheses were obtained using degrees of freedom as obtained through Equation 3.2.

$$\text{d.f.} = (k - 1) (h - 1) \dots \dots \dots (\text{Eqn 3.2})$$

Where,

k is the number of samples, and

h is the number of categories.

The standardised  $X^2$  tables were referred to. The  $X^2$  table yields a value which gives the percentage probability that the null hypothesis is correct. This  $X^2$  value reflects the sum of squares of the deviations of observed conditions from the expected conditions. Thus, if the calculated statistic exceeds the value that would likely occur by chance if the samples were drawn from the same population, then the hypothesis of "no difference" would be rejected at a certain significance level. For example ( $P < 0.05$ ) was used to test all the hypotheses. This means that there would be less than 5% chance of no difference and this would be said with a greater than 95% certainty of this difference. The use of a higher significance level would seem to confirm and emphasize the confidence that could be placed in this decision. Therefore, the larger the calculated  $X^2$  statistic, the more

likely that it will lie within the critical region for rejection of the null hypothesis.

### 3.3.2 Summary Statistics

Mean, also called, average, is a method used to summarize varying values within a set of data. It gives a reasonable approximation to what is normal. It is usually obtained by adding all the values together and then dividing the total by the number of values that there are.

In this study, the mean is used to find averages of the various socio-economic characteristics of both the co-operators and the non-co-operators of the studied sample. However, the computer was used to find out these means using SPSS programme.

Percentages are also used in the analysis of the study data. The percentage (%) is used to make comparison between two and more categories of the study data. Percentages are used to give a good impression of the quantity of each variable.

### 3.3.3 Regression Analysis

Regression analysis is used to determine the relationship between dependent and independent variables. Multiple regression was used to determine the relationship between income (response) and age and household size (determinant variables) of both the co-operators and the non-co-operators. Regression analysis was used

to test the null hypothesis that age and household size do not influence the amount of monthly income for co-operators and non-co-operators in the city as outlined in hypothesis number 6 and 7 of section 1.5. The model fitted here was as follows.

$$Y = b_0 + b_1 x_1 + B_2 x_2 + \dots + B_n + X_n + e \dots\dots\dots \text{Eqn 3.3}$$

## CHAPTER FOUR

### SOCIO-ECONOMIC FACTORS INFLUENCING CO-OPERATIVE HOUSING

#### 4.1 Introduction

The problem of housing in the urban areas of LDCs should attract personal involvement and motivation in order to arrest the ever-increasing housing deficits. This can be ensured through housing co-operatives. The Government of Kenya (GOK) has particularly recognised the co-operative movement in terms of the latter's ability to house people. This has been shown by the concern over the urban housing problem being currently experienced in the country. GOK has declared a long term objective of ensuring that more housing is created through strengthening the role of co-operative savings and credit schemes and co-operative housing societies. Gatabaki-Kamau (1985), ILO (1964) Murison and Lea (1978) and Abrams (1964) are among the authors who have recognised co-operatives as viable channels through which residential houses could be provided.

The housing problem in LDCs is a socio-economic one. Therefore, the socio-economic characteristics of co-operators such as their income, education, household size, age, and sex in one way or another influence the provision of residential co-operative houses. Indeed, Gatabaki-Kamau (1985) asserts that co-operative housing as a form of ownership and a mode of production could help in providing

effective broad-based access to proper housing especially for a wider range of low income groups. The development of housing co-operatives can, therefore, be seen as a means of mobilising local finance for housing. The low incomes of co-operative members, other financial problems in the co-operative movement have been viewed as major factors letting down the co-operative housing efforts especially for low income groups. However, the main objectives of housing co-operatives should be seen as provision of housing to co-operators at the lowest affordable price.

This chapter, therefore, scrutinizes the socio-economic factors that are currently influencing the performance of co-operatives in their endeavour to house especially the low income groups of urban residents. The analysis for the various socio-economic characteristics of the residents in Nairobi city in relation to co-operative housing has also been presented.

Essentially, the socio-economic characteristics of respondents are treated in this chapter with special emphasis on their influence on other aspects of housing development through co-operatives. This is with a view to suggesting solutions to such problems facing housing co-operatives and encouraging more participation in co-operative housing. These factors have been shown to be interrelated, particularly in their financial aspect. Co-operative management has been specially dealt with as an important factor influencing the running of housing co-operatives. Finally, the major features of the

co-operatives considered in the study have been highlighted.

#### 4.2 Income and Participation In Co-operative Housing

The first hypothesis was meant to relate income and participation in co-operative housing. In this test the income levels in all housing co-operatives were studied and the formers' totals presented for the co-operators. At the same time, the sample of non-co-operators represented the non-participants into the three levels of income - low, middle, and high. Because of the high variations in income among the city residents studied, large intervals were chosen to group these people according to their income levels. These groups were determined as follows.

(a) Low income people were considered as those earning Kshs. 3000 or less. This figure was chosen with support from the National Co-operative Housing Union (NACHU), an organization initially meant to assist only the low income people - those earning Kshs. 3000 or less - to produce housing units on co-operative basis. At the same time, this is a group which would not be expected to purchase a house on their own because of the little financial resources available to them. Currently, Kshs. 3,000 has limited value because of the high cost of living and, therefore, high costs of owning and/or constructing a residential house. Essentially, most of the people interviewed who live in the low income, high density residential areas have an income range of between Kshs. 500 and Kshs. 3,000 per month.

(b) The middle income group of people was considered as consisting of those people earning a monthly income of more than Kshs. 3,000 up to Kshs. 6,000. This group is dominant in the employment sector particularly the ministries and other government employers. These people live in the low income areas and a few in the middle income areas. Through the co-operative movement these are the most likely to succeed in co-operative housing.

(c) The high income group of people was considered as constituting those persons earning more than Kshs. 6,000 per month. This is the group which is likely to be able to buy the already built houses or build their houses individually without much problem and are likely to perform well in co-operative housing.

The pattern of income as observed (O) among members and non-members of housing co-operatives in the sampled number of people in the city is shown in Table 4.1. The expected frequencies (E) were computed using equation 4.1.

$$E = \frac{\text{Row total} \times \text{column total} \dots\dots\dots(\text{Eqn 4.1})}{\text{overall total}}$$

**Table 4.1 Observed and Expected Frequencies of Income Among the Study Samples**

	Low Income		Middle Income		High Income		Total	
	O	E	O	E	O	E	O	E
Members	30	42	41	31.5	29	26.5	100	100
Non-Members	54	42	22	31.5	24	26.5	100	100
Total	84	84	63	63	53	53	200	200

Source: Field Data, 1993.

Using Eqn. 4.2.

$$X^2 = \sum \frac{(O-E)^2}{E} \dots\dots\dots \text{(Eqn 4.2)}$$

the  $X^2$  statistic for income was found to be 13. The tabulated  $X^2$  statistic computed using (d.f=2,  $p<0.05$ ) was found to be 5.99.

Thus the null hypothesis that there is no significant difference between income and participation in co-operative housing is rejected. There is a less than 5% chance that income does not influence participation in co-operative housing. It is confidently (95%) asserted that income levels have a significant influence on participation levels in co-operative housing.

Low income people are expected to participate more in co-operative housing than any other group as observed in Table 4.1, noting that 30% are co-operators while 42% of low income people expected to be co-operative members is bigger. We can, therefore, see from Table 4.1 that the middle income group is more involved in



co-operative housing than any other group, thus representing 41% of the respondents.

The crosstabulation of income by education shows that the lowest income group, earning Kshs. 500 to 1,500, is represented by a significant number of low income earners 18 people (Appendix 6 i). On the other hand, the highest income group, represented by those earning Kshs. 30,000 to 35,000 has been least represented among the co-operators, with only 4 persons earning the said income. The largest number of co-operators earn Kshs. 3,000 to 4,000 (22 persons). Half of the co-operators earn Kshs. 4,000 and less.

On the other hand, more than half of the city residents studied who are low income earners (54%) do not participate in co-operative housing (Table 4.1). A smaller percentage of the respondents (22%) who are middle income earners do not participate in co-operative housing. The lowest income group among the non-co-operators was earning Kshs. 500 to 1,000 (Appendix 7 i), and was represented by 15 persons. The largest number of non-co-operators were low income earners earning Kshs. 1,200 to 2,600 (36 people). This was followed by those who earn Kshs. 3,000 to 7,000 represented by 31 persons. Like in the case of co-operators, the highest income group, represented by those earning Kshs. 15,000 to 25,000 had only 4 persons. More than three-quarters (82%) of the non-co-operators earn Kshs. 7,000 and below.

Multiple regression analysis was carried out using income as the response variable and household size and age as explanatory variables. Four samples were used: the first was that of all the co-operators (Appendix 8); the second comprised all the non-co-operators (Appendix 9); the third sample consisted of only those co-operators who had primary school education (Appendix 10); and finally the fourth one included those non-co-operators with primary school education (Appendix 11). The linear relationship in income with household size and age for the co-operators is given by Equation 4.3

$$Y = 5004.6 + 66.9x_3 - 54.5x_4 \dots\dots\dots\text{Eqn 4.3}$$

Where

- Y is the predicted income (for co-operators)
- $x_3$  is Household size
- $x_4$  is Age

Generally income is not to a large extent influenced by age and household size.  $R^2$  (Appendix 8) explains the linear relationship of income with household size and age among the co-operators studied. Only 3.9% variation in income is shown to be negatively influenced by age. This can be explained by a likelihood of younger educated people earning more. From the study, none of the co-operators who is young earns low income. Among the old co-operators the study shows that a significant proportion earns low incomes compared with the other age groups.

Income is also shown to be positively influenced by household

Income is also shown to be positively influenced by household size. This study has confirmed that the highest proportion of high income earners among the co-operators is found in the larger households (Table 4.4). It can also be noted that half of the small households are low income earners. This can be explained by the fact that people tend to limit the number of dependants due to low incomes. Larger households consists of more dependants and are therefore likely to earn more to cater for the big number of people.

The linear relationship of income and household size and age among the non-co-operators is given by the equation below.

$$Y = 4701.9 + 791.2x_3 + 90.9x_4 \dots\dots\dots\text{Eqn 4.4}$$

Where the unknowns are as in Equation 4.3, above.

Only 19.2% R<sup>2</sup>, (Appendix 9) of the variation in income can be explained by the linear relationship with household size and age among the non-co-operators. Income is negatively influenced by household size. Younger people, usually from small households, are likely to earn more because they are more educated. Income is positively influenced by age. Experienced older people are likely to earn better than fresh young employees. Table 4.7 shows that half of the old non-co-operators are high income earners. There are more low income co-operators in the young age group than there are in the other age groups.

The linear relationship of income with household size and age for the co-operators with primary level education is represented by

$$Y = -4592 - 408.3x_3 + 322.6x_4 \dots\dots\dots\text{Eqn 4.5}$$

Where the unknowns are as in Equation 4.3 for the co-operators with primary level education.

Only 7% (Appendix 10) variation in income could be explained by the linear relationship with household size and age among the co-operators with primary school education. Income is positively influenced by age among the co-operators with this level of education. Older people could be said to earn more due to experience in their work places. Income is negatively influenced by household size among those co-operators with primary schooling. High income earners are likely to limit their family size because they are more exposed to life's challenges and are likely to want to be more comfortable with small families.

The linear relationship in income with household size and age among the non-co-operators with primary school education is represented as follows.

$$Y = 6902.2 - 77.8x_3 - 85.3x_4 \dots\dots\dots\text{Eqn 4.6}$$

Where the unknowns are as in (Eqn 4.3) for those non-co-operators with primary level education.

Among this group of people 14.8% (Appendix 11) of the variation in income can be explained age and household size. Income is shown to be negatively influenced by age among this group of people. Low

to be negatively influenced by age among this group of people. Low income earners are younger people who may not afford to join co-operatives. Income is also shown to be influenced negatively by household size. Low income earners are from small households due to financial limitation to have bigger families.

The co-operators earning low incomes were shown to possess primary or no education (Table 4.2).

**Table 4.2 Income and Education of Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
No Education.	8	7	0	15(15%)
Primary Ed.	22	18	3	43(43%)
Secondary Ed.	0	14	2	16(16%)
Advanced Ed.	0	2	24	26(26%)
Total	30(30%)	41(41%)	29(29%)	100(100%)

Source: Field Data, 1993.

Table 4.2 shows that a majority of low income co-operators have primary schooling only (73.3%, 22 out of 30), while a majority of high income co-operators have attained advanced level education (82.75%, 24 out of 29). Appendix 6 (i) also depicts the same picture, with 76.7% (33 out of 43) of the co-operators with primary schooling earning Kshs. 4,000 or less. It can be noted that 27% of the low income earners engaged in co-operative housing had no education at all. No low

income earner co-operator had secondary or advanced level education. This group of people is, therefore, not expected to get employment in the formal sector. Most of the respondents from the low income areas either sell fruits or vegetables along paths in their residential areas or second hand clothes in small markets or in the major city open air markets. Such business has greatly prospered especially at this time of economic crisis in the country. These areas have large markets of small quantity foodstuffs and second hand clothes. Therefore, it cannot be ruled out that such business can fetch quite a lot of money. The informal sector and the efforts of the low income families to provide shelter by their own is, therefore, an important fact to consider in co-operative housing. These efforts must be recognised and encouraged by the GOK. All the counter-productive factors of the informal sector must be removed.

A crosstabulation of income and education shows that all the co-operators with no education earn Kshs. 500 to 14,000, the income group, Kshs. 1,600 to 2,500 being represented most 40% (Appendix 6 i). Many co-operators with primary level education (37%) are the lowest income earners, earning Kshs. 500 to 1,500. However, none of the co-operators with less than post secondary education earns more than Kshs. 14,000. It can, therefore, be seen that as co-operators advance in education, they earn more income. Notably, only one co-operator with advanced level of education earns less than Kshs. 5,600. The majority earn Kshs. 15,000 and above (57.7%). On the other hand,

more than three quarters (83%) of the non-co-operator respondents who were high income have post-secondary school education. 10% have primary education, 7% secondary education and none have no education at all (Table 4.3). Thus the more educated people should be encouraged to join in co-operative housing in order to boost housing production through their high incomes.

**Table 4.3 Income and Education of Non-Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
No Ed.	20	0	0	20(20%)
Primary Ed.	20	0	0	20(20%)
Secondary Ed.	14	17	12	43(43%)
Advanced Ed.	0	5	12	17(17%)
Total	54 (54%)	22 (22%)	24 (24%)	100(100%)

Source: Field Data, 1993.

All the non-co-operators with no education earn Kshs. 500 to 2,600 Appendix 7 i). Similarly, a majority of the non-co-operators with primary schooling (95%) are in the lowest income groups. None of the non-co-operators with primary level education earns more than Kshs. 7,000. The majority of the non-co-operators with secondary education (55.6%) earn Kshs. 3,000 to 7,000. No non-co-operator with advanced education earns less than Kshs. 3,000. A majority (65%) earn Kshs. 7,500 and more.

Obtaining peoples' incomes is a major problem experienced in developing countries. In most third world cities, most urban dwellers are under wage employment or are self-employed and this study confirms this fact. These people do not know their exact monthly incomes due to lack of proper profit records for the self-employed, yet there are many and immediate uses for such money (ILO, 1964). There is very little propensity to save. During the various interviews, most respondents did not want to disclose their incomes. Quite a number gave inflated figures of their monthly incomes especially from their petty businesses with three-quarters of the businesses being said to earn more than Kshs. 5,000 per month. Such figures were, however, not taken for granted but were instead used to estimate the correct monthly income for each of the respondents by assessing the size of their businesses.

ILO (1972) study recorded that two-thirds of the poor's incomes came from the informal sector, which accounted for 25% to 30% of all those employed in Kenya in 1972, but accounts for a much more percentage currently. This sector has largely been supported by the GOK's development policy. According to the ILO (1972) report, the GOK was advised to encourage meaningful informal sector employment because this sector had been able to absorb much of the urban population. Moavenzadeh (1987) agreed that in housing, the size and the output of the informal sector especially in the LDCs is substantial and provides shelter for the poor.



could be attributed to people's low incomes and their low propensity to save. This can be shown by the low levels of education among the co-operators who earn low incomes because they are likely not to get employment in well paying positions. This can be compared very well with the non-co-operators who, though having a larger percentage of low income people (54%), have a smaller percentage of this group with primary education. The latter group, therefore, has a greater advantage over their co-operator counterparts to do well in co-operative housing as considered in Section 4.3. Furthermore, while none of the low income co-operators have secondary or post secondary education, 26% of the non-co-operators with low level of income have secondary education.

Therefore, the estimated 20% city residents living in sub-standard housing could be due to the unavailability of money from their incomes combined with their low levels of education which are the primary disadvantages in co-operative housing.<sup>17</sup> Provision of adequate low cost housing has been a problem as the demand for this has continued to grow in numbers. Busaka (1985) recorded that a very small percentage of people have sufficient capital to invest in housing. The average monthly income for most of the respondents was found to be below Kshs 4,000. From such an amount housing was found to take quite a large proportion, sometimes up to 40%. Other necessities like food, clothing and education were found to take up the rest of the income, therefore, leaving hardly any amounts for

the rest of the income, therefore, leaving hardly any amounts for savings. Co-operative housing should be an important arrangement for such groups of people to enable them to own houses. For instance, 54% of all the non-co-operators studied were found to constitute low income people, thus earning not more than Kshs. 3,000. This group of people should be encouraged to form or join housing co-operatives for cheaper housing.

Nevertheless, even the groups which are involved in co-operative housing cannot generate enough funds out of their incomes to put up the amount of housing required for ownership. This is because many of them lack adequate and steady incomes. According to this study, only 29% of all the co-operators studied earn more than Kshs. 6,000, while the rest (71%) were earning less (Table 4.1). Yet the availability of shelter finance particularly for the poor is an essential part of the response to a large shelter demand as confirmed by Huyck (1987).

Many respondents cited "financial" constraint as the major problem encountered in their efforts to obtain houses. They take too long to accumulate enough savings to enable them obtain adequate loans. Co-operative leaders, in particular, complained of prolonged periods within which members complete their financial contributions. Most members lagged behind and consequently all co-operative attention was said to be paid to only those who had completed their contributions. This was the case with Akwana Housing Co-operative.

However, such a process was found to create factions within some co-operatives because some section was found to be more active than the other. Those who were found financially active formed one faction while the rest formed the other faction, the latter being less informed about most of their co-operative matters. In Marura Housing Co-operative Society, only those members who had obtained loans to finance the rehabilitation of their houses were found to be active in their co-operative, others seemed to have withdrawn from the co-operative activities. Such factors together with the others were found to make co-operatives less attractive to the members of the public as quoted by many of the non-co-operator respondents.

Those people already in housing co-operatives have membership consisting of a low percentage of low income earners, a significant percentage (29%) was from large households (Table 4.4).

Table 4.4 Income and Household Size of Co-operators Among the Study Sample

	Low Income	Middle Income	High Income	Total
Small 1-3	4	2	2	8 (8%)
Medium 4-6	16	24	17	57 (57%)
Large 7+	10	15	10	35 (35%)
Total	30 (30%)	41 (41%)	29 (29%)	100 (100%)

Source: Field Data, 1993.

Half of the co-operators from small households earn Kshs. 1,700 to 3,500 (Appendix 6 ii). A significant percentage (25.7%) from large households among the co-operators are the lowest income earners, earning Kshs. 1,600 or less.

A large percentage of non-co-operators (93%) with low incomes come from large households which consist of more than 6 persons (Table 4.5). This shows how seriously the low income groups must be facing housing shortage because of their large families.

**Table 4.5 Income and Household Size of Non-Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
Small	6	13	14	33 (33%)
Medium	34	9	9	52 (52%)
Large	14	0	1	15 (15%)
Total	54 (54%)	22 (22%)	24 (24%)	100(100%)

Source: Field Data, 1993.

The same condition is shown by Appendix 7 ii, which shows that 93% of co-operators from large households earn Kshs. 4,000 or less. This group has the greatest need for housing which can be obtained cheaply through co-operatives. Therefore, more participation in co-operative housing in terms of membership should be encouraged especially from the low income members. Thus, co-operative housing is not catering for the many people with a greater housing need

(large households). A majority of the non-co-operators from small households earn Kshs. 5,000 to 9,000 (60.6%). All the non-co-operators from large households except one earn less than Kshs. 5,000.

Co-operative members also complained of the tight economic situation being currently experienced in the country. This situation is almost obvious through the high inflation rates and the low and declining value of the Kenya shilling (Kariuki, 1992). Essential commodity prices are rising and people are unable to keep to their budgets. Most non-co-operators stated that they could hardly find extra money to dedicate it to owning a house, thus accounting for the low co-operative housing membership. This also delays and decreases savings and, therefore, co-operative housing financing. All the co-operatives studied had not been able to obtain finance from the members in time in order to get loans for funding their co-operative housing projects. With all these delays, co-operators have to cope longer with their housing problems. Half of the non-co-operator respondents stated that co-operatives take too long to meet their objectives in providing housing and, therefore, argued that such a time could be enough to accumulate savings to purchase an already built house. Therefore, most high income respondents prefer to be non-co-operators.

Income has been related to age in co-operative housing. While the majority of the co-operators are middle aged (59%, 31 - 45 years), the older age group (46 years and above) forms the greatest

percentage (66%) of the high income earners (Table 4.6).

**Table 4.6 Income and Age of Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
Young	0	1	0	1 (1%)
Middleage	18	31	10	59(59%)
Old	12	9	19	40 (40%)
Total	30 (30%)	41 (41%)	29 (29%)	100(100%)

Source: Field Data, 1993.

Similarly, 29% of all the co-operators aged 40 to 44 years and 74% of the co-operators are 35 to 49 years old (Appendix 6 iii). However, a majority of the low income non-co-operators are old (44%), compared with the middle aged (20%) and the young (35%, Table 4.7).

**Table 4.7 Income and Age of Non-Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
Young	19	12	4	35 (35%)
Middleag	11	7	8	26 (26%)
Old	24	3	12	39 (39%)
Total	54 (54%)	22 (22%)	24 (24%)	100 (100%)

Source: Field Data, 1993.

The non-co-operators grouped as old in this case have a majority in the high income group (50%). Through such persons co-operatives would be involved in less financial problems if the latter involved themselves more in co-operative housing. Moreover, 41% of all the non-co-operators studied were beyond 44 years old (Appendix 7 iii).

It is also essential to mention that women are significantly affected in housing through co-operatives because of their financial status. 40% of all the female co-operators earn low incomes, while only 27.5% were men (Table 4.8). Three-quarters of the female co-operators earn Kshs. 4,000 or less (Appendix 6 iv).

**Table 4.8 Income and Sex of Co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
Male	22	13	27	80 (80%)
Female	8	10	2	20 (20%)
Total	30 (30%)	41 (41%)	29 (29%)	100 (100%)

Source: Field Data, 1993.

Female co-operators, therefore, face more financial strains in co-operatives than their male counterparts. Furthermore, 46% of all the female non-co-operator respondents were from low income, the group which even needs co-operative housing (Table 4.9). Notably 40% of the female non-co-operators earn Kshs. 2,600 or less (Appendix 7 iv).

**Table 4.9 Income and Sex of Non-co-operators Among the Study Sample**

	Low Income	Middle Income	High Income	Total
Male	38	11	16	65(65%)
Female	16	11	8	35(35%)
Total	54 (54%)	22(22%)	24 (24%)	100(100%)

Source: Field Data, 1993.

The evidence of acute housing problem in the city is shown by the inadequacy of house allowances received by most employees in the city. Rental units have become very costly. With a monthly house allowance of Kshs. 1,000 an average household size (constituting 5 persons) cannot be housed comfortably. This evidence further authenticates the problem of inadequate living space in the city today where a bed-sitter may go for up to Kshs. 2,000. Nevertheless, city dwellers find it more comfortable to cope with the immediate problem of high rental rates than dedicate such money to co-operative housing as confessed by most of the non-co-operators interviewed.

Solutions should, therefore, be offered to help low income people who, lacking the necessary funds, become tenants at market rents. Co-operatives carrying out housing projects especially for low income people are, therefore, expected to provide small-scale ownership which is affordable to this group considering the income level. This would be to make these co-operatives more attractive and encourage



more participation and, therefore, registration of more members. Public funds could also be used in aiding such projects. This is because after all housing is an important social need and, therefore, there is every justification for the state to help low income families instead of carrying out the whole burden of popular housing program. Savings from members' low incomes could be encouraged through savings and credit schemes. This could enable quicker and larger loans for houses more cheaply through co-operatives. Low income families especially in urban areas should, therefore, be able to pool their savings in order to finance house building through this way. It would particularly help such co-operative members to meet the down-payment of their dwelling units more comfortably.

The problem of low incomes hinders both the production of housing through co-operatives and, therefore, the affordability of non-co-operators to financially participate in, and therefore, contribute towards, co-operative housing. This problem must, therefore, receive greater attention at present and in the near future in terms of catering for the low income urban residents.

#### 4.3 Education and Participation In Co-operative Housing

The second hypothesis sought to find out whether there is any significant difference between education and participation in co-operative housing. Education levels of the city residents studied were diverse - ranging from the illiterate to those who had attained

post-secondary formal education. Four levels of education were used:

(a) A level in which a person was found to have never gone to a formal school (represented generally by "none"). This group also included those who had attended school up to below standard three, mainly the people found in the older age groups. These are the people who are unable to read or write and are nearly illiterate, thus termed as having no education in this study.

(b) Primary education was recorded as being from standard three to eight. This group also includes those who may have attended literacy classes without necessarily attending formal schooling.

(c) Those who had attained secondary school education included the form four and/ or form six school leavers. Advanced (higher) education included all post-secondary graduates.

The observed (O) and expected (E) frequencies of the groups alluded to above for both the co-operators and the non-co-operators are summarized in Table 4.10.

**Table 4.10 Observed and Expected Frequencies of Education Levels Among the Study Samples**

	None		Pri.		Sec.		Advanced		Total	
	O	E	O	E	O	E	O	E	O	E
Members	15	17.5	43	31.5	16	29.5	26	21.5	100	100
Non-Members	20	17.5	20	31.5	43	29.5	17	21.5	100	100
Total	35	35	63	63	59	59	43	43	200	200

Source: Field Data, 1993.

Using Equation 4.2, the  $X^2$  statistic for education was found to be 24. The tabulated  $X^2$  statistic ( d.f = 3  $p < 0.05$ ) was found to be 7.81. Thus, the null hypothesis that there is no significant difference between education and participation in co-operative housing is rejected with 95% confidence. There is less than a 5% chance that education has no significant influence on participation in co-operative housing.

We can, therefore, conclude that a smaller percentage of people with no formal education are members of housing co-operatives (15%). More than twice the number of this group who have attained primary school education are members of housing co-operatives (43%), secondary school graduates have a smaller number of people representing them as members of housing co-operatives (16%). On the other hand, people with higher levels of education (post-secondary) are not represented by a large number of co-operators in housing. Yet it has been shown that primary school graduates constitute a significantly large number of lower income earners among the co-operators studied (46.5%). This has serious financial problems to the co-operatives. Generally, people with lower levels of education, (those with primary or lower levels of education which constitute 58% of all the co-operators studied in the city) however, participate more in co-operative housing than their more educated counterparts (those who have attained secondary and post-secondary education who only represents 42% of those studied). Consequently the latter group

forms a bigger percentage of non-co-operators in the city (59%) compared with the former group which forms 41% of all the non-participants in co-operative housing.

Formal education is an important aspect in almost every undertaking including co-operative housing. Gatabaki-Kamau (1985) agreed that an educated person is able to read and interpret rules and by-laws of co-operatives well and is more likely to adhere to them better than his uneducated counterpart. Notably, housing development is a complicated process which could be more understood by an educated person. In his plan for a house, one can suggest appropriate house plans and, therefore, seek guidance from government officials including other private professionals more conveniently (without any language barrier for example). Nevertheless, education influences response to co-operative housing either negatively or positively as explained in subsequent paragraphs.

The experience of illiteracy among the respondents is a good indicator of the low level of formal education. For example, 43% of all the co-operators studied stated that they had attained primary level of education (Table 4.10). 42% of non-co-operators studied had secondary school certificates. Nevertheless, those who had attended school up-to and below standard three, unable to read the relevant materials about their co-operatives, even when they were available to them, especially those concerning their housing projects, are termed

illiterate. 58% of all the co-operators studied had attended primary schools or had lower level of education while the rest had secondary and post-secondary level of education.

It is important to note that some of those co-operative officials studied did not show a literacy level which could be considered fit for co-operative leadership. During interviews with several officials of two of the housing co-operatives studied, direct translation into the Kiswahili language had to be done. Such a situation left a lot to be desired in consideration of the important information such officials receive about their co-operatives. Furthermore, important conferences on co-operatives present obvious disadvantages to such groups of people and the co-operatives they represent. Language barriers due to illiteracy and/or lack of adequate formal education makes it almost impossible for direct advisory role from outsiders to such co-operatives.

Due to the low levels of formal education within co<sup>o</sup>-operatives, it is difficult to maintain books of accounts as noted by Noor-mohamed (1986). Co-operatives are, therefore, forced to employ outsiders in such matters for the efficient running of the organisations. Those people who are employed or sometimes hired take a significant proportion of society's money as pay, and at the same time this increases the possibility of fund misappropriation. On the other hand, if the skills to take up such work could be present among co-operators, less money could be used to hire such professionals using

the co-operators' account. At the same time, when such outsiders misappropriate the co-operators' funds, this could cause frustration among members and encourage laxity in contributions towards society projects. Non-co-operators should be encouraged to form and/or join housing co-operative societies in order for them to lead and guide their less educated counterparts in the complicated housing co-operative matters. This could see co-operative housing into greater heights of development.

The CSA requires that before registration, the application should be accompanied by 4 copies of the proposed by-laws of the society in English (CSA Act Cap 490, 1968). This presents problems when considering that most co-operative members and/or officials experience language (English) barrier in expressing themselves in (English). The language used in the stated by-laws should be well understood by both members and co-operative leaders as translation from the original language to English changes the meaning and implications of the By-laws. Consequently, this curtails the clear understanding of the by-laws by the members themselves resulting in grave consequences in the process of adhering to the By-laws.

Little or lack of formal education has negative effects in understanding such important aspects of housing as house plans as discussed earlier. If the old and/or illiterate persons in co-operatives cannot understand the complicated plans, they may underate the importance of professionals like architects. This could

also be due to lack of finance to use such professionals, but more so due to lack of clear understanding of such procedures and the importance of their duties. Such societies have been found to lag behind in their housing projects and requires more training and/or advice from outside their co-operatives, thus demanding more time and money. This is a problem which was frequently found to be experienced by most housing co-operatives particularly those constituting low income, generally illiterate members. More education and training for such co-operatives plus participation of more educated people in co-operative housing projects would save this situation.

The rights and privileges of co-operators as contained in the Co-operative Societies Act (CSA) are very important points to note in running of these societies. However, low levels of education limits the understanding of the By-laws . Subsequently, co-operators may not exercise their full rights and powers within their co-operatives and may depend wholly on co-operative leaders for such information. This keeps aloof such members from fully participating in co-operative matters thus leading to dormancy in a section of a co-operative. Such a situation was observed in one of the co-operative studied, constituting almost 75% illiterate members yet the management committee seemed to be the only section of the co-operative with little formal education.

As seen earlier in Table 4.2, none of the co-operators studied

who had not attained any formal education was earning more than Kshs. 6,000. A majority of the co-operators earning high incomes have had post-secondary education (83%). Also, 92% of all the post-secondary school graduates earned high incomes. While the secondary and the post-secondary school graduates formed only 42% of the co-operators, the non-co-operators formed 60% (Table 4.4). The latter should be encouraged to form and/or join housing co-operatives to help in the areas where their formal education is needed in co-operative housing.

Table 4.13 shows a summary of the crosstabulation comparing education and household size for the co-operators (also see Appendix 6 v).

**Table 4.11 Education and Household Size of Co-operators Among the Study Sample**

	No	Primary	Secondary	Advanced	Total
Small	1	4	0	3	8 (8%)
Medium	8	25	10	14	57 (57%)
Large	6	14	6	9	35 (35%)
Total	15 (15%)	43 (43%)	16 (16%)	26 (26%)	100 (100%)

Source: Field Data, 1993.

A significant percentage of co-operators with low levels of education were from large households 40%. Appendix 6 v). The majority of co-operators who had attained primary level education



came from households constituting more than 3 persons (90.7%). Generally those non-co-operators who had attained low levels of education (below secondary school) had come from households constituting more than 3 persons as shown in Table 4.12.

**Table 4.12 Education and Household Size of Non-Co-operators Among the Study Sample**

	None	Primary	Secondary	Advanced	Total
Small	0	0	23	10	33(33%)
Medium	14	13	19	6	52(52%)
Large	6	7	1	1	15(15%)
Total	20 (20%)	20 (20%)	43 (43%)	17 (17%)	100(100%)

Source: Field Data, 1993.

The non-co-operators who had attained a high level of education (secondary and advanced) came from small households (100%). Persons from small households should be encouraged to join in co-operative housing in regard to their high education levels (Appendix 7 v). Most of the co-operators who are between ages 30 and 46 years (that is middle aged) have had only primary level education or none at all (58%, Table 4.13). Similarly, 53.5% co-operators aged 30 to 44 years had only primary schooling (Appendix 6 vi).

**Table 4.13 Education and Age of Co-operators Among the Stud Sample**

	None	Primary	Secondary	Advanced	Total
Young	0	0	1	0	1(1%)
Middle	7	28	15	9	59(59%)
Old	8	15	0	17	40(40%)
Total	15(15%)	43(43%)	16 (16%)	26 (26%)	100(100%)

Source: Field Data. 1993.

A significant percentage of young persons who were not members of any housing co-operative had secondary and/or advanced level education (63%, Table 4.14). Appendix 7 vi shows that 59.4% of the non-co-operators ages 25 to 299 years had secondary and post-secondary education. The people with more education should, therefore, be encouraged to be involved in co-operative housing activities.

**Table 4.14 Education and Age of Non-Co-operators Among the Study Sample**

	None	Primary	Secondary	Advanced	Total
Young	13	0	18	4	35(35%)
Middle Age	7	0	16	3	26(26%)
Old	0	20	9	10	39(39%)
Total	20(20%)	20(20%)	43 (43%)	17(17%)	100(100%)

Source: Field Data. 1993.

There were very few female co-operators with high levels of education, a majority of whom had only primary or no education (75%, Table 4.15, Appendix 6 vii). However a majority of the female non-co-operators (71%) had secondary and advanced education (Table 4.16, Appendix 4 vii). Women who have more education are needed in co-operative housing so they may participate fully even as leaders of the co-operatives.

**Table 4.15 Education and Sex of Co-operators Among the Study Sample**

	None	Primary	Secondary	Advanced	Total
Male	13	30	13	24	80(80%)
Female	2	13	3	2	20(20%)
Total	15(15%)	43(43%)	16(16%)	26(26%)	100(100%)

Source: Field Data, 1993.

**Table 4.16 Education and Sex of Non-Co-operators Among the Study Sample**

	None	Primary	Secondary	Advanced	Total
Male	10	20	23	12	65(65%)
Female	10	0	20	5	35(35%)
Total	20(20%)	20(20%)	43(43%)	17(17%)	100(100%)

Source: Field Data, 1993.

Effects of education in co-operative housing are very detrimental to the development of housing projects. Time is wasted and substantial amount of money is spent to keep such societies well informed and up-to-date with their housing projects and hence delaying housing production. Formal education ought to be encouraged and co-operative training campaign and literacy classes taken seriously in order to boost the productivity of housing co-operative societies. The more educated persons should be encouraged to form and/or join housing co-operatives in order to save the situation of low income housing co-operatives. These would set a good example for other co-operatives with members who have lower levels of education to follow.

#### 4.4 Household Size and Participation In Co-operative Housing

The third hypothesis considered, the household size as a factor which could influence participation in, and performance of, co-operative housing. Three groups of households were considered in this study - small, medium and large. A small household was considered as one constituting 1 to 3 persons. Generally, the least number of persons in a household was found to be 1 (that is a single man or woman). Such a person could have newly settled in the city, probably having migrated from the rural area and newly employed in the urban area. Alternatively, he/she could have moved from the

parents' house into a rented house or could have bought his/her own house. In the case of 2 to 3 persons, they could have decided to share a house. On the other hand, a new family, considered as one consisting of a husband, wife and a child, could have settled in one house thus forming the smallest household in terms of family size.

The medium household was that which consisted of 4 to 6 persons. Generally, in urban environments, the size of the household is limited by space in residential houses which is small. Therefore, an average ranging from 4 to 6 persons is likely to be the size of most households in any large urban centres like Nairobi. The large households are those considered as consisting of more than 6 persons and may be associated with the urban poor.

The following were the frequencies observed (O) and expected (E) among these three groups (Table 4.17).

**Table 4.17 Observed and Expected Frequencies of Household Sizes Among the Study Samples**

	Small		Medium		Large		Total	
	O	E	O	E	O	E	O	E
Members	8	20.5	57	54.5	35	25	100	100
Non-members	33	20.5	52	54.5	15	25	100	100
Total	41	41	109	109	50	50	200	200

Source: Field Data, 1993.

Using Equation 4.2, the  $X^2$  statistic for household size was found to be 33.74. The tabulated  $X^2$  statistic (d.f = 2,  $p < 0.05$ ) was found to be 5.99. Thus, we reject the null hypothesis that there is no difference between various household sizes and participation in co-operative housing. We are 95% certain that there is a difference between household size and participation in co-operative housing. We can, therefore conclude that a small percentage (8%) of all the co-operators are from small-sized households. Conversely, a significant percentage of non-co-operators are from small-sized households (33%). That, 57% of the co-operators are from medium-sized households, while 35% of all the co-operators are from households which are large, and large households represent the smallest percentage of all the non-participants in co-operative housing (15%).

Co-operative housing development is negatively influenced by the size of households in the city in the following way. The size of the households determines a household head's response to the need of joining a co-operative in order to house his or her household. Household size influences the size of houses built equivalent to the number of prospective occupants of such a house.

Households in the city are generally large particularly among the low income people among the non-co-operators. That, 93% of all the low income non-co-operators come from large households (Table 4.5). The study showed that 35% of the households represented in the housing co-operatives studied have several children, a few relatives

and friends living with them in a single housing unit, each of these consisting of seven or more heads (Table 4.4). That 92% consist of more than 3 persons. Only 8% of the co-operators studied are from small households. Further, 33% of the non-co-operators come from small households. This calls for houses for the large households because the majority live in single or double-roomed dwelling units, which are hardly comfortable and/or convenient to live in. While the co-operators expressed desire for bigger houses as well as the non-co-operators studied, the latter group should reconsider their decision to join housing co-operatives in order to house themselves more cheaply through co-operative efforts. For the former group, this was a major reason for joining housing co-operatives. They expressed their wish to house their large households more comfortably. The nature of African communities is that they usually have strong rural ties which force them to live with their relative who are usually dependants. Friends also find sympathy from these African families. These dependants, looking for employment, stay and help in the household chores. It can be argued that such households present problems in obtaining houses because the latter have to be big enough to accommodate the whole household. This applies especially to housing people through housing co-operatives. Some households constitute up to ten persons. This causes overcrowding, particularly in the low income areas.

Most co-operatives were found, or intended, to build uniform houses (of the same size). These houses are small especially for large households. Therefore, even when such households obtain houses through their co-operatives, this will not solve their problem.

Such a fact calls for housing co-operatives to re-think and consider the sizes of their members' households. This will not only encourage especially large households to join co-operatives (in order to obtain larger and cheaper houses), but also the medium-sized households to join co-operatives (to house themselves). Small households contribute less to co-operative housing in terms of membership.

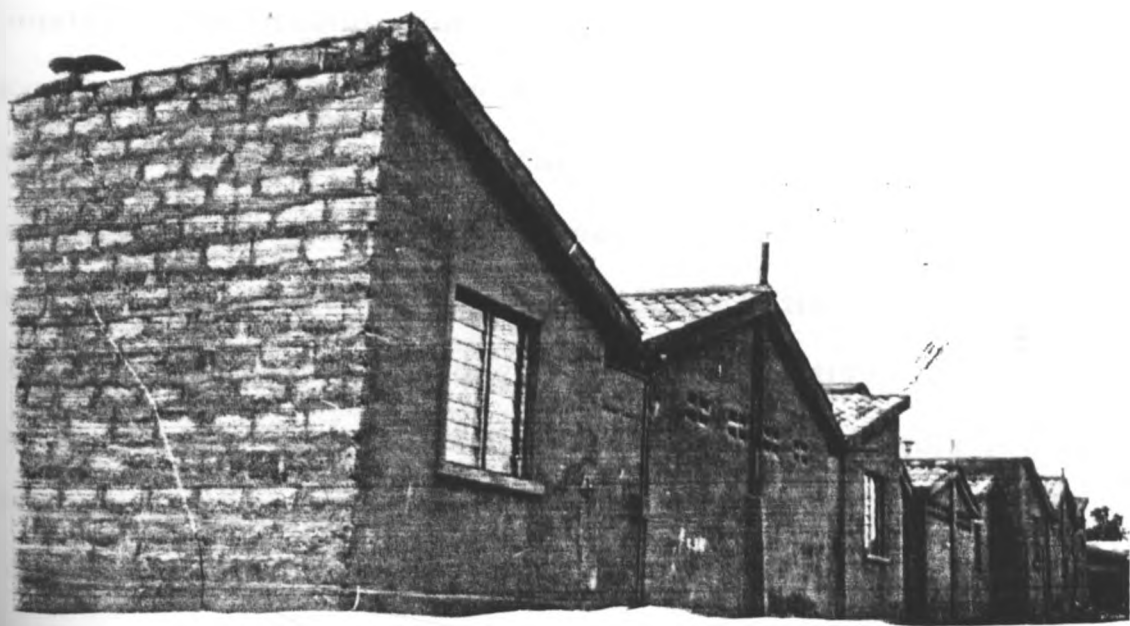


Plate 4: A Section of Kariobangi Co-operative Houses. (These 2-roomed houses are not enough for large households).

This is the case probably as a result of enough housing space in the rental housing units. At the same time, this is the group that constitutes only one person forming the household usually a bachelor



or a single woman, who nevertheless, anticipate larger households. All household sizes should, therefore, be encouraged to participate in co-operative housing.

Since housing is a part of what consumes a household's income, it can be argued that large households may not afford owner-occupier houses even through housing co-operatives. For instance, they may not make their financial contribution towards housing more promptly and/or comfortably. Other parts of the household budget takes up a large proportion of the household income. These include food, clothing, education and health, even when the level of income is kept constant. The situation can be observed particularly at this time of economic crisis in the country, as high inflation rates are experienced and food, clothing and medical costs are on the rise, while education has continued to become an expensive investment. The large households as members of co-operatives find it difficult to accumulate the necessary savings through these co-operatives<sup>es</sup> for acquiring housing loans. This outcome delays housing projects for these respective co-operatives to be able to produce the planned number of houses within a given time.

The problem is common among low income people. The co-operatives were found to take too long in terms of years to obtain loans for their co-operative housing projects. Such a situation has increasingly become important in this era of high inflation and the frequent fluctuation in the value of the Kenya shilling. Consequently,

such projects, with time, have become very costly. This problem has been perpetuated by the fact that most of the dependants of such large households have only one bread-earner, which makes it difficult for only one person to feed, clothe, and probably educate the household and at the same time afford extra money to save for co-operative housing. This in turn made housing projects of the co-operatives to which they belong lag behind due to lack of financial contributions to put up the buildings. It is determined that 71% of the co-operators from large households earn Kshs. 6,000 or less (Table 4.4). Furthermore, those persons who had not yet joined housing co-operatives and who had come from large households represented 93% of all those non-co-operators from large households earning low incomes. This latter group would benefit more from co-operative housing (Table 4.5).

Most co-operatives studied constituting generally low income earners are unable to build bigger houses for the large households. Two of these were found to build only two-roomed houses for all their co-operative members irrespective of their household sizes. Such houses were hardly adequate and only made a little difference between repaying the cost of such a house and paying rent for an equally small house which cannot comfortably house all the household members.

Repaying for the constructed houses is even part of the great problem among low income large households. They are forced to

sublet part of their new house in order to enable them pay the loan. These households live in even smaller spaces in order to provide for subletting, which was not provided for in the initial stages of the house construction. This also exposes the owner household to the risk of insecurity from the tenants in these low income areas, and at the same time, the household is being denied the privacy, an important aspect in residential housing.

A solution to the problem of providing large households with large houses could be found through the housing co-operatives themselves. Household sizes together with their incomes should be important aspects when planning for housing through co-operatives. Houses should be planned with the consideration of the number of persons to be accommodated and how much such a household is able to pay for the house. They should be planned to provide for subletting. To reduce the cost of such a house, appropriate building materials should be used (section 5.5). Subletting should provide extra income for a household to meet other functions and this will eventually uplift the living standards of such households.

Notably, 37.1% of non-co-operators studied are young people from small households, and 14.3% from large households (Table 4.19), compared with the small percentage (1%) representing those young people in co-operatives who are from all the household sizes (Table 4.18). It can also be seen from Appendices 7 viii and 6 viii that 48.5% of the non-co-operators were aged 25 to 34 years and that only 4% of

all the co-operators aged 34 years and below. Nevertheless, all the household sizes should be encouraged to participate in co-operative housing in order to involve more of the young people.

**Table 4.18 Household Size and Age of Co-operators Among the Study Sample**

	Small	Medium	Large	Total
Young	0	1	0	1 (1%)
Middle	7	29	23	59(59%)
Old	1	27	12	40(40%)
Total	8 (8%)	57(57%)	35(35%)	100(100%)

Source: Field Data, 1993.

**Table 4.19 Household Size and Age of Non-Co-operators Among the Study Sample**

	Small	Medium	Large	Total
Young	13	17	5	35(35%)
Middle	11	14	1	26(26%)
Old	9	21	9	39(39%)
Total	33 (33%)	52(52%)	15 (15%)	100(100%)

Source: Field Data, 1993.

We can note that, 90% of all the female co-operators came from households which had more than 3 persons (Table 4.20, Appendix 6 ix).

**Table 4.20 Household Size and Sex of Co-operators Among the Study Sample**

	Small	Medium	Large	Total
Male	6	45	29	80 (80%)
Female	2	12	6	20 (20%)
Total	8 (8%)	57(57%)	35(35%)	100(100%)

Source: Field Data, 1993.

The households represented which had less than 7 members represented by women non-co-operators were significantly many (Table 4.21. Appendix 7 ix).

**Table 4.21 Household Size and Sex of Non-Co-operators Among the Study Sample**

	Small	Medium	Large	Total
Male	21	30	14	65(65%)
Female	12	22	1	35(35%)
Total	33(33%)	52(52%)	15(15%)	100(100%)

Source: Field Data, 1993.

Due to the increasing importance of large family sizes in urban areas, hence large households, family planning programmes should now be more emphasized in urban areas. This is because in the past, generally the programme were emphasized in the rural areas where rural dwellers were thought to be less informed. Nevertheless, this

should be emphasized in both areas in order to reduce rural urban migration and at the same time reduce family sizes in both areas. This would enable urban households of the near future to comfortably participate in co-operative housing programmes. This will eventually positively effected the development of housing through co-operatives in terms of increased financial participation in housing projects for low income urban dwellers. Small households should also be encouraged to join housing co-operatives in order to prepare for their anticipated large households. They have less tight budgets to cope with, keeping other factors constant. This would lead to greater financial dedication to housing and lessen the problem of inadequate housing in the city because such households would own houses and reduce demand for rental units.

#### **4.5 Age and Participation In Co-operative Housing**

Three categories of age were considered in this study in order to test the hypothesis relating age and co-operative housing. These were young, middle-aged and old. Those considered young were the ones found to be 30 years old and below. However there were no persons below 18 years was a member of any housing co-operative. Furthermore, 18 years was considered as the youngest age at which people are expected to participate in co-operative housing. At 18 up to 30 years is the age at which people are expected to graduate from schools and colleges and obtain jobs, especially in the urban areas.

This age bracket also represents people starting families within the urban centres.

The middle aged are those who are considered as those who are 31 years to, and including 45 years old. Those who were considered as old consisted of persons who are more than 45 years old. These are persons within the urban centres about to retire from their jobs and those who have already retired but are still living in the urban centres.

The observed (O) and the expected (E) frequencies of age were tabulated (Table 4.22).

**Table 4.22 Observed and Expected Frequencies of Age Among the Study Samples**

	Young		MiddleAge		Old		Total	
	O	E	O	E	O	E	O	E
Members	1	18	59	42.5	40	39.5	100	100
Non-members	35	18	26	42.5	39	39.5	100	100
Total	36	36	85	85	79	79	200	200

Source: Field Data, 1993.

Using (Eqn. 4.2) the  $X^2$  statistic for age was found to be 44.94. The tabulated  $X^2$  statistic (d.f = 2,  $p < 0.05$ ) was found to be 5.99. Thus, we reject the null hypothesis that there is no difference between age and participation in co-operative housing. We are 95% confident that age influences participation in co-operative housing. Generally, a large percentage (50%) of people who participate in co-

operative housing are middle aged while a small percentage (1%) are young. Likewise, a significant percentage of non-co-operators in co-operative housing are young (35%).

A majority of the co-operators are aged 40 to 44 years (29%), closely followed by those that are aged 45 to 49 years (25%) and those aged 35 to 39 years (20%). Thus nearly three-quarters of co-operators (74%) were aged 35 to 49 years. Only 1% are aged 60 years and above and 4% are the youngest age-group (30 to 34).

However, the youngest age group among the non-co-operators (25 to 30 years constituted the majority (32%). Those non-co-operators aged 50 to 54 years are represented by the second majority with 25%. More than half of the non-co-operators were aged 25 to 39 years old. A significantly large percentage (35%) was above 45 years old.

Certainly, age is an important aspect of housing and co-operative housing. It can be argued, for instance that, co-operatives should involve more middle-aged persons (between 30 and 40 years old). This is because this group of people can obtain cheaper houses, for their already established families through co-operatives, and more comfortably attend to other family matters. However, at the same time, the relatively young families should engage themselves in co-operative housing because they have more human and financial resources. Nevertheless, most of the co-operator respondents were over 30 and below 46 years old. This was especially common among



co-operatives with income co-operators.

It was determined that age affects housing production through co-operatives in many ways, one of which concerns family formation (and therefore, related to the household size as in section 4.4). Normally a 40 year old, for instance, is expected to have established a family with several children while his younger counterpart, say 25 years old could still be single or only at the initial stages of establishing a family. It is apparent that both these groups of people require comfortable housing. They could, therefore, acquire these houses cheaply through co-operatives. However the size of their respective houses differ. It can be argued that older people need bigger houses for their already established families, under normal circumstances. On the other hand, their younger counterparts may not have bigger (or any) families and therefore, may fit in smaller houses. Nevertheless, these latter groups may still in the near future need bigger houses for their families as seen earlier. As stated earlier, young persons should, therefore, be encouraged to join in co-operative housing activities. None of the young co-operators studied are from small households (Table 4.18 above, Appendix 6 vii). Although 39% of all the young non-co-operators are from small households, co-operatives should also cater for a significant percentage (33%) of the large households represented by young persons (Table 4.19 above, Appendix 4 vii).

More participation of younger persons in co-operative housing would boost the productivity of housing for reasons such as discussed below. The amount of income which could be directed to housing by older and younger households differ. As considered earlier, it would be expected that younger people be more active in co-operative housing than their older counterparts. This is because the latter have a likelihood of delaying housing construction because of the much needed time of savings accumulation to their co-operatives. Their younger counterparts are, however, expected to have less uses for their money. Therefore, co-operatives consisting of younger people have been found to be more progressive, probably for the same stated reasons above.

Nevertheless, considering the final goals of co-operative housing, the older age groups have shown some advantage. The study found out that more patience is shown by the older generations towards housing development through co-operatives.<sup>51</sup> This could be associated with experience as they had gone through harder times trying to save money for their housing projects. This is a strong phenomenon when we consider that in such co-operatives their members earn very little income. Therefore, small money contributions has taken them long to accumulate enough savings. Their active participation throughout that long period saw them to more successful projects. Consequently, these tolerant co-operatives have been more successful in housing their members.

One housing co-operative society studied (Marura Housing co-operative) showed that three-quarters of their members were above 50 years old. These members live in very poor houses and through their co-operative they are trying to rehabilitate themselves. This co-operative had remained firm with few members, after factions had developed as a result of financial problems, and had started afresh considering new approaches to better housing. This housing co-operative was found to be progressive despite the members' earlier frustrations.

On the other hand, a large percentage of the older non-members of co-operatives earn higher income. Furthermore, 65.5% of all the non-co-operators who are old earn high incomes (Table 4.6), yet this group (old) seem to form the largest percentage of all the non-co-operators studied (39%). This group should, therefore, be encouraged to form or join housing co-operatives.

In general co-operatives with members of higher income levels may not be compared with those of low income groups. Even if they constitute mainly old people, that is beyond 50 years, their income and, therefore, the money directed to housing, is higher. Such age groups are shown to have higher education levels. Notably, 58% of all the non-co-operators with high education are old (Table 4.13 above). Similarly younger people are more education. Also, 63% of all the young non-co-operators had secondary and higher education (Table 4.14). This study, however, shows that the latter group of people is

less involved in co-operative housing. Only 1% of all the co-operators were found to be young (18-30 years) and 35% of the non-co-operators were also found to be young. This group could afford buying houses directly without involving themselves in co-operatives. However, it is this group which is more educated than their old age counterpart and, therefore, more likely to be equipped with administrative, managerial and other skills required in the co-operatives (62% of all the young non-co-operator respondents had secondary and more education, while only 48% of the old people had attained the same level of education). The absence of this group of people in housing co-operatives means a lot to leadership and, therefore, management in these societies which lack such skills (see section 4.6). Nevertheless, co-operators with little education and, therefore, lacking such essential skills must receive regular assistance in all these aspects although skilled members would be of greater advantage to these co-operatives.

Table 4.23 shows that most (71.2%) middle aged co-operators are male, while only 28.8% are female. Male co-operators are concentrated in ages 40 to 49 (55%), while females are concentrated in ages 35 to 49 years (85%, appendix 6 x).

**Table 4.23 Age and Sex of Co-operators Among the Study Sample**

	Male	Female	Total
Young	0	1	1 (1%)
Middle aged	42	17	59 (59%)
Old	38	2	40 (40%)
Total	80 (80%)	20 (20%)	100 (100%)

Source: Field Data, 1993.

All the old non-co-operators are male (Table 4.24).

**Table 4.24 Age and Sex of Non-Co-operators Among the Study sample**

	Male	Female	Total
Young	15	20	35 (35%)
Middle-aged	11	15	26 (26%)
Old	39	0	39 (39%)
Total	65 (65%)	35 (35%)	100 (100%)

Source: Field Data, 1993.

Young co-operators are fairly represented in both sexes (42.8% male and 57.2% female. 42.3% of the middle aged co-operators are men and 57.7% are women. None of the female non-co-operators is beyond 45 years old (Appendix 7 x). Young females should be encouraged in co-operative housing.

All in all, co-operative housing should be encouraged among all age groups in urban areas especially those found to be un-involved

in housing co-operatives (the middle income people were found to be dominating in housing co-operatives). This is because all the age groups are experiencing the housing problems in the city and yet the combination would share ideas and duties in these co-operatives. This would enable all groups to involve themselves in housing acquisition and obtain their own houses within the shortest time possible. Young people should particularly be encouraged to participate more in co-operative housing by joining the savings and credit societies in order to save for their housing needs. At the same time, this would enable them own large houses by the time they need them.

However, it was noted that older people have an urgent and immediate problem of housing to deal with and should, therefore, be encouraged to join co-operatives in order to accumulate enough savings and obtain cheaper housing within the shortest time possible. Thus these groups of people could be informed through seminars on the advantages of co-operative housing and this would attract more people in the co-operatives.

Jorgensen (1968) argued that the mismanagement of funds has sometimes, although not always, been due to lack of elementary knowledge in book-keeping and other factors. This could be due to lack of enough education. High age groups which earn low incomes show low levels of education than higher income groups. The former have a higher probability of lacking managerial skills and therefore

liable to expose their co-operatives to the risk of mismanagement, and therefore delay housing projects. These are consequences of badly kept books and records thus encouraging fund misappropriation.

The absence of lower age groups in co-operative housing projects means quite a lot to the present and future development of housing through co-operatives. The youth face a big problem in finding appropriate shelter after they can no longer live with their parents in the urban centres. They also face a near future problem of housing their prospective future families. This is also the group which is experiencing the worst shelter problems, particularly when considering the job seekers and the newly employed persons in the urban centres. Increased rural-urban migration means more housing problems for the migrants who are usually the youth. the youth should therefore be encouraged to know about and therefore participate more in co-operative housing programmes. This would alleviate the housing problem in urban areas because they constitute the majority in the urban population.

All these age and age related factors have affected housing development through co-operatives due to lack of money among the low income people, lack of perseverance and little participation among the youth. Personal involvement and motivation in housing is a prerequisite for the successful arrest of the ever increasing housing deficits as noted by Murrison and Lea (1978). These should be encouraged among all income groups. Through co-operatives,

savings from all age groups for housing development should also be encouraged.

#### 4.6 Sex and Co-operative Housing

The fifth hypothesis sought to find out the relation between sex and participation in co-operative housing. Participation of both sexes in co-operative housing were obtained by considering both the co-operators and the non-co-operators.

The following table represents the observed and the expected frequencies of sex among the two sexes.

**Table 4.25 Observed and Expected Frequencies of Sex Among the Study Samples**

	Male		Female		Total	
	O	E	O	E	O	E
Members	80	72.5	20	27.5	100	100
Non-Members	65	72.5	35	27.5	100	100
Total	145	145	55	55	200	200

Source: Field Data, 1993.

Using (Eqn. 4.2) the  $X^2$  statistic for sex was found to be 7.42. The tabulated  $X^2$  statistic (d.f = 1,  $p < 0.05$ ) was found to be 3.84. Thus, we cannot accept the null hypothesis that there is no difference between sex and participation in co-operative housing. We are therefore 95% confident that sex influences participation in co-operative housing. Hence the following conclusion can be made. More



men have been involved in co-operative housing than women. It is noted that 80% of all the co-operators are men while only 20% are women. men are four times the number of women who participate in co-operative housing.

The sex issue in co-operatives is hereby considered with a view to alleviating the housing problem of female headed households (who are usually single) in LDCs urban centres. Women in LDCs face serious problems related to acquiring comfortable shelter because of financial conditions, illiteracy, lack of tradable skills and educational deficiencies, as noted by UNCHS (1985). However, these households are significantly greater than were previously thought.

Majority of co-operatives show a higher proportion of males than females in membership. This situation becomes even more serious when considering low income co-operatives. Sex is an important index to scrutinize in its effects on the performance of co-operatives especially among the low and middle income households in the developing countries. Tinker (1976) asserted that women suffer greater discrimination and deprivation than men in establishing and maintaining households especially on their own. Yet women should be more prepared to participate directly in housing their households especially through co-operatives. Through joint efforts, the female headed households could cheaply and more conveniently provide their households with comfortable housing. This could be emphasized in the light of the fact that a higher proportion of low income families

are female headed households according to Lewis (1969).

This group of people suffer greater problems in their housing needs because they play double roles of heading the households as well as being the sole bread earners and raising their "families". It can be noted that in many developing countries there is often discrimination against women in employment and education. As a result, women lack the knowledge and incentives to be involved in housing credit schemes for instance in co-operatives. They are overburdened with domestic chores and do not therefore find adequate time and energy to pursue a role in housing programmes (UNCHS, 1985). Since such women have more responsibility in bringing up their families on their own, they should be encouraged to join in co-operatives to help them participate fully in meeting their housing costs.

Meeting the housing requirements for low income women is a specific aspect of the human settlement issue which has begun to receive a lot of attention in light of the growing general concern of women in the development process. 40% of all women co-operators were found to be low income earners, only 10% were earning more than Kshs. 6,000 (Table 4.8). This process must be accompanied by the removal of barriers in participation of women in all aspects of national life and remedial measures to assist woman in assuming new responsibilities consistent with the development process.

Women should, therefore have equal privileges in co-operative housing participation and co-operative leadership. Three quarters of all the co-operatives' leaders were men. To encourage female co-operative leadership, women should participate more in co-operative training courses. This would enable them become better leaders in these co-operatives and could encourage more membership from many more women neighbours especially the low income ones. This would enable co-operatives to reach the majority of low income households in the process of residential housing provision.

The co-operatives studied showed the low frequency of women as leaders. Those who were found to be leaders had lower or no formal education than their male counterparts. This again has great implications in those co-operatives with women leaders. As seen earlier, low education levels encourage poor co-operative management, fund misappropriation and, therefore, lack of proper book-keeping. Low income women need some formal education in order to plan for their community development, manage institutions and deal with credit and other financial organisations. 75% of the female co-operators were found to have had only primary and lower levels of education (Table 4.15). To encourage higher education among women formal education should be emphasized particularly among those girls who come from poor backgrounds in urban areas.

## 4.7 Co-operative Management

The running of co-operatives entails the management aspect. This includes decision making about the conduct of the society's affairs in such a manner that the confidence of the members is maintained. The co-operative is also required to maintain an elaborate financial and membership administration which is necessary in order to make regular supervision and control over the use of funds. Management of co-operative is, therefore, important in influencing the performance of co-operative housing.

The quality of management affects the development of housing through co-operatives particularly in reference to mismanagement and/or lack of managerial and administrative skills among co-operative leaders. Lack of technical, managerial and administrative qualities is a big problem facing co-operative societies in Kenya today. Low levels of education have been shown in co-operative housing. It has been shown that 58% of all the co-operators possess only primary or no education at all (Table 4.10 above). It has also been shown that many co-operators earning low incomes have low education levels (Table 4.2 above), yet the low income people constitute a significant percentage of all the co-operators.

This affects areas in co-operatives such as in matters pertaining to realistic costs and investment plans, negotiating construction loans and about building techniques, administration and book-keeping. This is a major problem facing the low income co-

operatives.

Jorgensen (1968), admitted that mismanagement of funds and societies have sometimes though not always been due to lack of elementary knowledge in book-keeping etc. This can only be rectified by training officials and members. Outright dishonesty and imprudence must of course carry preventive punishment. Some of the co-operative members contacted during the various interviews simply refused to give any information about their co-operatives especially in connection with the issue of co-operative fund mismanagement. This was also a major problem with the co-operative officials. Most of the officials insisted on knowing where the information about their co-operatives would be taken. However, they were assured of top confidentiality in the information given.

It is also important to note that most low income co-operatives were more liberal in giving any information about their societies unlike their high income counterparts. This left a lot to be desired about this latter group, apparently about the management of co-operative funds. Quarrels and factions developing within the co-operatives were found to be partly as a result of members' unrealistic expectations. This partly due to the complexity of the process of housing development and the huge sums of money needed for housing. This may not be understood by low income co-operators, for example, partly due to lack of information on progress in co-operative projects.

In Marura Housing Co-operative, there was a disagreement on how to spend the co-operative funds acquired for housing. Therefore, co-operative spirit is an important aspect in co-operative housing and lack of such a quality among members can lead to such a problem. What holds people together in a society should be the type of goal they are hoping to achieve. However, some co-operatives were found to be ethnic-based which may hardly work in an urban environment. Due to the disintegrating traditional means of punishment for such a group of people, for example, disloyalty among members is common. Hence the first essential in co-operatives is a true co-operative spirit, whatever co-operative problems in finance, land purchase and developments of actual house building. This is a quality frequently missing even among prospective co-operators.

Members should be kept aware of the progress of their co-operatives in order to be encouraged to take an active part in their housing projects. Frequent committee meetings should not be made without the consent of the members especially concerning fund appropriation discussions. Members should at least meet once a year. Most co-operative members stated that they rarely meet as a co-operative. This was found to create mistrust among members and the management committees. Such problems leave loopholes in such co-operatives through which the co-operative leaders may misappropriate funds.

## CHAPTER FIVE

### FINANCING CO-OPERATIVE HOUSING

#### 5.1 Introduction

Much money is need for housing development yet there is a stubborn disparity between income and shelter costs, as noted by Abrams (1964). The capital available for housing finance tends to be extremely limited. Ondiege (1989) agreed that rapid price increase of housing construction materials is mainly attributed to high demand of housing in the face of shortage of housing production and supply. The availability of shelter finance of all income groups particularly to the poor is, however, an essential part of the systematic response to shelter demand at a scale sufficient to impact national needs.

This chapter scrutinizes the problems faced in financing co-operative housing in Nairobi and other similar areas especially among low income households which should be encouraged to participate in co-operative housing. Essentially, the major sources of housing finance have been considered, that is through the co-operators' direct contribution and through other outside finance sources. Other factors related to, and influencing, housing financing are discussed in this chapter. These include land cost and availability, building costs and by-laws and local authority services.

## 5.2 Member Contribution

The initial source of financing a co-operative comes from the purchase of shares and membership fees as confirmed by this study. Once a member has paid his initial membership fee, he subscribes shares in the society. A majority of co-operative members studied are in the low and middle income groups as earlier shown. Due to their unreliable incomes and their low propensity to save, member contribution have been shown to deteriorate over the last few years due to what has been termed as the poor economic situation in the country. Most co-operative leaders have complained of the failure of members to make their due contributions in time, and therefore, the delay in their housing projects. Most of these co-operatives were seen to purchase plots and the beneficiaries become those who have completed making their financial contributions.

A major problem which is related to the members' contributions is the co-operators' low incomes as shown earlier. These incomes are insufficient to build houses for all the co-operative members. The savings of lower income urban households are limited. At the same time, the groups involved in housing cannot afford to subsidize their own contributions and carry out their housing projects. However, it is important for the co-operators to develop a habit of subscription so that funds are continually generated from within until their objectives have been met.



### 5.3 External Financing

Pooling the resources of members through the purchase of shares in the societies and through regular contributions cannot be enough to finance building of houses for all members. as considered earlier, financing housing is a major constraint being experienced in co-operative housing development. Nevertheless, outside finance is a major source of funds for all the co-operatives, although, this source presents several problems to co-operatives and make the latter delay or discontinue with their housing projects.

One of the problems is directly related to co-operators' insufficient incomes. Generally, low income groups are associated with lack of security and suspicion of them having repayment problems. Unreliable incomes and lack of collateral make low income groups to be considered un-credit worthy. Most LDCs savings and loan systems have mortgage mechanisms which require borrowers to have a high degree of solvency in order to keep institutional risks low. This is obviously incompatible with the needs of the poorly capitalised low income households. It also makes prospective low income people get discouraged to join co-operative housing projects. This is shown by the high percentage (54%) of low income earners among the non-co-operators studied. as seen in the study, a great part of most of the incomes in these groups of people is through the informal sector. Loan repayment for instance presupposes that poor people have unstable incomes because a majority are involved in a sector which is quite unpredictable. Loan repayment is so rigid and discourages most of the local

beneficiaries because of the insecurity of their jobs. These people, whose incomes are unreliable, are unable to pay for the loans obtained.

Obtaining loans from banks is also very difficult. Banks were found to charge very high interest rates to borrowers irrespective of their income levels. However, a substantial amount of money is cancelled out by the high interest rates and this delays launching housing schemes particularly of families in the lower income groups. This was particularly stated as one of the problems by the co-operative leaders and as a reason as to why their co-operative had not been able to obtain loans to complete their housing projects. High interest rates are discouraging the application for loans by co-operatives. The small amounts of money saved by the co-operators through their regular contributions and the sale of shares form an uneconomical base for obtaining bank loans. There are usually higher costs for administering a large number of small loans in the banks because the latter obtain less profits. These institutions prefer the lower administrative costs of bigger loans. In practice, therefore, loans have been relatively unimportant partly because the degree of savings mobilisation is essential if a dynamic housing finance market is to be created as also to be created as also observed by Boleat (1987).

Furthermore, banks prefer to make loan arrangements with high and middle income groups. This leaves the low income people with smaller chances of obtaining loans. Yet there is often little or no concern to simplify loan requirements to benefit lower income households. When co-operatives obtain loans from financial institutions, the latter demand that

each individual member be attached to his part of the co-operative expenses. The financial institutions, therefore, regard it easier to regain losses from individual members than the society as a whole. Such a system has been found to undermine the co-operative idea which is very essential in co-operative housing as reported by Mikael and Svensson (1989).

Even after obtaining loans, most co-operatives studied were found to prefer to build rental houses for outsiders who could help them in accumulating enough capital to get more loan and/or build more houses for a bigger proportion of their members. There is little doubt that co-operatives building for non-members at market rents would have the highest potential for capital formation. However, co-operatives should build a few houses for the money which they initially collect from their members. This is important because not only is it that this tangible result would create incentives among members, but also the rents from them (the houses) would add to the funds of the societies, which would be used to apply for more loans.

Asked what the future plans were, most co-operatives preferred to buy land and sub-divide it into small plots for members to develop on their own and at their own pace. Others preferred building rental units for outsiders. However the former choice may lead speculation unless stricter conditions are put to prevent this. The latter preference would encourage more co-operative savings and, although with time, would enable co-operatives obtain bigger loans with a tangible security. However, this can lead to fund misappropriation by co-operative leaders if the handling of the

said rents is not done properly.

Repaying loans by co-operators also presents problems. The amount of down-payment is high. The co-operators are not able to make for the down-payment comfortably. They are forced to repay their loans once they get their houses. It is important to note that very few co-operatives have managed to secure loans from lending institutions. Most of them are at the savings stage, while a few have purchased plots for constructing houses.

The problems associated with external financing of co-operative housing are found to be more acute among the co-operatives consisting of majority low income earners. The Government of Kenya (GOK) is left with the challenge of providing adequate credit facilities in form of long repayment periods and low interest rates. This would encourage more and faster projects development through a majority of the co-operatives. The GOK could also subsidize on financial matters in response to people's expectations. It is also noted by ILO (1964) that people consider housing co-operatives as a reliable way of attracting support from the government in form of financial guarantees. Yet unnecessary subsidies must be eliminated from those households which do not require them. This would reduce any element of risk and attract private capital into co-operative housing. As considered earlier, private developers have treated particularly low income co-operatives with great suspicion over repayment of their dues. Yet private capital would boost housing development through co-operatives.

The National Co-operative Housing Union (NACHU) has often come into the rescue of co-operatives by making more direct arrangements to provide loans to member co-operatives which need them. One of the officials at NACHU stated that it is a priority in their operations to help especially the low income co-operatives. It is also important that NACHU organises and stimulates savings among members accordingly. This is because savings have to be encouraged to boost housing production through co-operatives. Membership fees and/or the sale of co-operative shares to its affiliates could help NACHU continue with its operations without much financial strains. This would also encourage more affiliations to NACHU which would act to encourage more societies.

Co-operatives could also save more of their financial resources through wholesale purchases of construction materials, for example (section 5.5). This can be arranged among many housing co-operatives who are at about the same stage of housing development. Thus co-operative officials could avoid calculating expenses on the basis of retail prices of construction materials, and this would reduce strain on their budgets and fetch more encouragement from members. NACHU can also apply co-operative methods at a national scale by purchasing construction materials and equipment wholesale. At a later stage the union would enter into the field of production of these materials. The wholesale purchase would reduce the cost of NACHU's affiliates in their housing projects. This would eventually fasten the process of housing acquisition by members of these co-operatives.

Loans should also be guarded the way they are released. This should be done in step with the progress of construction of the houses which the funds are supposed to finance. NACHU takes this as an important factor in co-operative housing projects. NACHU requires that progress be made as more funds are released for more advanced stages of the projects. This should however be more emphasized.

On the other hand co-operatives can aim at being financially self supporting by using their own resources. This would be hand in hand with other characteristic methods like carrying out small or wholesale businesses of home-made goods in the informal sector in order to avoid external financing problems. This process would generate co-operative income with limited problems. In this case, it means that external finance may not be relied on to provide the sums required or the terms needed to solve the problem of housing very low income groups who are without any recognised security. An example of such business is brick production and sale. Kariobangi Housing Co-operative Society is producing bricks for their house construction. Furthermore, the society has future plans of engaging in production for outside market in order to get more funds to construct more houses for more of their members. Nevertheless, the societies must be able to budget on the total costs according to what the members are able to afford before going into any construction.

It is also necessary to develop a system where the co-operative holds a blanket mortgage. This would increase the identity of the co-operative as a trustworthy and responsible economic unit and strengthen the bond

between members. The notion of co-operativeness can persist among the members through such a process. This would also ensure co-operative spirit and especially encourage more savings from within and attract more capital from without. GOK, NACHU and other financial institutions can all play their part and work together to better the performance of co-operative housing by ensuring proper financing of housing projects. This would be in line with housing subsidies for the poor to help correct highly unequal income distribution.

#### 5.4 Land Costs and Availability

The rapid population growth in most LDCs' urban centres puts pressure on demand for urban housing which in turn leads to increased demand for urban land. These cities are facing a shortage of serviced land with the necessary infrastructure for housing development. Serviced urban land is becoming scarce and constraining housing development. Most of the land in the city is owned by private individuals and organisations who develop it and own it during the leasehold period of 99 years. During this period, one can transact that piece of land on private market. In cases where land is in private ownership, it would be advisable to the public sector to influence its development.

Since building land is very important to housing and, therefore to housing co-operatives, it has first to be got before any construction plans are made. Housing co-operatives purchase land for constructing their

houses as the first target in their projects. However, as seen earlier, others buy land and subdivide it among members who are supposed to develop the plots for themselves. The latter co-operatives are represented by a small proportion. Co-operatives studied however expressed their preference in future to follow the latter procedure. This may present problems in cases where the majority of co-operators were from low income groups and may not have been able to develop such plots. Such a system also encourages speculation, an important problem in handling urban land. This confirms the findings of Abrams (1964) that speculation causes land prices to rise so that it often costs as much to buy the land as to build the houses.

The ability of the poor to solve their own problems, especially urban housing problems, has been to a large extent based on the possibility of them obtaining access to a plot of land. Due to constant land value rises, it is very difficult for the low income people to be able to afford buying land (Mikael and Svensson, 1989). Such access is becoming more and more difficult. This is particularly so when we consider the shortage of cheap land with minimum services for low cost housing within urban areas. This is a major bottleneck to the production of authorised housing for mainly low income earners (Opinya, 1982). Therefore, a major problem in housing co-operative development is lack of suitable and affordable land (Muller, 1978). The conclusions of this study concur with the above scholars'.

The land available for residential use in the city mainly favours ownership for high and middle income people groups of people. The



problem of finding reasonably priced land for the urban poor is acute and its harshest effect is to shut out low income families from land ownership. The expansion in the Nairobi-Ruiru-Thika areas has presented a number of land sub-divisions. This land is being developed mainly for low income family housing on rental schemes. The expansion in the south along Nairobi-Ngong Road and Nairobi-Langata-Magadi Road has led to the current development of residential houses. The area has been converted from farmland and the development has favoured middle and high income family housing. The area around Ongata Rongai township is developing low income residential housing for rental purposes. Much of the land being offered for plot sale is unaffordable for low income households. Most of the buyers are middle and high income households who either develop single dwelling housing for owner-occupation or blocks of rental housing for low income earners, the latter being too costly for the low income households.

Essentially, the middle and high income households are the only ones that can afford urban fringe lands, as they are purchasing land either for constructing their own houses for occupation or for rental purposes for low income households. They also purchase the land for speculative purposes, as they expect the city to expand along these areas, and this further marginalises the urban poor. These areas are far removed from the main employment centres though, especially the southern axes, would be expensive for the low income people in terms of transportation and servicing. That is why co-operative, especially those in the low income category are seeking land closer to the city centre. This land would.

therefore, be appropriate for high and middle income households. Their developments would ease pressure on land values within city boundaries, as they are open for development and therefore create more housing stock.

Low income co-operatives can build rental units for middle income people in the areas outside the municipal boundaries. Such an investment would allow low income co-operatives to build for their members houses on land purchased within the city boundaries which would cancel out the effects of high transportation costs. This is particularly so for petty traders who are usually suited to high population density areas where there is adequate market.

It has been observed that land in Kenya generally accounts for 20% of the value of housing construction costs (Ondiege, 1989). Yet land values have increased rapidly within the city and its surrounding areas. The reasons for this are clear and includes increased demand for urban land, failure to provide easier access to appropriate sites, freedom from land taxation and lack of installation of infrastructural facilities. These factors lead to reduced residential housing production. This applies to low income housing construction, considering that from 1972 to 1978 a total of 1590 ha of land in the city was designated by Nairobi City Council (NCC) for residential use (Ondiege, 1989). The problem of land acquisition is, therefore, related to that of finance. It is very difficult to acquire land for constructing houses at reasonable prices by most of the co-operative as confirmed by this study. Very few co-operative have acquired land, and those which had made it had taken over 5 years. The land prices given by

most of the co-operatives were recorded as ranging between Kshs. 10,000 and Kshs. 20,000. All the co-operative leaders interviewed not only complained of the high land prices but also about the rising costs. In most cases, income was found to be too low that land at such prices was beyond the income means of most families. Co-operatives had also to obtain very large amounts of loan to purchase this land. This was found to present problems in terms of members' savings and loan repayment.

Other co-operative complained of un-serviced land and admitted that servicing such land privately was very costly. Serviced land is very important especially to residential housing because it also attracts prospective residents. It would be very expensive especially for individuals and co-operatives to install for themselves water, electricity and good roads. Therefore, suitable building plots are scarce as expressed by most co-operatives. Most of the co-operators are shown to be low to middle income earners and, therefore, their share capital is rather limited. The societies are, therefore, unable to pay for the high prices of urban plots and thus the reason as to why most of them became dormant almost immediately after registration. Having acquired land, therefore, most societies could immediately devote their resources to house construction as stated by the co-operatives.

Most low income co-operatives had decided that in future they would buy plots and subdivide them among the members. However, as stated earlier, this should not be done to individuals who cannot afford to develop them. But, in catering for this group of people, unfurnished houses in form

of rooms, for example, could be allocated to them and eventually they would complete them on their own. This would again prevent land speculation. Other co-operatives were found in the process of acquiring loans through NACHU for rehabilitation purposes. Among those studied all the rehabilitation activities were based in the slum areas. The slum dwellers aimed at improving the conditions of their old houses.

These land problems were found to discourage participation in co-operative funding by the members. Rising land prices and the fluctuating Kenya shilling are important factors leading to this situation. Due to these factors, it is very difficult for low income people to afford buying land for housing because incomes are not increasing either. For this group, therefore, it should be possible to purchase land over a number of years. Yet the introduction of the basic services such as sewers would enhance residential development for low income households particularly through co-operatives. The following suggestions can be made for the supply of land to be more responsive to the needs of the low income groups.

Since the government is concerned about sheltering low income groups in the country, and particularly in the urban areas, this can be demonstrated by creating an environment whereby these groups can either shelter themselves more decently through housing co-operatives. This would involve ensuring the sustained supply of urbanised land with minimal infrastructure available to the low income groups at affordable prices. To limit the effects of land speculation, and to lower the prices of urban land down to the abilities of the urban poor, taxation measures

should be taken. Land value taxes and betterment taxes should be enforced. Taxes should be imposed on idle land to penalise the withholding of urbanised land from productive use. The government can also impose direct control over land prices as with any other commodity. These measures would help ensure access to urban land by all income groups as an essential aspect of economic development. This would make all members of the society to make maximum contribution to the development process. However, this approach may go against the thrust of liberalised economy.

### 5.5 Building Costs and By-Laws

Even after acquiring land, the cost of construction particularly from the purchase of construction materials still makes housing construction very costly. Housing is currently experiencing financial problems mostly due to the high cost of materials to build modern houses. Related to this are the standards stipulated in the Kenya's building code which are too unrealistic and quite irrelevant for a developing country like Kenya given the limited development resources. Traditionally, government agencies have set unrealistically high standards of building materials and construction designs. Such are almost irrelevant to self-help groups and housing co-operatives particularly for low income co-operatives.

There are two grades in Kenya's building code. Grade 1 building by-laws are set by international standards which imply conventional durable materials and high standard infrastructure. Grade 2 by-laws permit low cost construction with more traditional semi-permanent building materials.

These aspects are crucial for the low cost housing which most co-operatives could afford. It is this type of housing that, however, the by-laws are restrictive and, therefore, affecting most of the urban residents who are low income. This is because the current approach to the problem of low cost housing is cost oriented. The problem has to be positively solved by providing housing and all other essential services within the available resources and with optimum utility.

As considered earlier, the major problem facing housing production by co-operatives is finance oriented. Lack of enough funds to carry out housing projects has been facing and continue to face many housing co-operatives especially urban areas. Most co-operatives studied showed that high costs of construction materials discouraged many co-operative leaders in their housing projects. These materials include, cement, roofing, and stone. The rapid rise in the cost of building materials is a consequent of the increasing worldwide inflation in general. This, however, becomes much more important to the low income groups of people. Together with such costs, transporting these materials to the sites of construction is also very expensive.

All these costs affects members' savings at the expense incurred in loans. The level of financial contribution is lowered. Cheaper building materials and, therefore, Grade 2 building by-laws should be allowed for housing projects by the low income people. This would reduce the overall building costs and enable the low income co-operators to acquire cheaper houses (at affordable prices). The locally available construction materials

can open up market for local materials that would otherwise not be used. However, these construction materials should be tested and standards of quality laid down to be observed by the low income groups of people. This is because the use of semi-permanent materials cuts down costs of a house by half (HRDU, 1987). Therefore, local authorities should relax housing standards which can lead to improved affordability by the urban majority. The construction policies of the past have left the poorest 40% of the majority people in the LDCs unable to afford housing even through the informal sector (Moavenzadeh, 1987). Such constraints within the building materials industry has had serious negative effects on the general housing production. Attention to the industry is therefore a critical component in the new directions of the building materials industry. Focus should be on lower cost building materials (locally produced) for the appropriate building standards. Appropriate standards need to be established to encourage the efficient use of materials and the substitution of the least cost materials where appropriate for the more expensive ones (Van Huyck, 1987).

This applies especially to the housing projects being carried out by co-operatives. The use of semi-permanent building materials should be encouraged in low cost housing through co-operatives in order to stimulate the production of co-operative houses. The building materials industry should provide materials even on credit to low income co-operatives. The government can also consider the establishment of building materials credit facilities for the benefit of these co-operatives. A domestic construction

purposes of housing at the lowest cost possible relying on locally available resources.

## 5.6 Local Authority Services

The installation of water, sewerage, electricity, roads, and other infrastructure is an important element of residential housing. The provision of minimum essential infrastructure for residential housing is an important challenge in meeting the housing demand for all income groups. Most urban areas in developing countries face huge deficits in infrastructure provision. In general these urban areas have an overall shortage of serviced land at reasonable prices yet the creation of new serviced land will produce increases in prices in substantial excess of these services.

This problem is a result of capital shortage to service the land with the necessary basic infrastructure for housing development. Co-operative housing has been greatly affected by these problems. Without the basic services like clean drinking water, sewers, roads, electricity etc, co-operatives would not be able to construct residential houses because it is very difficult for people to live in un-serviced land, and it is very expensive to service that land privately. However serviced urban land is becoming scarce and therefore constraining housing development. This can be explained by lack of capital in most developing areas. This is partly due to poor cost recovery for the capital invested in urban housing infrastructure by the public sector (Ondiege, 1989). This worsens the capital shortage situation by making it very difficult to plough back



capital shortage situation by making it very difficult to plough back recovered capital into the public sector housing development. Improvements of these cost recovery methods should be made. The government should be able to expand its programmes of infrastructure provision by educating the public about the fact that good infrastructure has to be paid for and that without effective cost-recovery even the maintenance of the existing capital infrastructure is in jeopardy (Boieat, 1987). Through this, the release of urban and urban fringe land would be hastened. This could help more co-operatives to acquire (more) land and, therefore, cheaper housing for their members. In the long run, this would result to lowering of prices of housing in urban areas.

However, the standards and levels of infrastructure provided should be taken into consideration. The affordability of the majority of the urban households dictates lower standards and lower levels of infrastructure. Otherwise, higher quality infrastructural services may out-price most of the families and this would make it difficult for the co-operatives to participate fully in urban housing development. One of the services which NCC has been unable to provide adequately is the collection of garbage from residential areas. There was no respondent who stated that this service was regularly available in their residential areas. Most of the respondents admitted that these services were rare while others said that they were unheard of. The co-operators interviewed either pay privately for this service (particularly those in the high income groups) or burn the garbage off or simply dumped it.

Another aspect related to the local authority services offered to co-operators is the approval of house plans. However, most co-operatives complained of the lengthy plan approval process. Thus it consumed a lot of time causing increased construction cost with time and, therefore, encouraging the slow progress of the housing projects. Thus NCC and other local authorities have been called upon to approve plans within the shortest time possible i.e as soon as the financial requirement of such projects are attained. The fiscal abilities of the NCC to extend services and to associated transportation improvement will depend heavily on the ability to establish systems to recover the costs of such programs from the increases in land values that it inevitably creates.

Co-operative housing development has been shown to be affected by many financing factors. All the aspects relating to external factors affecting co-operative housing should also be considered with a view to making conditions easier for low income people to obtain appropriate housing through co-operatives.

More particularly, action should emphasise making financial resources more easily available and appropriately used for Co-operative housing development, especially for low income people. This will depend on to how much the individuals, government, and the co-operatives themselves will work hard to make sure that co-operative housing is a success.

## CHAPTER SIX

### SUMMARY CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Introduction

This section gives a summary and conclusions of the major findings of this study. Major policy recommendations based on these findings are briefly stated, and the overall conclusion of this study is also given. Together with these, the suggestions for further research made on the basis of further understanding of the role of co-operative housing are presented.

#### 6.2 Summary of Findings

This study finally came up with some findings based on the stated objectives and the tested hypotheses of this study. It can be noted that the present Kenyan housing policy does not provide adequately for low income housing development particularly in urban areas and needs to be revised in favour of the needs and the affordability of low income urban dwellers. This should focus on alleviating the financial problem being currently experienced by low income housing co-operatives in their endeavour to produce residential housing for their members. The high demand for low cost housing has been as a result of low levels of housing production in Nairobi especially through co-operatives. Housing co-operatives have the potential to provide housing affordable to the low income group of people in the city. Furthermore, low income earners do not

fully participate in co-operative housing compared with their high income counterparts.

Socio-economic characteristics of urban residents influence the level of participation in co-operative housing and, therefore, influence the production of co-operative houses. An important factor influencing participation in co-operative housing is income, in which case middle income earners represent the highest number of participants and a much smaller proportion of low income earners participate in co-operative housing. Co-operative housing has, therefore, tended to cater more for the people other than the low income earners. Therefore, a smaller number of houses for this latter group of people have been produced through co-operatives. Similarly, less educated people engage more in co-operative housing than their more educated counterparts thus contributing to the problem of inadequate managerial and other relevant skills in housing co-operatives and exposing more co-operatives to the risk of fund mismanagement, eventually leading to low levels of housing production.

Small households form a small proportion of housing co-operators, yet such a group of people may advance co-operative housing through their relatively more financial and human resources. This would eventually reduce the overall housing shortage in urban areas. Similarly, young people have a generally slow response to the call of owner-occupier housing through co-operatives. Thus this age-group should be encouraged to form and/or join housing co-operatives because they have more resources, they are probably more educated and have more time and energy.

On the other hand, female urban dwellers participate less in co-operative housing than their male counterparts. Women-headed households should be encouraged to join housing co-operatives with a view to housing especially the low income urban households.

Low incomes is a major problem facing housing co-operatives in urban areas. This has obvious strains on the co-operative housing projects' financing leading to low productivity of co-operative houses. One of the major problems related to this is that of the Building Code of Kenya which has not been realistically set to assist low income earners to obtain houses through co-operatives. The high building standards set result in high building costs which are beyond the financial capability of most housing co-operatives. High costs of urban land and, therefore, the scarcity of cheap urban land are major obstacles facing housing co-operatives especially those constituting low income earners, thus making their projects lag behind or become dormant. The available urban land is unserviced, and servicing such land presents financial challenges to housing co-operatives and especially those consisting of the low income people. Lack of local authority services in urban areas is therefore apparent.

8. Co-operative mismanagement, partly due to lack of technical, managerial and administrative skills and the low levels of education among co-operators is a major problem causing many co-operatives to remain inactive in their housing projects.

There are generally low levels of co-operative housing development in urban areas. However, there is a lot of potential in residential housing

## 6.3 Recommendations

The GOK, co-operative societies and individuals have a role to play in the development of co-operative housing especially in urban areas. The following recommendations are suggested with a view to assisting in higher housing productivity level of co-operative housing, and especially in favour of low income earners. Therefore, if co-operative housing is to be developed as a means of housing low income earners, housing has to receive greater support especially from the GOK.

### 6.3.1 To the GOK

1. The GOK should subsidize public land for the urban poor to cheaply obtain land for constructing residential houses. This could be in form of offering public land to co-operatives at cheaper prices for residential development. This should go along with the government encouragement of local authorities to eliminate speculation in land suitable for building projects especially on the outskirts of urban centres. This land could be made available to co-operatives at lower costs or at long term renewable leases.
2. Minimal servicing of urban land by local authorities for residential housing development should be ensured in order to reduce financial strain imposed on housing co-operatives in their housing projects.
3. Rapid urbanisation and high urban and rural birth rates should be

arrested in form of emphasizing family planning programmes in both the rural and urban areas. This should be done by incorporating such programmes and giving them more emphasis as part of the wider national development programme.

4. A chance could be given to housing co-operative societies to use foreign capital in their housing projects. This is with a view to assessing the success of these projects and encouraging more co-operatives to engage in residential housing development especially in urban areas, since the major problem hindering their development is finance oriented. This could be done by giving the more promising co-operatives the first priority. This is because there is an apparent need for housing co-operatives to be supported financially by external capital.

5. A more effective mechanism of dealing with those co-operative leaders who manage co-operatives and especially those who misappropriate co-operative funds should be sought. Court procedures should be followed more closely in dealing with such cases.

6. The national housing policy should provide for adequate credit facilities in the form of long-term repayment periods and low interest rates to enable especially the low income co-operatives produce more residential houses. This would also prevent delay in large scale housing schemes for families in the lower income groups.

7. The housing policy should consider more appropriate and particularly cost-effective standards of housing in order to cater for low income earners trying to obtain housing through co-operative efforts.

8. The application of co-operative principles and practices in the field of housing with all the relevant financial, legal, administrative and accounting information should be provided in a clear language for all housing co-operatives. This would expose the public to the wider advantages of co-operation and, therefore, encourage membership and guide the existing co-operatives in their operations.

### 6.3.2 To NACHU

As the overall national housing society, NACHU has a great challenge now and in the near future in making co-operatives more effective in providing particularly the low income urban residential housing. The following are some of the suggestions to the union.

1. The union should promote further research on semi-permanent construction materials which are locally available and ensure their wider use and development. These should be used especially by low income housing co-operatives and this would make it much cheaper than the use of permanent construction materials which are much more expensive. This would eventually reduce building costs for the latter income groups.
2. NACHU should carry out nation-wide educational campaigns by directly involving co-operative members and co-operative leaders in seminars and workshops. This could be done through making these groups of people aware of general co-operative development and management processes and especially on specific aspects of these processes. Generally therefore, an educational campaign is necessary to encourage more co-operative housing



participation.

3. NACHU should assist in the establishment of new co-operatives and, therefore, encourage more co-operative membership from all income groups, household sizes, educational levels, ages and from both sexes. This would eventually lead to indiscriminate residential housing through co-operatives. Through such a programme therefore, the union could also facilitate the exchange of ideas and experiences among co-operatives in order to create challenge for the less successful housing co-operatives.

4. NACHU could also carry out wholesale purchases and later production of construction materials for housing co-operatives nationwide. This would assist co-operative housing projects to obtain building materials more cheaply directly from NACHU, with the latter getting a small margin of profit to help in its operations. NACHU can also provide architectural, lawyer and auditor services at lower charges than is the case.

5. NACHU should give advice to housing co-operative societies about such specific matters as making realistic cost calculations, investment plans, about negotiating construction loans, building techniques and book-keeping.

### 6.3.3 To Co-operative Societies

As seen earlier, co-operatives have an essential role to play in providing especially to the low income earners with appropriate housing. Therefore, the following are the suggested recommendations to individual societies in their endeavour to do this.

1. Co-operatives should recruit more members from the low income groups of people at lower membership fees in order to attract more needful households into co-operative housing. To win such membership, small-scale ownership of co-operative property could be guaranteed to the members.
2. Co-operative members should be encouraged to attend conferences and seminars which have been organised on co-operative aspects. This would improve on members' understanding of their full rights, privileges and responsibilities in their co-operatives. This would also help them to appreciate the activities of co-operatives and, therefore, improve their initiatives to work towards faster and more housing production.
3. Co-operatives should employ more educated and qualified personnel in their activities so that their housing projects do not delay due to ignorance. Co-operatives should seek advice and more details of this from NACHU.
4. Income generating activities should be encouraged within co-operatives which are directly involving the co-operators especially in those co-operatives constituting low income members. This would make such co-operatives financially more self-supporting in order to avoid the external financing problems. Such activities should be emphasised within the informal sector.
5. Co-operatives dealing with housing should accept lower standards in their housing projects. This would reduce building costs and, therefore give such co-operatives incentives to build more houses. Advice from NACHU should be sought regarding these standards.

6. Co-operatives should consider housing projects appropriate to their members' needs in terms of household sizes. This would ensure that large households are well catered for.

7. Co-operatives should ensure that their activities benefit their members. Their members should, therefore, take the first priority in acquiring housing at affordable prices before selling them out to the non-members. Even if the latter is done, this should be seen to directly benefit the members.

#### 6.4 Suggestions for Further Research

The following areas of research have been suggested for further understanding of the role of co-operative housing. These areas would have been included in more details in this study if more time and financial resources were available and these include:

1. The effect of inter-co-operative relations on the productivity of co-operative houses need to be studied further. The interactions of co-operatives is likely to bring about changes within and among housing co-operatives in the sense that by sharing experiences some co-operatives could provide challenges for the less successful co-operatives.

2. The determinants of savings and credit co-operative societies (SACCOs) to engage in housing schemes is an important aspect to the future development of co-operative housing and these need to be further studied. The recent increase in the number of SACCOs especially in the urban areas is tremendous and if such co-operatives could engage in housing projects.

they would assist much in saving the present housing shortage in the urban areas. Such a study would therefore suggest ways of encouraging such schemes.

3. Further research on the construction industry and especially the production of building materials on co-operative basis would help in finding out whether this could be a viable means of reducing the costs of purchasing these materials on individual basis.

4. There is a necessity of a detailed study on government involvement in co-operatives, particularly co-operative housing with a view to suggesting the best areas of activities to help the co-operative movement produce more residential housing.

5. Further study on the operation and the activities of NACHU could be of great help in understanding the union's incentives to housing co-operative societies.

## 6.5 Conclusion

If the GOK followed the guidance from the national development plans which emphasize the importance of the housing sector and that of co-operatives in housing, there could be a better era for co-operative housing. However, even though the official housing policy has many good and realistic aims, these have not been put into practice.

The number of housing co-operatives and the number of co-operators should increase with time when the short-term problems discussed earlier in this study have been dealt with. This is because the need and demand

for housing is likely to be there for a long time and is also likely to grow. Nevertheless, there is a lot of potential in co-operative housing in Kenya but there is need for especially financial support to the existing housing co-operatives and proper co-ordination of co-operative housing activities. Perhaps the most complementary action to be taken is the creation of jobs to raise the incomes of the poor households so that they can afford better housing through co-operatives. The housing sector itself provides many opportunities for job creation through the informal education and training of unskilled labourers in construction skills. NACHU has shed a lot of light into the future of co-operative housing shown by its increasing number of its affiliates and number of its housing projects with these member societies. Most of the affiliates to NACHU have already started on very promising housing projects. Some of them have already sold out their completed houses, others are sub-dividing plots to their members while a number are in the process of saving and loan arrangement to buy land. The co-operatives which have been shown to have completed<sup>ed</sup> their housing projects have contributed in housing a section of the middle and high income urban residents. This has, however, been seen not to have benefitted their members. On the other hand, some low income earners have been provided houses through their co-operatives, although a majority of their housing projects are still lagging behind due to financial drawbacks. NACHU, however, needs to look into financial support in these projects. Finally, it can be concluded that co-operatives have the potential in alleviating the housing problem especially for the low income urban people.

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## APPENDICES

### Appendix 1: Questionnaire 1: To Co-operators

#### A. Introduction

I am a student from the University of Nairobi carrying out a research on Co-operative Housing. The following questionnaire would help me get crucial information about you and your co-operative. The information given will be treated very confidentially. Thank you in advance.

#### B. General Information (for the researcher only)

Name of the Co-operative:

Sample No.

Date:

#### C. Socio-economic Characteristics

1. Name \_\_\_\_\_
2. Age \_\_\_\_\_ (years)
3. Sex (tick where appropriate)
  - a. Male
  - b. Female
4. Formal Education
  - a. None
  - b. Primary education up to below standard four
  - c. Primary education beyond standard three
  - d. Secondary
  - e. Post-secondary (specify) \_\_\_\_\_
5. Occupation \_\_\_\_\_
6. Monthly Income Kshs. \_\_\_\_\_
7. Monthly house allowance Kshs. \_\_\_\_\_
8. Household size (state the number)
  - a. Wife/wives/husband \_\_\_\_\_
  - b. Children \_\_\_\_\_
  - c. Relatives \_\_\_\_\_
  - d. Friends \_\_\_\_\_

#### D. Housing Information

1. Are you a resident of Nairobi?
  - a. Yes
  - b. No
2. If yes, for how long have you been living in Nairobi? \_\_\_\_ yrs \_\_\_\_ months.

3. When did you get your first house? \_\_\_\_ month \_\_\_\_ year
4. Was your first residence rental?
  - a. Yes
  - b. No
5. If yes, how much was the rent per month? Kshs. \_\_\_\_
6. How much was your income then? Kshs. \_\_\_\_
7. Have you changed houses since you came to Nairobi?
  - a. Yes
  - b. No
8. If yes, give reasons for the change of houses.
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
9. State your present place of residence \_\_\_\_\_
10. state the size of your house in terms of number of rooms? \_\_
11. How many facilities does this house contain (state the number where appropriate)
  - a. Bedroom \_\_\_\_\_
  - b. Kitchen \_\_\_\_\_
  - c. Toilet \_\_\_\_\_
  - d. Bathroom \_\_\_\_\_
  - e. Water \_\_\_\_\_
  - f. Electricity \_\_\_\_\_
12. Is this house rental?
  - a. Yes
  - b. No
13. If yes, how much rent do you pay per month? Kshs. \_\_\_\_
14. If no, is it a co-operative house?
  - a. Yes
  - b. No
15. If yes, state the total amount of money spent to obtain this house Kshs. \_\_\_\_
13. Was the whole amount paid at once?
  - a. Yes
  - b. No
14. If no, what was the down-payment? Kshs. \_\_\_\_



15. State the sources of funds for the purchase of this house

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

16. How long did it take you to obtain this house?  
\_\_\_\_\_ yrs \_\_\_\_\_ months

17. What problems did you encounter when obtaining this house?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

E. Local Authority Services

1. State the frequency of refuse collection from your area by the city council \_\_\_\_\_

2. What other methods do you use to dispose of your garbage?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

3. How far are the following from your co-operative house?

- a. Main-road \_\_\_\_\_
- b. Bus-stop \_\_\_\_\_
- c. School (primary and/or secondary) \_\_\_\_\_
- d. Hospital/Clinic \_\_\_\_\_
- e. Shopping centre \_\_\_\_\_
- f. Playground \_\_\_\_\_

4. How much bus-fare do you pay to the city centre? Kshs. \_\_\_\_\_

F. Co-operative Information

1. When did you join this co-operative? Month \_\_\_\_\_ Year \_\_\_\_\_

2. For what reasons did you join this co-operative?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

4. Do you still communicate with your co-operative?

- a. Yes
- b. No

5. If yes, how frequently? \_\_\_\_\_

6. If no, why? \_\_\_\_\_

7. What problems do you as a member of your co-operative face?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

8. Suggest solutions to such problems

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

9. What suggestions can you make to your co-operative to enable it produce more housing units?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

Thank you for your co-operation.

## Appendix 2: Questionnaire II: To Non-Co-operators

### A. Introduction

I am a student from the University of Nairobi carrying out research on co-operative housing. The following questionnaire would help me get crucial information. The information given will be treated very confidentially. Thank you in advance.

### B. General Information (for the researcher only)

Place of residence:

Sample no.:

Date:

### C. Socio-Economic Characteristics

1. Name \_\_\_\_\_

2. Age \_\_\_\_\_ years

3. Sex (tick where appropriate)

a. Male

b. Female

4. Formal education

a. None

b. Primary education up to standard 3

c. Primary education beyond standard 3

d. Secondary education

e. Post-secondary education (specify) \_\_\_\_\_

5. Occupation \_\_\_\_\_

6. Monthly income Ksh. \_\_\_\_\_

7. Monthly house allowance Ksh. \_\_\_\_\_

8. Household size (state the number)

a. Wife/wives/ husband \_\_\_\_\_

b. Children \_\_\_\_\_

c. Relatives \_\_\_\_\_

d. Friends \_\_\_\_\_

### D. Housing Information

1. For how long have you been living in Nairobi? \_\_\_\_\_ years

2. When did you get your first house? \_\_\_\_\_ month \_\_\_\_\_ year

3. Was your first house rental?
  - a. Yes
  - b. No
4. If yes, how much was the rent per month? Ksh. \_\_\_\_\_
5. What was your monthly income then? Ksh. \_\_\_\_\_
6. Have you ever changed houses since you came to Nairobi?
  - a. Yes
  - b. No
7. Give reasons for the change of houses.
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
8. State the size of your present house in terms of the number of rooms.
9. Is this house rental?
  - a. Yes
  - b. No
10. If yes, state the rent per month. Ksh. \_\_\_\_\_
11. If no, specify the type. \_\_\_\_\_

E. Co-operative Information

1. Have you ever heard of a co-operative?
  - a. Yes
  - b. No
2. If yes, how many types of co-operatives do you know?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
3. Are you a member of any co-operative?
  - a. Yes
  - b. No
4. If yes, specify the type. \_\_\_\_\_
5. What advantages does it offer to you as a member?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_

6. If no, state the reasons.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

7. Have you ever heard of a housing co-operative?

- a. Yes
- b. No

8. If yes, what are its functions?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

9. What advantages do you think a housing co-operative has?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

10. Give reasons for not joining a housing co-operative.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

11. State your future plans for improving your housing conditions (if any)

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

Thankyou for your co-operation.

## Appendix 3: Questionnaire III: To Co-operative Officials

### A. Introduction

I am a student from the University of Nairobi, carrying out a research on co-operative housing. The following questionnaire would help me get crucial information about your co-operative. The information given will be treated very confidentially. Thankyou in advance.

### B. General Information (for the researcher only).

Name of the Co-operative:

Sample No.

Date:

### C. Socio-Economic Characteristics

1. Name \_\_\_\_\_

2. Age \_\_\_\_\_

3. Sex (Tick where appropriate)

a. Male

b. Female

4. Formal Education

a. None

b. Primary up to below std four

c. Primary beyond std three

d. Secondary

e. Post-secondary (specify) \_\_\_\_\_

5. Occupation \_\_\_\_\_

6. Monthly Income Kshs. \_\_\_\_\_

7. Give the education level, sex and age number of your co-operative officials.

	<u>Education level</u>	<u>Sex</u>	<u>Age</u>
a. Chairman			
b. Vice- chairman			
c. Secretary			
d. Treasurer			

### D. About the Co-operative

1. When did this co-operative start operating? Month\_\_Year\_\_

2. What was the total number of members then? \_\_\_\_\_

3. What is the current total number of your co-operative members? \_\_\_\_\_

4. When did you join this co-operative? Month \_\_\_\_ year \_\_\_\_
5. How many houses has your co-operative built since it started operating? \_\_\_\_
6. How many of your members have benefitted from these housing units? \_\_\_\_
7. Where have the housing units been built? (state the number of units in each area)

<u>Area</u>	<u>No. of Houses</u>
a.	
b.	
c.	
d.	

8. Do you consult private professionals like land surveyors and architects?
  - a. Yes
  - b. No

9. If yes, state the charges for consultation Kshs. \_\_\_\_

10. How much did the land on which your co-operative has built (or intends to built) houses cost per acre in each area?

<u>Area</u>	<u>Cost per acre of land</u> (Kshs.)
a.	
b.	
c.	
d.	

11. What difficulties do (did) you experience in purchasing land?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

12. Approximately how much did (will) each of the housing units cost? Kshs. \_\_\_\_

13. According to you, these houses are

- a. Low cost
- b. Medium cost
- c. High cost

13. State the sources of financial income in order of importance

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

14. State the amount you are able to obtain from each source.

<u>Source</u>	<u>Amount (Kshs.)</u>
---------------	-----------------------

- a.
- b.
- c.
- d.

15. What problems do you encounter in the process of obtaining funds?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

16. State the size of your already built houses and those which you intend to build.

<u>Already built</u>	<u>To be built</u>
----------------------	--------------------

- a.
- b.
- c.
- d.

18. State the type of your co-operative? \_\_\_\_\_

19. What are the major functions of this co-operative?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

20. What (other) problems does your co-operative face in the process of providing houses for members?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

21. What suggestions can you make about such problems?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

22. What future plans does your co-operative have in improving the supply of residential housing units?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

Thank you for your co-operation.



## Appendix 4: Socio-Economic Characteristics of Co-operators

Sampl No.	Incom e	Educatio n	Househol d size	Age	Sex
1	1,500	non	7	46	M
2	1,500	pri	5	42	M
3	4,500	pri	4	40	M
4	3,000	pri	5	45	F
5	3,700	pri	4	52	M
6	5,300	pri	5	37	M
7	1,500	pri	6	54	M
8	1,500	pri	6	40	F
9	3,500	non	5	55	F
10	1,700	non	6	50	M
11	4,000	pri	8	40	M
12	5,500	pri	7	49	M
13	1,500	pri	9	51	M
14	2,000	non	5	49	M
15	3,600	pri	3	53	M
16	1,400	pri	5	62	M
17	1,500	pri	8	43	F
18	1,500	pri	8	45	F
19	4,200	non	7	39	M
20	1,700	non	4	46	M
21	6,500	pri	7	49	F
22	4,000	pri	5	44	M
23	2,500	pri	2	42	F
24	4,000	pri	6	52	M
25	3,500	non	4	51	M
26	4,000	pri	5	45	F

27	4,000	non	5	56	M
28	1,000	pri	5	47	M
29	1,600	pri	4	45	F
30	3,900	pri	7	44	M
31	1,700	non	2	42	M
32	900	pri	4	44	M
33	2,000	non	6	42	F
34	500	pri	7	56	M
35	1,500	pri	5	48	M
36	4,000	sec	8	39	M
37	6,000	non	7	35	M
38	900	pri	7	45	M
39	6,500	pri	4	38	F
40	6,000	sec	5	36	M
41	4,500	pri	5	39	M
42	6,000	col	8	44	F
43	5,000	sec	5	30	F
44	5,000	pri	6	52	M
45	4,000	non	8	43	M
46	3,700	pri	4	42	M
47	3,500	pri	5	34	M
48	1,000	pri	7	38	M
49	4,300	pri	6	41	M
50	500	pri	6	56	M
51	1,800	non	7	42	M
52	2,100	pri	6	47	M
53	6,000	sec	4	43	M
54	6,500	pri	9	51	M
55	5,600	non	5	49	M

56	3,000	pri	3	43	M
57	2,000	pri	3	34	M
58	1,000	pri	6	44	F
59	1,500	non	7	41	M
60	700	pri	8	38	M
61	20,000	uni	6	49	M
62	14,000	uni	5	46	M
63	25,000	uni	3	39	M
64	20,000	uni	3	43	M
65	15,000	uni	5	53	M
66	35,000	uni	4	46	M
67	20,000	uni	4	44	M
68	20,000	uni	7	57	M
69	25,000	uni	5	54	M
70	20,000	uni	8	49	M
71	15,000	uni	5	57	M
72	30,000	uni	7	55	M
73	25,000	uni	6	52	M
74	21,000	uni	7	46	M
75	20,000	uni	5	48	M
76	35,000	uni	5	46	M
77	30,000	uni	5	46	M
78	17,000	uni	5	49	M
79	20,000	uni	7	55	M
80	19,000	uni	7	51	M
81	9,000	uni	8	44	M
82	6,000	pri	9	39	F
83	6,500	sec	6	40	M
84	6,000	sec	6	41	M

85	4,000	sec	6	35	F
86	3,600	sec	4	31	F
87	6,000	sec	7	43	M
88	5,000	sec	7	36	M
89	7,000	uni	10	39	M
90	4,000	col	2	35	F
91	9,000	sec	4	37	M
92	7,000	uni	6	45	M
93	4,000	sec	7	39	M
94	6,500	col	5	42	M
95	4,500	sec	5	44	M
96	3,500	pri	5	41	F
97	6,000	sec	6	38	M
98	3,600	pri	8	35	F
99	6,000	sec	7	45	M
100	5,000	sec	7	38	M

#### NOTES

1. Income is in Ksh(s). per month.
2. pri = Primary
3. sec = Secondary
4. col = any college after secondary education.
5. uni = University
6. M = Male
7. F = Female

## Appendix 5: Socio-Economic Characteristics of Non-Co-operators

Sample No.	Income	Education	Household size	Age	Sex
1	1,500	non	7	28	M
2	6,500	sec	3	29	M
3	9,000	sec	4	40	F
4	10,000	uni	2	51	M
5	6,000	uni	5	29	F
6	8,000	sec	5	42	F
7	9,000	sec	1	26	F
8	2,000	sec	3	50	M
9	7,500	sec	2	27	F
10	2,500	pri	7	51	M
11	15,000	uni	4	52	M
12	7,000	sec	5	44	F
13	2,500	sec	4	28	M
14	8,000	sec	3	27	F
15	2,500	sec	3	57	M
16	6,000	sec	3	45	M
17	1,200	non	6	29	M
18	1,000	pri	10	50	M
19	1,500	non	5	34	F
20	2,000	pri	4	55	M
21	4,000	sec	6	26	F
22	7,000	uni	3	48	M
23	2,500	sec	6	53	M
24	2,000	pri	12	52	M
25	1,000	non	5	29	F
26	7,000	sec	3	41	M

27	2,000	non	5	31	F
28	10,000	uni	5	52	M
29	2,000	sec	5	32	F
30	1,500	sec	6	27	F
31	11,000	uni	4	51	M
32	2,500	non	8	28	F
33	500	non	6	26	F
34	500	pri	6	50	M
35	5,000	col	3	30	F
36	2,500	pri	5	52	M
37	6,000	sec	4	29	F
38	5,000	col	3	34	F
39	19,000	uni	6	46	M
40	1,500	sec	5	28	M
41	6,000	sec	3	38	M
42	2,000	non	7	25	M
43	5,000	sec	2	36	F
44	900	non	5	26	M
45	1,000	pri	6	53	M
46	5,000	sec	5	30	F
47	8,000	uni	3	39	M
48	15,000	uni	4	51	M
49	2,000	pri	6	53	M
50	2,600	sec	1	26	F
51	5,000	sec	2	30	F
52	5,000	sec	3	32	M
53	10,000	uni	3	53	M
54	1,500	non	6	34	M
55	3,000	sec	4	40	F

56	2,000	sec	3	28	M
57	5,000	sec	3	29	M
58	2,000	pri	9	52	M
59	3,000	sec	5	32	F
60	2,000	pri	7	54	M
61	2,500	pri	6	55	M
62	2,000	non	8	29	M
63	2,500	non	11	31	M
64	2,500	pri	9	56	M
65	600	non	6	29	F
66	2,000	pri	6	54	M
67	10,000	col	3	39	F
68	5,000	sec	4	51	M
69	6,000	sec	4	34	M
70	2,600	pri	5	57	M
71	1,000	sec	2	44	M
72	4,000	col	3	28	F
73	700	pri	10	55	M
74	5,000	sec	1	26	M
75	800	non	5	29	F
76	2,500	pri	5	50	M
77	6,000	col	1	27	M
78	2,000	non	5	32	F
79	12,000	uni	8	55	M
80	11,000	sec	1	45	M
81	1,200	non	7	28	M
82	9,000	sec	2	46	M
83	25,000	uni	3	52	M
84	1,500	non	5	25	F

85	2,500	sec	3	33	F
86	500	pri	6	60	M
87	1,000	non	6	40	F
88	1,500	pri	5	55	M
89	7,000	sec	5	26	F
90	700	pri	6	61	M
91	6,000	sec	4	25	M
92	2,400	sec	8	54	M
93	5,000	sec	2	27	F
94	7,000	sec	2	51	M
95	6,000	sec	4	32	F
96	3,000	pri	4	50	M
97	500	non	4	31	M
98	5,000	sec	6	52	M
99	4,000	sec	2	47	M
100	1,000	non	7	28	M

## NOTES

1. Income is in Ksh(s). per month.
2. pri = Primary
3. sec = Secondary
4. col = any college after secondary education.
5. uni = University
6. M = Male
7. F = Female



## Appendix 6: Crosstabulation Summary Tables (Co-operators)

### (i) Income and Education

	None	Primary	Sec.	Advanced	Total
500 - 1500	2	16	0	0	18
1600 - 2500	6	4	0	0	10
3000 - 4000	4	13	4	1	11
4200 - 5500	1	6	4	0	11
5600 - 14000	2	4	8	6	20
15000 - 25000	0	0	0	15	15
30000 - 35000	0	0	0	4	4
Total	15	43	16	26	100

### (ii) Income and Household Size

	2 - 3	4 - 6	7+	Total
500 - 1600	0	10	9	19
1700 - 3500	4	10	1	15
3600 - 4500	2	12	7	21
5000 - 7000	0	12	11	23
9000 - 21000	1	8	6	15
25000 - 35000	1	8	1	7
Total	8	57	35	100

(iii) Income and Age

	30-34	35-39	40-44	45-49	50-54	55-59	60+	Tot.
500 - 1600	0	2	6	6	2	2	1	19
1700 - 3500	2	0	6	4	2	1	0	15
3600 - 4500	1	7	8	1	3	1	0	21
5000 - 7000	1	9	6	5	2	0	0	23
9000 - 21000	0	1	3	6	2	3	0	15
25000 - 35000	0	1	0	3	2	1	0	7
Total	4	20	29	25	13	8	1	100

(iv) Income and Sex

	Male	Female	Total
500 - 1500	14	4	18
1600 - 2500	7	3	10
3000 - 4000	14	8	22
4200 - 5500	10	1	11
5600 - 14000	16	4	20
15000 - 25000	15	0	15
30000 - 35000	4	0	4
Total	80	20	100

(v) Education and Household Size

	2-3	4-6	7+	Total
None	1	8	6	15
Primary	4	25	14	43
Secondary	0	10	6	16
Advanced	3	14	9	26
Total	8	57	35	100

(vi) Education and Age

	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
Non	0	2	5	4	2	2	0	15
Pri.	2	7	14	10	7	2	1	43
Sec.	2	8	5	1	0	0	0	16
Adv.	0	3	5	9	4	4	0	26
Total	4	20	29	25	13	8	1	100

(vii) Education and Sex

	Male	Female	Total
None	13	2	15
Primary	30	13	43
Secondary	13	3	16
Advanced	24	2	26
Total	80	20	100

(viii) Household Size and Age

	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
2 - 3	1	2	4	0	1	0	0	8
4 - 6	3	7	16	17	9	4	1	57
7+	0	11	9	8	3	4	0	35
Total	4	20	29	25	13	8	1	100

(ix) Household size and Sex

	Male	Female	Total
2 - 3	6	2	8
4 - 6	45	12	57
7+	29	6	35
Total	80	20	100

(x) Age and Sex

	Male	Female	Total
30 - 34	2	2	4
35 - 39	15	5	20
39 - 44	22	7	29
45 - 49	20	5	25
50 - 54	13	0	13
55 - 59	7	1	8
60+	1	0	1
Total	80	20	100

## Appendix 7: Crosstabulation Summary Tables (Non-Co-operators)

### (i) Income and Education

	None	Primary	Sec.	Advanced	Total
500 - 1000	8	6	1	0	15
1200 - 2600	12	13	11	0	36
3000 - 7000	0	1	24	6	31
7500 - 12000	0	0	7	7	14
15000 - 25000	0	0	0	4	4
Total	20	20	43	17	100

### (ii) Income and Household Size

	1 - 3	4 - 6	7+	Total
500 - 1200	1	12	4	17
1500 - 4000	7	23	10	40
5000 - 9000	20	12	0	32
10000 - 25000	5	5	1	11
Total	33	52	15	100

### (iii) Income and Age

	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 +	Total
500 - 1200	8	1	0	2	0	3	1	2	17
1500 - 4000	12	8	0	1	1	12	6	0	40
5000 - 9000	12	7	3	4	3	3	0	0	32
10000 - 25000	0	0	1	0	2	7	1	0	11
Total	32	16	4	7	6	25	8	2	100

(iv) Income and Sex

	Male	Female	Total
500 - 1000	10	5	15
1200 - 2600	27	9	36
3000 - 7000	16	15	31
7500 - 12000	8	6	14
15000 - 25000	4	0	4
Total	65	35	100

(v) Education and Household Size

	2 - 3	4 - 6	7+	Total
None	0	14	6	20
Primary	0	13	7	20
Secondary	23	19	1	43
Advanced	10	6	1	17
Total	33	52	15	100

(vi) Education and Age

	25- 29	30- 34	35- 39	40- 44	45- 49	50- 54	55- 59	60+	Tot.
Non	13	6	0	1	0	0	0	0	20
Pri.	0	0	0	0	0	12	6	2	20
Sec.	16	8	2	6	4	6	1	0	43
Adv.	3	2	2	0	2	7	1	0	17
Tot.	32	16	4	7	6	25	8	2	100

(vii) Education and Sex

	Male	Female	Total
None	10	10	20
Primary	20	0	20
Secondary	23	20	43
Advanced	12	5	17
Total	65	35	100

(vii) Household Size and Age

	25- 29	30- 34	35- 39	40- 44	45- 49	50- 54	55- 59	60+	Tot.
1-3	11	5	4	2	5	5	1	0	33
4-6	16	10	0	5	1	14	5	2	52
7+	5	1	0	0	0	6	3	0	15
Tot.	32	16	4	7	6	25	8	2	100

(ix) Household size and Sex

	Male	Female	Total
1 - 3	21	12	33
4 - 6	30	22	52
7+	14	1	15
Total	65	35	100

(x) Age and Sex

	Male	Female	Total
25 - 29	15	17	32
30 - 34	5	11	16
35 - 39	2	2	4
40 - 44	2	5	7
45 - 49	6	0	6
50 - 54	25	0	25
55 - 59	8	0	8
60+	2	0	2
Total	65	35	100



Appendix 8: Multiple Regression Analysis of Income Against Household Size and Age (Co-operators)

Equation Number 1 Dependent Variable..  $Y_1$  Income

Variable(s) Entered on Step Number

- 1..  $x_4$  Age
- 2..  $x_3$  Household Size

Multiple R .19839  
 R Square .03936  
 Adjusted R Square -.00867  
 Standard Error 1792.51848

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	5265798.17280	2632899.08640
Residual	40	128524899.50162	3213122.48754

F = .81942 Signif F = .4479

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
x4	-54.46748	43.55318	-.19510	-1.251	.2183
x3	66.89708	160.96506	.06484	.416	.6799
(Constant)	5004.57860	2066.33323		2.422	.0201

Appendix 9: Multiple Regression Analysis of Income Against Household Size and Age (Non-Co-operators)

Equation Number 1 Dependent Variable.. Y<sub>1</sub> Income

Variable(s) Entered on Step Number

- 1.. x<sub>4</sub> Age
- 2.. x<sub>3</sub> Household Size

Multiple R .43831  
 R Square .19212  
 Adjusted R Square .17546  
 Standard Error 3776.12872

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	328919733.76013	164459866.88006
Residual	97	1383137366.23987	14259148.10557

F = 11.53364 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
x4	90.94159	34.27644	.24838	2.653	.0093
x3	-791.17387	176.04364	-.42073	-4.494	.0000
(Constant)	4701.86901	1476.42173		3.185	.0019

Appendix 10: Multiple regression Analysis of Income Against Household Size and Age (Co-operators with Primary Level Education)

Equation Number 1 Dependent Variable..  $Y_1$  Income

Variable(s) Entered on Step Number

- 1..  $x_4$  Age
- 2..  $x_3$  Household Size

Multiple R .26507  
 R Square .07026  
 Adjusted R Square .05109  
 Standard Error 7929.22869

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	460898746.09353	230449373.04676
Residual	97	6098648753.90647	62872667.56605

F = 3.66533 Signif F = .0292

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
x4	322.59474	123.48763	.25609	2.612	.0104
x3	-408.35297	483.86908	-.08273	-.844	.4008
(Constant)	-4592.00512	6093.20740		-.754	.4529

Appendix 11: Multiple Regression Analysis of Income Against Age and Household Size (Non-Co-operators with Primary Level Education)

Equation Number 1 Dependent Variable.. Y<sub>1</sub> Income

Variable(s) Entered on Step Number

- 1.. x<sub>4</sub> Age
- 2.. x<sub>3</sub> Household Size

Multiple R .38507  
 R Square .14828  
 Adjusted R Square .04808  
 Standard Error 773.43931

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	1770457.79142	885228.89571
Residual	17	10169542.20858	598208.36521

F = 1.47980 Signif F = .2556

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
x4	-85.29632	56.67199	-.33823	-1.505	.1507
x3	-77.81990	80.71797	-.21666	-.964	.3485
(Constant)	6902.17946	3144.57879		2.195	.0423

## Appendix 12: Housing Co-operatives Studied

Name of the co-operative	Socio-Economic Characteristics	Achievements	Current Status
Akwana (Kibera Slums)	<ul style="list-style-type: none"> <li>-low to middle income</li> <li>-Low education levels</li> <li>-Majority middle aged</li> <li>-Medium to large households</li> <li>-More men than women</li> </ul>	<ul style="list-style-type: none"> <li>-Purchased a ten acre piece land at Embakasi Nairobi</li> <li>-Obtained loan from Homeless International</li> </ul>	<ul style="list-style-type: none"> <li>-Repaying loan at Kshs. 350 per month per person</li> <li>-Planning members' settlement-</li> <li>Lack of water and proper sanitation in the new site</li> <li>- Seeking help through NACHU</li> </ul>
Kariobangi (Mathare-Kariobangi)	<ul style="list-style-type: none"> <li>-Low to middle income</li> <li>-majority with no education</li> <li>-middle age to old people</li> <li>-middle to large households</li> <li>-single headed households represented</li> </ul>	<ul style="list-style-type: none"> <li>-Bought land from an Indian owner</li> <li>-134 members settled in the new houses of phase I of the project with USAID assistance</li> <li>-Owns a School and an office</li> </ul>	<ul style="list-style-type: none"> <li>-Making local bricks for construction</li> <li>-Use self labour</li> <li>-Future plan of investing in brick production</li> <li>-C.F to provide Kshs. 12,650,000 under long term mortgage of 15 years for house construction</li> </ul>

<p>Marura (Kariobangi North</p>	<ul style="list-style-type: none"> <li>-Majority low income</li> <li>-Low education</li> <li>-Middle to old aged</li> <li>-Large households</li> <li>-Women headed households highly represented</li> </ul>	<ul style="list-style-type: none"> <li>-Financed by Ford Foundation in their upgrading project</li> </ul>	<ul style="list-style-type: none"> <li>-Upgrading their houses</li> </ul>
<p>Kenya Medical Association</p>	<ul style="list-style-type: none"> <li>-Majority high income</li> <li>-Advanced levels of education</li> <li>-Middle to old age</li> <li>-Small to laarge households</li> <li>-More men than women</li> </ul>	<ul style="list-style-type: none"> <li>-61 houses completed in South C</li> <li>-Owns a clinic and a nursery school</li> </ul>	<ul style="list-style-type: none"> <li>-Members repaying their loans</li> </ul>
<p>Harambee SACCO</p>	<ul style="list-style-type: none"> <li>-Low to high income</li> <li>-primary to advanced education</li> <li>-Small to large households</li> <li>-Middle to old age</li> <li>-More men than women</li> </ul>	<ul style="list-style-type: none"> <li>-Owns an estate in Eastleigh selling at Kshs. 850,000 to 1.5m. per house</li> </ul>	<ul style="list-style-type: none"> <li>Members did not directly benefit from the housing project</li> </ul>