# POPULATION MOBILITY AND EMPLOYMENT:-
## A Case Study of the Athi River Township.

BY

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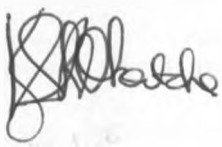
JULY 1979.

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

KATHLEEN SIMANI OKATCHA



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S.H. OMINDE, PH.D.

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TABLE OF CONTENTS

## LIST OF FIGURES AND TABLES

## ABSTRACT

The primary purpose of this study was to determine and estimate the magnitude of factors that have influenced out-migration from the source areas of migrants in this study. The sample consisted of 246 heads of house-holds resident in the Athi River urban center at the time of the survey.

The obtained results have indicated that, amongst other things, intervening distance between the areas of origin and the Athi River township, low wage earning levels, low levels of Government per capita expenditure and high population density in the rural environment have stimulated out-migration from the rural origins of the migrants. The greatest impact on migration rates comes from the distance factor and the mean wage-earnings differentials. Positive migrant selectivity on the basis of Sex and Age has been shown to have occured amongst the migrants at their areas of origin while the potential 'returnees' have been shown to have been negatively selected from the sample population on the basis of Age and Occupation.

The results have been illustrated to be consistent with previous research work and they imply that rural to urban migration is both desirable and undesirable because while high levels of economic opportunity have attracted a great many in-migrants into the Township, the grim reality of low levels of economic opportunity in the rural environment and resultant massive unemployment are exposed. Furthermore, positive migrant selectivity of the sample population points to the possibility of negative selectivity of the non-migrants in the rural environment and hence, the robbing of able hands from rural socio-economic development projects - an aspect of the migration process that needs further research.

# CHAPTER 1

## INTRODUCTION

The demographic scene in the world to-day is characterised by three major factors that are of great significance to development planning, not only for the remainder of this century but, most probably, for the next century as well. These factors are:

(1) an unprecendented rate of population growth, occuring particularly in the less developed regions;

(2) a rapid growth of the urban population and an increase in the number of big cities, in the developing world, and

(3) a reversal of the basic pattern of internal mobility in the more developed regions.

Estimates (United Nations, 1975) show that the total population of the world has passed the 4 billion mark. In 1960, it was estimated to be 3 billion and it is expected to reach the 5 billion mark in 1990. The greatest proportion of the world's total population now lies in the less developed region and this trend is expected to continue into the next century.

Furthermore, the estimates show that whereas the developed regions contained the major share of the urban population prior to 1975, the pattern of

distribution has shifted so that the less developed countries now account for the major proportion of the urban population. The gap in the distribution of the urban population between the developed and developing region is expected to widen such that between mid-twentieth century and the year 2000 A.D. there will be an eight fold increase in the urban population of the less developed world as compared to a 2.5 times increase in the more developed world.

The growth in the urban population of the less developed regions has been accompanied by an increase in the number of big cities. It has been noted that the majority of the world's big cities, whether judged by cities of 100,000 and over or of a million and over, for the first time now lie in the less developed region. On the other hand, big city populations are decreasing in the more developed region due to a reversal in the basic pattern of rural to urban and/or non-metropolitan to metropolitan internal migration.

In the U.S.A. (Beale, 1975) , it was shown that whereas the 1960s were characterised by movement towards the metropolitan areas, the 1970s have been dominated by movements away from the central cities and a growing number of metropolitan areas. The same pattern of reversed migration has been reported by other researchers in the U.S.A., for example, Morrison

(1975) , and the U.S. Bureau of the census (1976) . This trend is not peculiar to the U.S.A. alone because it has been also noticed elsewhere in the developed world. In Europe, Bevaegelser (1973) has pointed out its existance and so has Kuroda (1975) for Japan. Scholars studying this phenomena, amongst whom is Elgin et al.(1974) have suggested that a shift may have occurred in the factors influencing the decision to move and the choice of residence.

The three factors combined point to an increasing need for attention to internal migration as a major component of population growth, decline and redistribution. U.S. National Health statistics (1970) has pointed out the need for the study of internal migration in the following words:

> "In the more developed nations, as vital rates and especially fertility, become more homogenous between regions and between urban and rural places, migration takes on an increased importance in accounting for differential growth rates and for changes in the composition of population between areas."

Neither has the role of migration as a major component of population dynamics in the less developed world been overlooked. Goldstein points this out when he remarks:

> "In less developed countries, migration also accounts for a disproportional share of the differential growth rate of urban and rural places; and in those locations where urban and rural fertility are still very similar, it accounts for almost all of the differential (Goldstein, 1976)."

Studies in the less developed countries dealing with the factors that account for urban growth, enumerated by Weller, Macisco and Martine (1971) as comprising (1) a positive rate of natural increase in the urban population, (2) net in-migration and (3) the reclassification of places that formerly were 'rural as 'urban', have put different emphasis on these factors.

In Latin America, Ducoff (1965) and Arriaga (1967[a], 1968[b]) seem to view the positive rate of natural increase in an urban area as the overiding factor. Other studies conducted in the same region (Elizaga, 1965 ; Durand and Pelaez, 1965) have emphasized the joint role of urban natural increase and net in-migration while Martine (1969) has shown that net in-migration is a primary factor in determining the growth of urban places in Latin America. In their attempt to rectify the disagreement over the relative importance of the components of urban growth in Latin

America (Weller, Macisco and Martine, 1971) carried out a study which showed that net in-migration seemed to play a larger role in determining the rate of growth of large metropolitan centers of a country than in the case with smaller urban centers.

Studies carried out in Africa have also laid varying emphasis on the factors that determine population growth in urban areas. In his study of Nigeria, Okonjo (1973) emphasized the joint role of urban natural increase and net in-migration as major factors in determining urban growth. He writes:

> "Urban residents in Africa ----- carry with them in their migration to the cities their traditional pronatalist outlook. Favourable social and economic conditions in the city merely intensify this outlook resulting in an increased number of births." (p. 159).

Examining the dynamics of urban population growth in Nigeria Adepoju (1976) lays greater emphasis on net in-migration as a direct influence on urban growth. He, however, points out that natural increase plays a subsidiary role. Other studies, in Ghana (Forde, 1976) and in Kenya (Ominde, 1977) have emphasized the importance of positive growth in urban natural increase and net in-migration.

From a view of the studies quoted above, it seems that net in-migration and natural increase are components that cannot be isolated from each other as elements of urban growth in developing countries. Although the two processes are not always synchroneous, their effects can not be said to be mutually exclusive. In the developing countries in particular, these two processes account for the greater part of growth in the population of an urban place. However, in the more developed regions where there is no distinct difference between rural and urban places and hence the resultant differentials in fertility and mortality observed in the developing world, net in-migration accounts for the greater share of the growth of an urban place.

Not only does migration affect the size, composition and structure of the population of rural and urban places but it is also associated with some of the most acute social problems of the world today. In view of the fact that these problems are not identical, even when given as small an area as a country or a state in either the developing or developed world, "a universal urban type and urban solution of problems is no longer valid" (Ominde, 1974, P. 27) . This is because the process of urbanization has a socio-economic and political dimension. Consequently, one can point to the following major problems effected by the process of rapid urbanization in Kenya:

(1) Overcrowding of social amenities in the urban areas e.g. problems of physical accommodation;

(2) problems resulting from the provision of economic opportunities e.g. massive unemployment;

(3) problems arising from social adjustment to the urban environment e.g. mental illness and crime;and

(4) problems arising from the depletion of working - aged persons in the rural areas due to the selective nature of migration.

It is evident that a constructive policy of urban development must also take into account the problems of the rural areas, thus considering both the origins and destinations of migration streams. Otherwise, efforts to solve the problems of the urban environment only may lead to even greater movement since actual or perceived inequalities in economic opportunity, social and cultural amenities between rural and urban places have been major determinants of rural to urban flows of population. Hence the need for research on migration behaviour.

In the past, various studies have been carried out to estimate the degree in which various factors have influenced rural to urban migration and/or interstate migration. Causal factors of out-migration from the place of origin, the volume, direction and characteristics of the population movements have been

discussed. In the U.S.A. numerous studies have been carried out (Gallaway , Gilbert and Smith, 1967 ; Okun, 1968 ; Greenwood, 1970 ; Greenwood and Gomerly, 1971 ). In the less developed world, some recent studies dealing with the same subject of migration include those carried out in Brazil (Sahota, 1968) ; Ghana (Beals, Levy and Moses, 1967) ; Egypt (Greenwood, 1969) and Kenya (Rempel and House, 1976) . The previous research cited above rests on the assumption that lack of economic opportunities stimulates residents to out-migrate and at the same time repels in-migrants. Consequently, they seem to 'over-stress' the economic variables to the exclusion of other factors that may be involved in the migration process. Such factors could be able to explain why some people don't move at all, even when residing in regions of depressed economic conditions.

Apart from 'over-stressing' the economic incentives in the migration process, most researchers have focussed on the 'large-scale observation aspects'. This is more true of developing nations where there is a distinct difference between the rural and urban places. In Taiwan (Speare, 1973) , the scale of observation was 'a major city' while in Kenya Rempel and House (1976) and Ominde (1968) have dealt with migration at the 'inter-district level'. In cases where the study is based on an urban center, the scale of observation is

'a large urban center' like Nairobi (Ominde, 1971) or Kisumu (Oucho, 1974).

Conditions in a small urban center, like Athi River, are not necessarily the same as those of a large urban center. Therefore, studies based on large urban centers and regions restrict their value for purposes of generalisation.

Furthermore, most research carried out so far has focussed on the 'permanent' aspect of migration to the exclusion of other types of movements that go into the making of a migrants' history. Such movements include: Commuting, seasonal migration, step-wise and return or circular migration. Since these movements constitute an element of instability in the population of an urban area, they have great implications for planning policy both at the place of origin and destination of the migrant. Thus, there is need for research on the migrants' plans for future residence and the impact of migration in both the place of origin and destination of the migrant. More important, is the need for research on the integrated nature of the various facets of the migration process, their relationships, causes and effects.

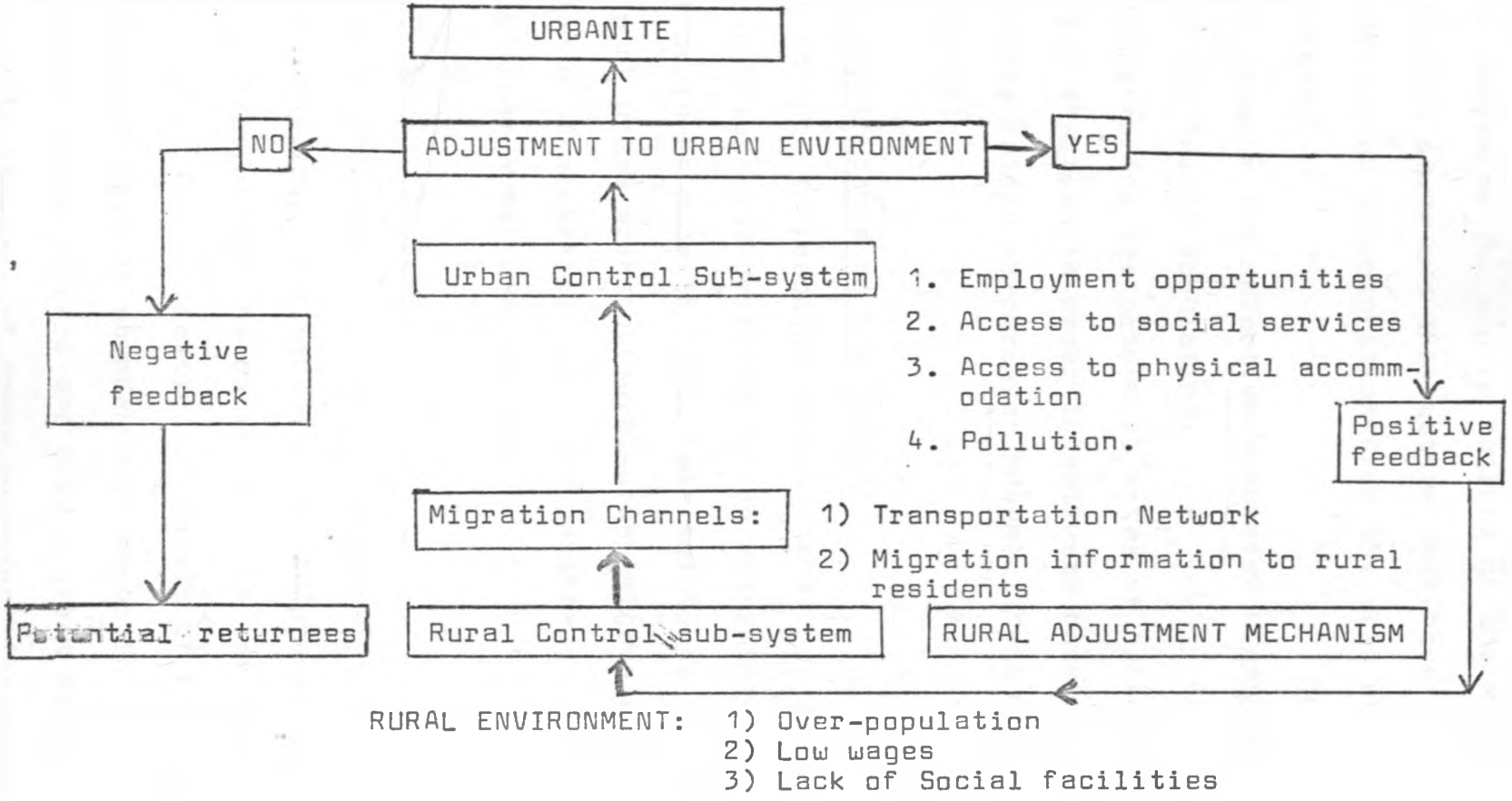
2) Statement of the problem:

The objective of the study is to examine the factors that have influenced out-migration from the places of origin of the migrants and in-migration into

the Athi River Township. An attempt will be made to show whether the migrants' aspirations have been fulfilled due to residence in an urban area, through an examination of the occupational structure and other consumption patterns of the town. The research problem is presented as a flow diagram below.

FIG: 1:1 FLOW DIAGRAM OF THE RESEARCH PROBLEM

URBAN ENVIRONMENT



3) Specific Objectives:

i) To determine the source regions of the migrants in this study and the factors that have influenced out-migration from the area of origin.

ii) To observe the selective nature of migration in the town's population.

iii) To determine the potential rates of out-migration from the town in order to estimate possible future return or circular movement from the township.

4) The Significance of the Study:

If factors influencing migrant behaviour at the places of origin and destination are determined, an attempt could be made to facilitate solutions to the flooding of urban areas by rural-urban migrants and the depletion of the working age - groups through out-migration from rural populations.

5) Approach to the Study:

A large proportion of studies attempting to explain migration behaviour have focussed on differentials in economic conditions as the basic stimulus for in and out-migration. The implication of models of economic opportunity are that an abundance of economic opportunities would attract and hold a great many migrants while the lack of these opportunities would stimulate residents to out-migrate and repel in-migrants.

These assumptionshave been demonstrated by studies carried out in both the developing and developed worlds.

Studies in the developed region date back to the nine-teenth century when Ravenstein (1889) showed that counties of in-migration in the United Kingdom were centres of commerce and industry while those counties where out-migration occurred were mainly agricultural. In the United States, Ravenstein's findings were illustrated by Goodrich et al. (1935) and Thornthwaite (1934) who showed that out-migration to relatively more prosperous countries occurred during the years of the 'great depression'. Since then, other models on migration behaviour developed in the U.S.A. have pointed to the primacy of economic opportunities as a stimulus for net in and out-migration, for example, models formulated by Stouffer (1940) , Bowles (1969) , Galle and Taeuber (1966) and Rutman (1970)

In the less developed world, researchers on causes of out-migration have also come out with results similar to those of studies done in the more developed regions. Although there is a time - lag between the studies carried out in the less and more developed worlds, the findings of the studies are comparatively similar. This could be explained by the stages of economic development at which the studies were carried out in the two major regions. Research with comparable findings to those of

the more developed region include studies carried out in Kenya (Rempel and House, 1976) ; Ghana (Beals, Levy and Moses, 1975) ; Egypt (Greenwood, 1969) and Tanzania (Bernum and Sabot, 1975) , in Africa. In Latin America, research work includes studies carried out in Brazil (Sahota, 1968) and Columbia (Schutz, 1971) . Amongst others carried out in Asia is Speare's study in Taiwan in 1971 .

In recent years, however, research done in both the developed and developing world has pointed to the fact that the decision to move can not be solely explained in terms of economic theory. Toney (1976) , basing his research on the United States, showed that while an abundance of economic opportunities do, in fact, attract a great many in-migrants, low levels of economic opportunity do not stimulate an exceptionally high rate of out-migration. If high levels of economic opportunity attract a high rate of in-migration, the reverse should also hold true. If it does not, then other factors have to be considered when dealing with in or out-migration in any given area.

The search for other 'possible' factors has led to an examination of the social and demographic facets of migration behaviour. In the U.S.A. the following studies have been reported: Litwak (1960) found out that relatives often assisted in the process of

migration rather than acting as inhibitors. Brown et al. (1963) showed that members of the same family after leaving the areas of origin tended to select the same areas of destinations while, Choldin (1973) has shown that the extended family sent information which relatives in places of origin could use in deciding whether to move and where to move to. If the relatives moved, the extended family provided extensive economic and social aid.

The demographic factor in the migration process has been stressed by studies carried out in developing countries, where there is a high rate of natural increase. Problems of population pressure on the land, the sole resource of sustenance, have been shown to be push factors from the areas of origin of the migrants. On the other hand, the areas of destination, the towns and large scale commercial farming areas, are the centers of commerce and industry. Amongst other studies featuring population pressure as a causal factor in out-migration are those that have been carried out in Kenya (Ominde 1963; 1968 ; Ducho, 1974 ; Rempel, 1974 ) and Tanzania (Cleason and Egero, 1971 ).

In view of the different studies cited both in the developed and developing world, it is impossible to envisage a general typology of migration behaviour because causal factors in the migration process seem to depend on a given level of socio-economic development, the political structure of a

given country or state and the fact that the decision to move is personal. It would not be realistic either if in every move, the economic factors or any other set of factors is stressed to the exclusion of the others that are known to account for out and in-migration in an area.

The primacy given to the various sets of factors in the studies cited could be attributed to the fact that the studies were carried out by people from various desciplines who tend to 'over-stress' their areas of specialization. For example, whereas an economist would stress the differentials in income levels as a causal factor in the out and in-migration process, a demographer would stress the population pressure aspect on the available resources.

The complexity of the migration process can be viewed as follows: (1) the potential migrant who resides in the rural area, (2) a rural sub-control system that 'sieves' through the actual migrants from the potential ones residing in the rural area, (3) a rural adjustment system that has to adjust to the loss of migrants, (4) the migration channels which the migrant uses to arrive at his destination. These also determine the cost of transport and the migrant's access to information, (5) the urban control sub-system

that sieves through the arriving in-migrants, (6) the migrant's adjustment to the urban environment through type of job, access to housing, health and educational facilities, and access to a kinship system, and (7) the migrant's feedback from his place of destination to the place of origin. If the feedback is positive, it is likely that more migration will occur but if it is negative, it is to be expected that return migration will ensue and in-migration into the urban area will diminish. These facets of migration behaviour are best illustrated by the flow diagram of the research problem already presented in figure 1:1.

It is therefore evident that reasons for and processes of migration are much more complex and cannot be explained by a single set of factors. The complexity of the migration process is seen when the fact of circular and stepwise migration is considered because it becomes a two-way process rather than being linear that is, starting from the place of origin and culminating in the place of destination. To the migrant, all the given aspects of the migration process occur over a given period of time, in one single system within which are found sub-sets, all interrelated and comprising his 'world'. To understand the world of the migrant, the researcher has to, therefore, choose an approach that will comprise the various sub-sets of the migration

process. It was with this need in mind that the 'systems analysis approach' was opted for in an attempt to study migration and employment in the Athi River township.

6. Research Hypotheses:

The study is based on the major assumption that economic, social and demographic factors have jointly influenced out-migration from areas of origin of the migrants and in-migration into the Athi River township. The following subsidiary assumptions are advanced concerning the different sets of factors:-

(1) ECONOMIC

(i) There are high levels of income in the Athi River township in comparison to the areas of origin. These will stimulate and hold a great many in-migrants and repel out-migration.

(ii) The Low income earners in the Athi River township will account for the greatest proportion of responses to future out-migration from the township in comparison to the Medium and High income earners.

(iii) Distance is a deterrent factor in migration and the frequency of movement is an inverse function of the distance between the places of origin and the Athi River township.

(2) DEMOGRAPHIC

(i) Migrant Selectivity in terms of age and sex has occurred in the selection of migrants from the rural populations of origin.

(ii) On the basis of sex and age most migrants will be predominantly males and these are expected to be concentrated in the young adult years.

(iii) Areas of high densities of population are associated with high rates of out-migration.

(3) SOCIAL

(i) Most migrants have a friend-kinship network in the town and the majority of them come from the immediate neighbourhood to the study area.

(ii) The level of Educational attainment correlates negatively with migration rates from the source areas of the migrants.

(iii) The potential out-migration rates from the township are indicators of the urban environment's degree of failure in solving the causal factors of out-migration from the areas of origin.

(iv) Return Migration serves to 'weed' out the less successful migrant.

7. Definition of important concepts:

Presented below are definitions of important terms that have, and will be used in this study.

(a) House-hold unit; Head of house-hold

The United Nations Multi-lingual Dictionary defines a household as a socio-economic unit made up of individuals who live to-gether. This definition carries with it the concept that more than one family can make up a house-hold unit, particularly so in area where kinship ties still hold strong. At the same time, 'the head of the house-hold unit' is defined as the person who is acknowledged as such by the other members of the house-hold unit. In rural Africa, the head of the house-hold unit is the oldest member residing in the homestead. However, for the purposes of this study which has been conducted in an urban area, the head of the house-hold unit will be designated as the person who controls the maintenance of the house-hold through exercising authority to run the home and at the same time, being the chief earner of the house-hold. In cases where more than one family live in the same housing unit, the head of the house-hold will be designated as the 'owner of the dwelling unit.

(b) Migration or Mobility

Migration or Mobility are terms that bear the

same meaning. They refer to spatial, physical or geographic movement of persons which involves a sustained or permanent sojourn in the place of destination.

(c) A Migrant

A migrant in this study is defined as a person who has under-taken the above defined move. His place of residence in the Athi River township is different from his residence in the area of origin, regardless of intervening changes of residence.

(d) Area of origin (Source)

The origin of migrants generally refers to the place from which the move is made. For migrants in this study, the area of origin is the migrants' place of birth which is not necessarily the area from which the last move into the Athi River township was made.

(e) Area of destination

The area of destination is the place at which the move terminated at the time of the survey. In this case, the migrant's destination is the Athi River township.

(f) 'Potential' return migrant

A 'potential' return migrant is defined as a person who intends to go back to his place of birth, from the Athi River township, sometime in the future.

(g) The economically active population or the Labor-force

For the purpose of this study, the economically active population or the labor-force will refer to the total number of persons who want employment, whether or not their wish is satisfied. If it is, then these persons are employed but if it is not, these persons are actively seeking employment.

(h) A systems approach

In this context, a system is an inter-relation of parts which in some way are dependent on each other and are defined by a definite boundary which is bordered by an environment. In this case, the environment is made up of the rural and urban areas. A systems approach, therefore, has been viewed in this thesis as comprising the following elements: (1) sources of migrants, (2) causes of out-migration, (3) migrant selectivity, (4) intervening obstacles, (5) adjustment to the urban environment, and (6) potential return migration. These elements interact amongst each other and with the environment both at the places of origin and destination of the migrants.

8. (i) Introduction to the study area

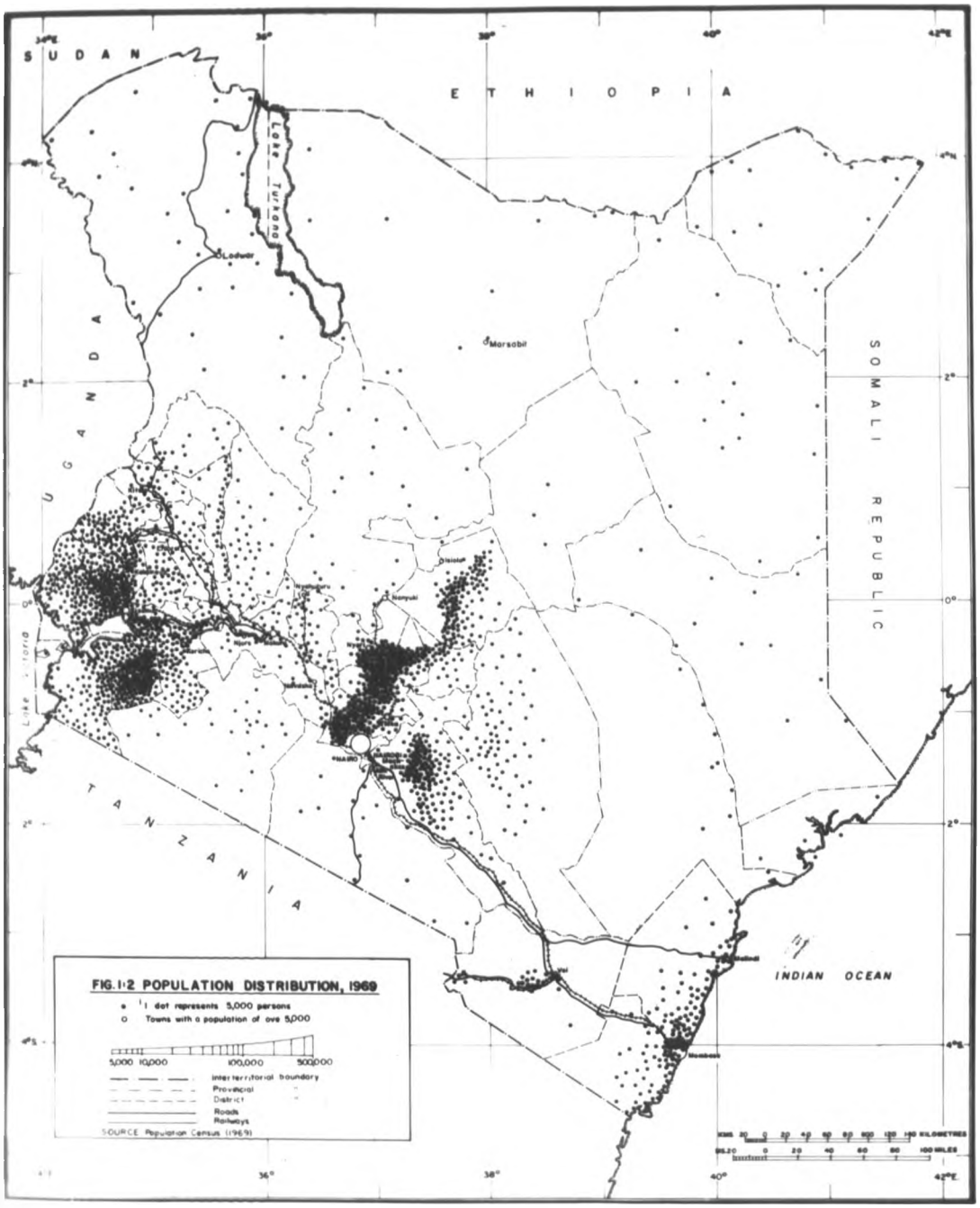
To comprehend the nature, extent and reasons for migration into the Athi River township, one needs a general knowledge of the immediate hinterland to the

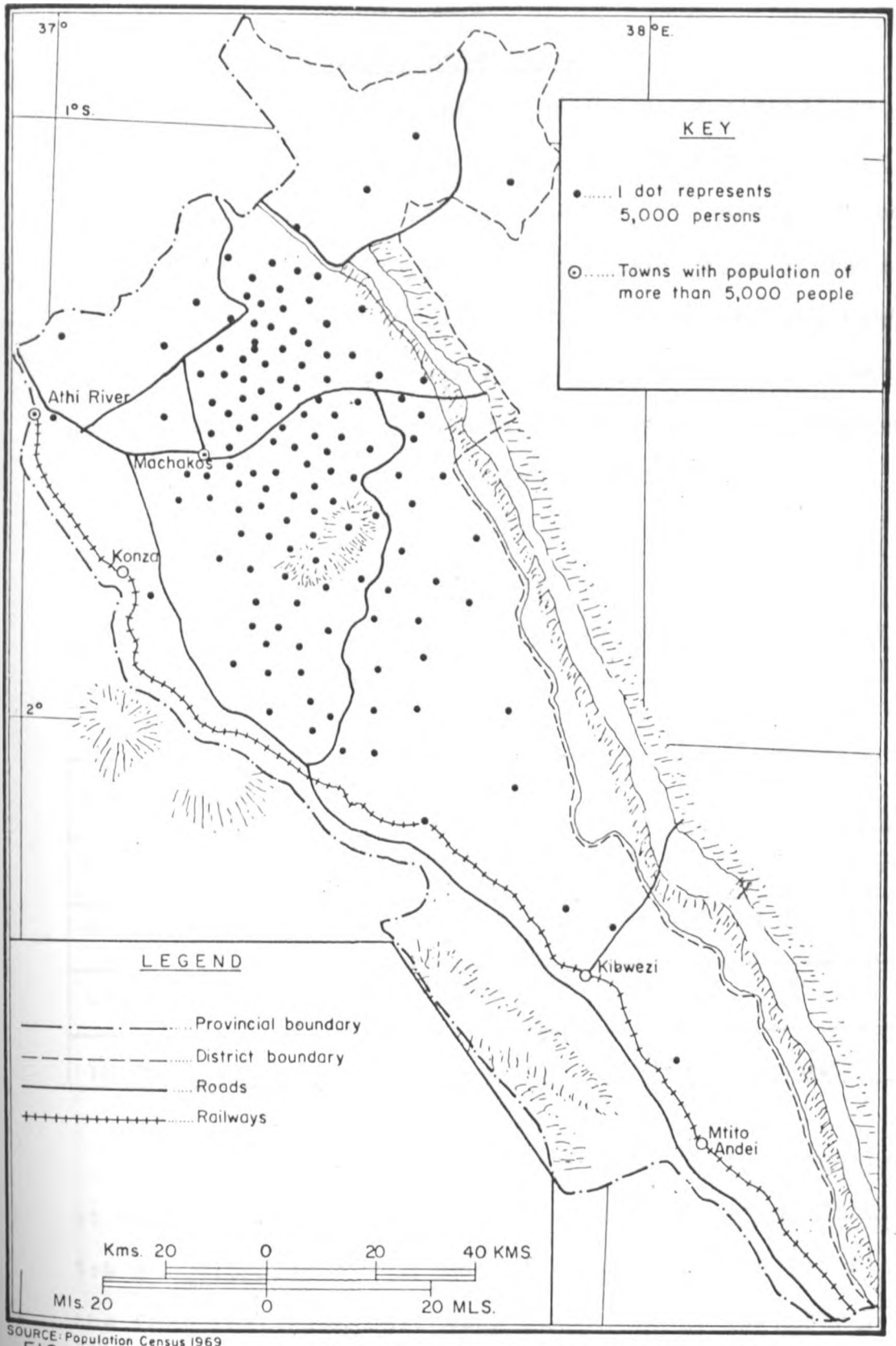
study area. The following discussion serves as an introduction and will focus mainly on the Athi River township, the Machakos district, which contains the study area, with general remarks relating to the country as a whole.

i) Population distribution

Figure 1:2 presented below illustrates the population distribution in Kenya according to the 1969 Kenya Census.

The map shows that the greater part of rural population is concentrated in three major population clusters namely: (1) The Western cluster with densities of 300 persons per sq. km. It extends from the Mt. Elgon slopes southwards to Lake Victoria and onward to the Kenya-Tanzania border; (2) the Central cluster with densities of 600 persons per sq. km. This belt stretches from Nairobi city to the lower slopes of the Aberdare and Kenya Mountains, Machakos hills and parts of Kitui district, and (3) the Coast cluster which extends from the Sabaki/Galana river delta southwards towards the Kenya-Tanzania border. The rest of the country which is largely made up of arid lands has densities of 20 people per sq. km. The distribution of population in the district containing the study area is illustrated by Figure 1:3.


SUDAN
ETHIOPIA
UGANDA
SOMALI REPUBLIC
TANZANIA
INDIAN OCEAN
Lake Turkana
Lake Victoria
Lodwar
Marsabit
Nanyuki
NAIROBI
Mombasa
FIG. 1·2 POPULATION DISTRIBUTION, 1969
1 dot represents 5,000 persons
Towns with a population of ove 5,000
5,000 10,000 100,000 500,000
Inter territorial boundary
Provincial
District
Roads
Railways
SOURCE Population Census (1969)




SOURCE: Population Census 1969

FIG. 1:3 POPULATION DISTRIBUTION IN MACHAKOS DISTRICT ACCORDING TO THE 1969 CENSUS

ii) Land productivity potential.

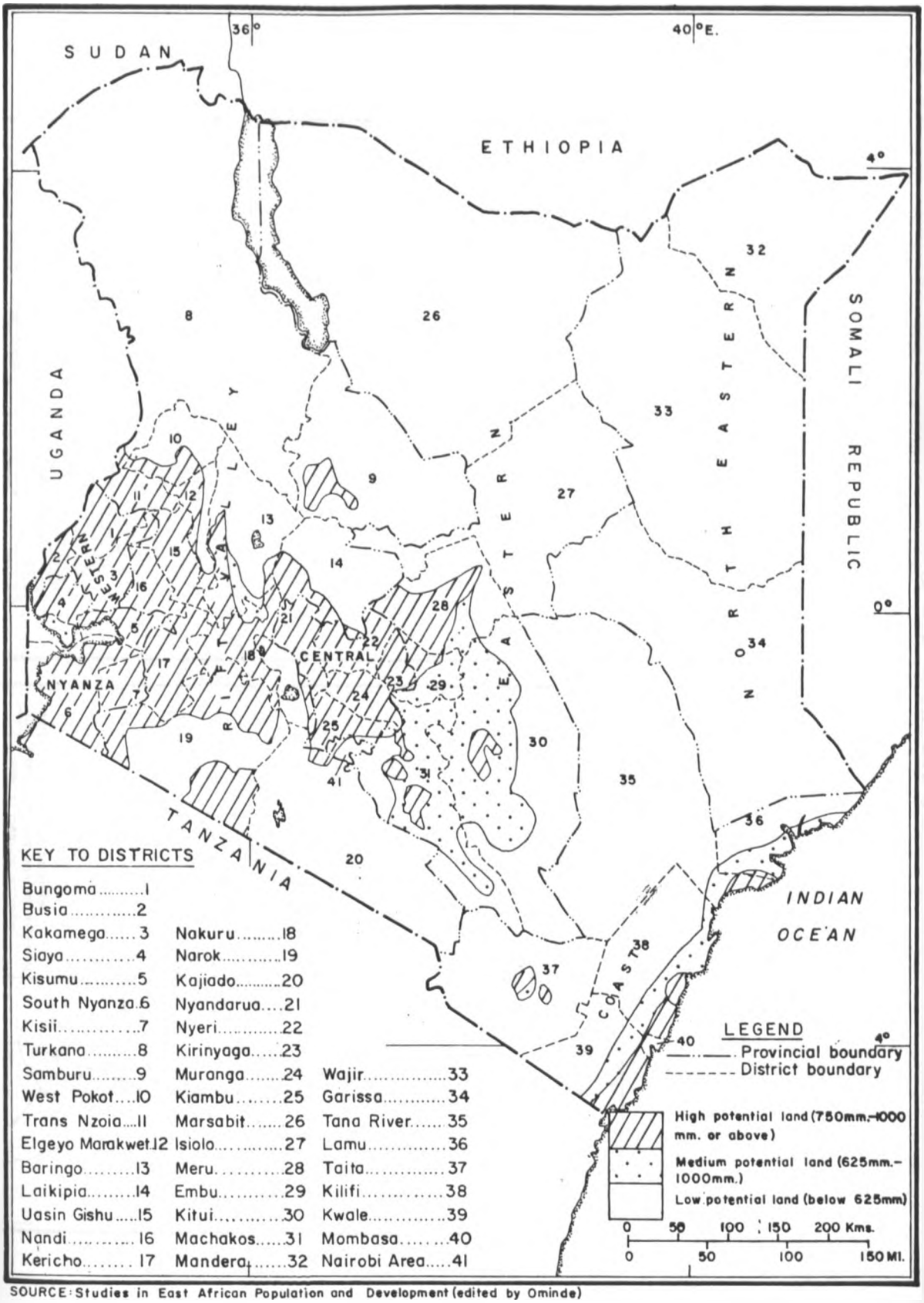
On the basis of rainfall as the sole classificatory factor, the land in Kenya can be attributed to the following major categories: (1) High potential, (2) Medium potential and (3) Low potential land. These categories of land are depicted by Figure 1:4, for the whole country and Figure 1.5 for the district containing the study area. The distribution of Land productivity potential in Machakos district is presented in Table 1:5 below:

TABLE 1:5

MACHAKOS DISTRICT - THE DISTRIBUTION OF LAND PRODUCTIVITY POTENTIAL

| Category of Land | Rainfall (mm) | Area (Sq.km.) | Percent (%) |
|---|---|---|---|
| High Potential | $\geq$889 | 1,404 | 9.9% |
| Medium Potential | 635-889 | 7,705 | 54.2% |
| Low Potential | $\leq$ 635 | 5,068 | 35.9% |
| TOTAL | - | 14,177 | 100.00% |

The classification of land productivity potential both at the national and district levels as shown by Figures 1:4 and 1:5 points to, amongst others, one key peoblem - the fact that high potential lands form a very small proportion of the total land area in Kenya.




SOURCE: Studies in East African Population and Development (edited by Ominde)

FIG. 1:4 KENYA LAND PRODUCTIVITY POTENTIAL

SOURCE: Owako, F.N. in "STUDIES IN EAST AFRICAN POPULATION AND DEVELOPMENT" (edited by Ominde.)

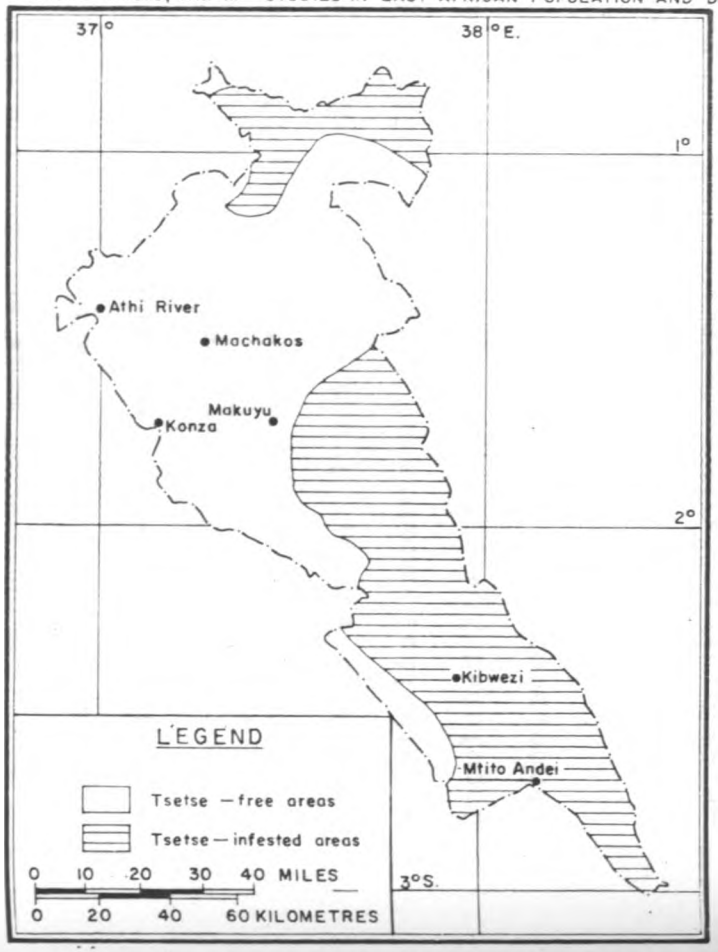



FIG. 1:6 Machakos District: tsetse distribution.

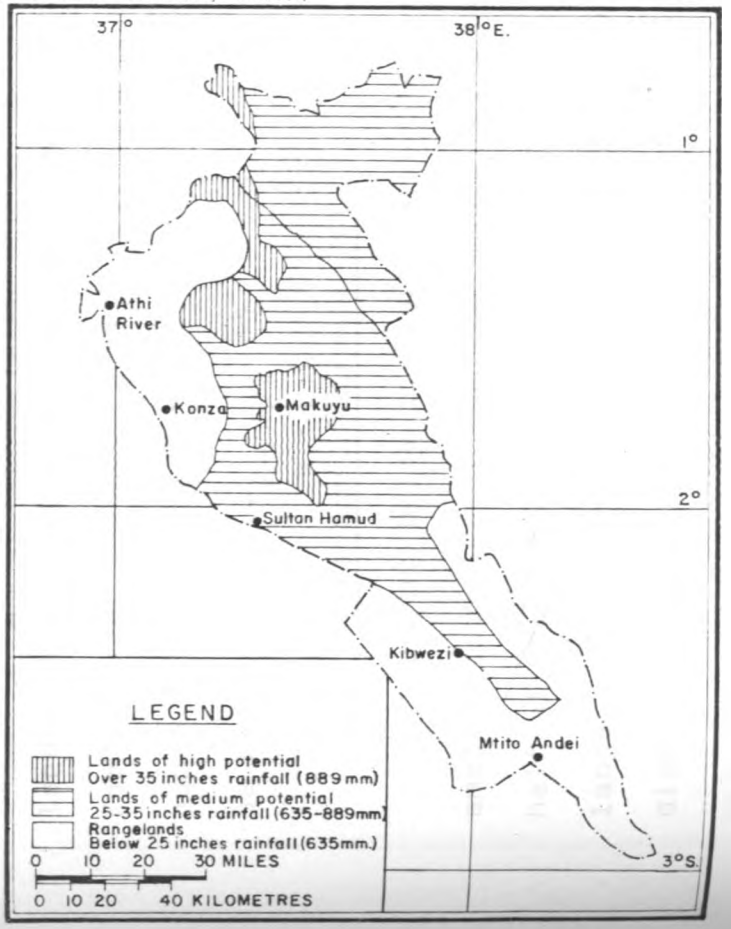



FIG. 1:5 Machakos District: agricultural-potential land categories

A comparison of maps showing the distribution of population (Figures 1:2 and 1:3) and those depicting the distribution of land productivity potential (Figures 1:4 and 1:5) reveal the fact that high densities of population coincide with the distribution of high potential lands. The medium potential lands accommodate substantial amounts of population while the sparsely populated low potential lands are chiefly used as rangelands.

In Machakos district, the greatest concentration of population falls within the High and Medium potential lands and although these categories of land account for 64.1% of the total land area, other factors deterring human settlement exist in the environment, as will be noted shortly.

(1) Presence of tse-tse fly

Presented below is Figure 1:6 which shows that a small proportion of the high potential lands, about half of the medium potential lands and all of the range-lands in the dry south and eastern parts of the district are infested or have at one time been infested, with tse-tse fly. Lack of surface water being a

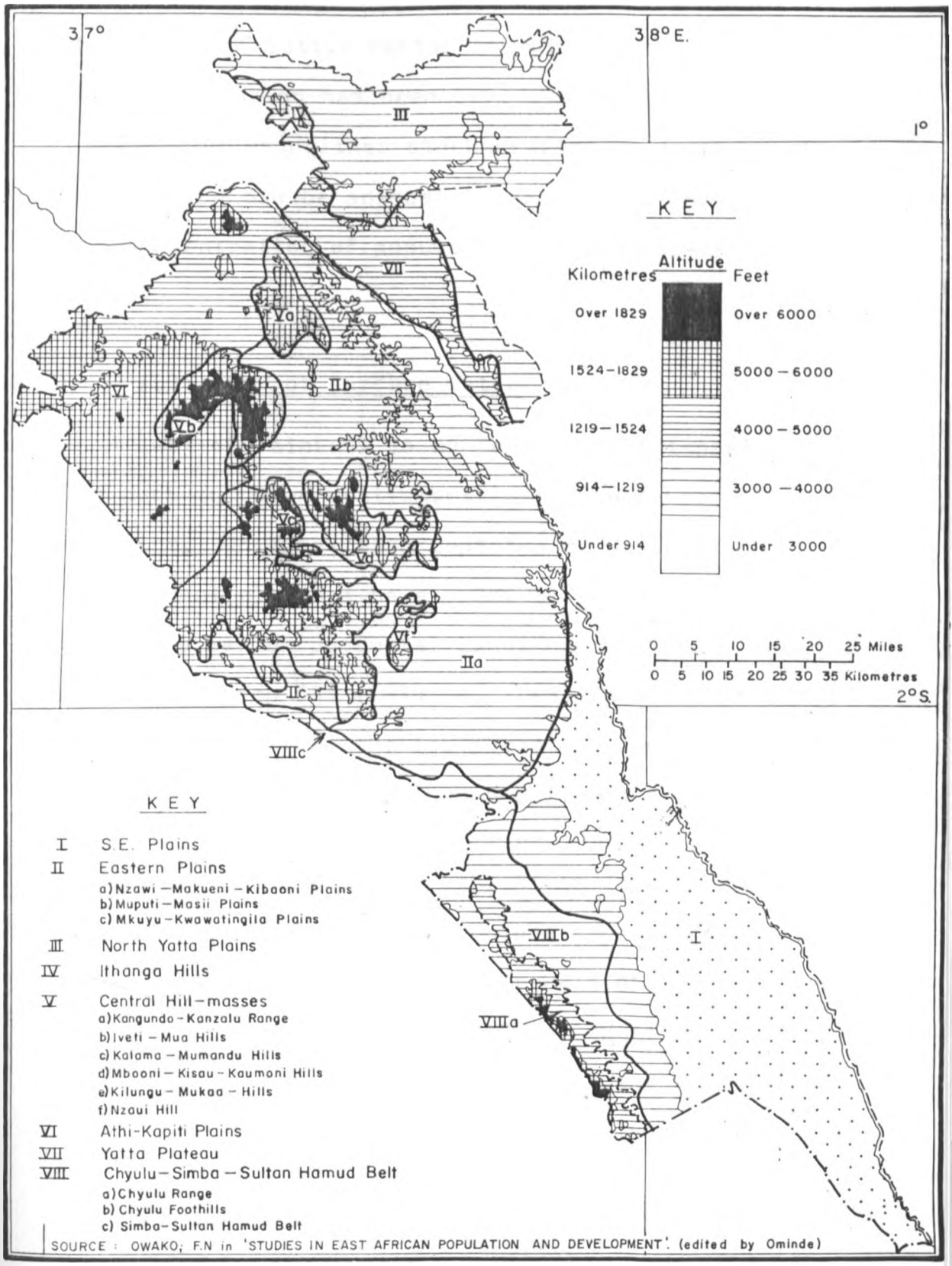



FIG. 1.7 Machakos District - Physiographic units

further restrictive factor in this environment, human population has been left with no choice of survival as neither stock-rearing or crop-cultivation can be adequately practised. Hence, the concentration of population in the tse-tse free areas.

(2) Lack of surface water

Lack of rainfall is by far the most important set back to human settlement in the Machakos district. This has been depicted by Table 1:5. High potential lands have 889 mm of rainfall while the medium potential lands have rainfall amounts ranging between 635 - 889 mm. Least amounts of below 635 mm occur within the low potential lands, used as rangelands due to low and unreliable rainfall.

The study area - the Athi River Township, is situated within the rangeland zone or low potential lands. It is recalled that over half of the rangelands are tse-tse fly infested therefore, apart from the limitation of tse-tse fly in parts of the medium and low potential lands, rainfall is a further restrictive

factor in the Machakos environment. This is evidenced by the fact that drought and crop failure are not unknown in Machakos district.

(3) Nature of the terrain

The physical nature of the land is yet another restrictive factor to human settlement and land carrying capacity in Machakos district. The district can be sub-divided into the following physiographic units illustrated by Figure 1:7.

A view of Figure 1:7 in terms of maps showing population distribution in Machakos district, tse-tse fly distribution and categories of land productivity potential reveal the following features, namely: (1) the high potential lands coincide with the location of the Central hill masses, (2) over half of the medium potential lands which comprise (i) the North Yatta Plains (ii) the Eastern plain and (iii) the Yatta Plateau, lie within the tse-tse infested region of Machakos district, (3) the only environments suitable to human settlement are the high and medium potential lands but these are faced with problems of population pressure, and (4) the rangelands comprising the S.E. plains and the Athi - Kapiti plains are in no position to ease over-population in either the high or medium potential lands because they are in themselves faced with problems of lack of surface water and the presence of tse-tse fly.

Although centered on the Machakos district, the foregoing discussion can be likewise shown to hold for the rest of the country as a whole. It is therefore not surprising that there should be heavy drifts of the economically active population from the rural to the urban areas insearch for livelihood. These drifts are reflected in the very high sex ratios of some urban centers in Kenya as shown in Table 1:8 and Figure 1:8 below.

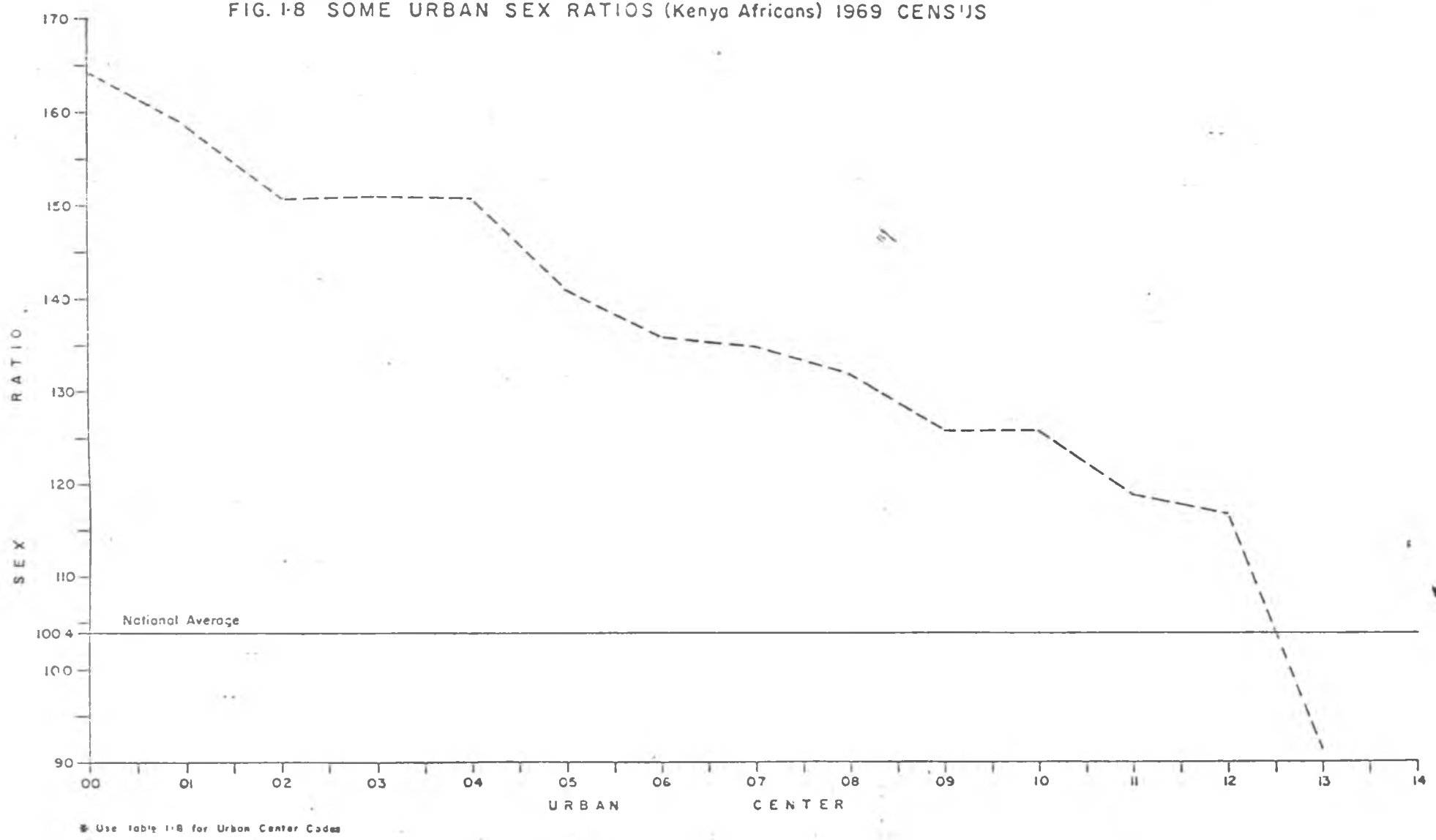
TABLE 1:8

SOME URBAN SEX RATIOS (KENYA AFRICANS 1969 CENSUS

| CODES | URBAN CENTRE | SEX RATIO |
|---|---|---|
| 14 | Kenya as a whole | 100.4 |
| 01 | Nairobi | 159 |
| 02 | Mombasa | 151 |
| 09 | Nakuru | 127 |
| 06 | Kisumu | 136 |
| 07 | Eldoret | 135 |
| 03 | Thika | 151 |
| 12 | Nanyuki | 117 |
| 08 | Kitale | 132 |
| 04 | Nyeri | 151 |
| 10 | Gilgil | 127 |
| 13 | Lamu | 93 |
| 05 | Malindi | 141 |
| 11 | Isiolo | 119 |
| 00 | Athi River | 164 |

Source: Central Bureau of Statistics

FIG. 1-8 SOME URBAN SEX RATIOS (Kenya Africans) 1969 CENSUS




* Use table 1-8 for Urban Center Codes

The table shows that the Athi River township, the study area had the highest sex ratio of 164 males per 100 females amongst the fourteen major urban centres presented. Figure 1:8 graphically illustrates the results of Table 1:8.

8. (ii) The Study area

The Athi River township lies on the Nairobi-Mombasa road and rail route, some 30 kilometres from the Nairobi city center. Founded in the 1930s by the Leibitz company as a slaughter house center, the town has grown tremendously since then. In 1969, the township had a population of 5,343 inhabitants.

The township is situated on the Eastern plains which average about 4,000 ft. in altitude (see Figure 1:7). This part of the plain cuts into the Athi - Kapiti plains whose average altitude is generally above 5,000 ft. It is therefore evident that the township is located in a depression - a fact which has greatly influenced its temperatures.

To the west, the township is bordered by the Nairobi City Council, Kitengela conservation area and the Nairobi game park. It is bordered to the south by the Athi - Kapiti plains while the south-east plains border the township to the north and the east. A map of the location of the township is shown in Figure 1:9 below:

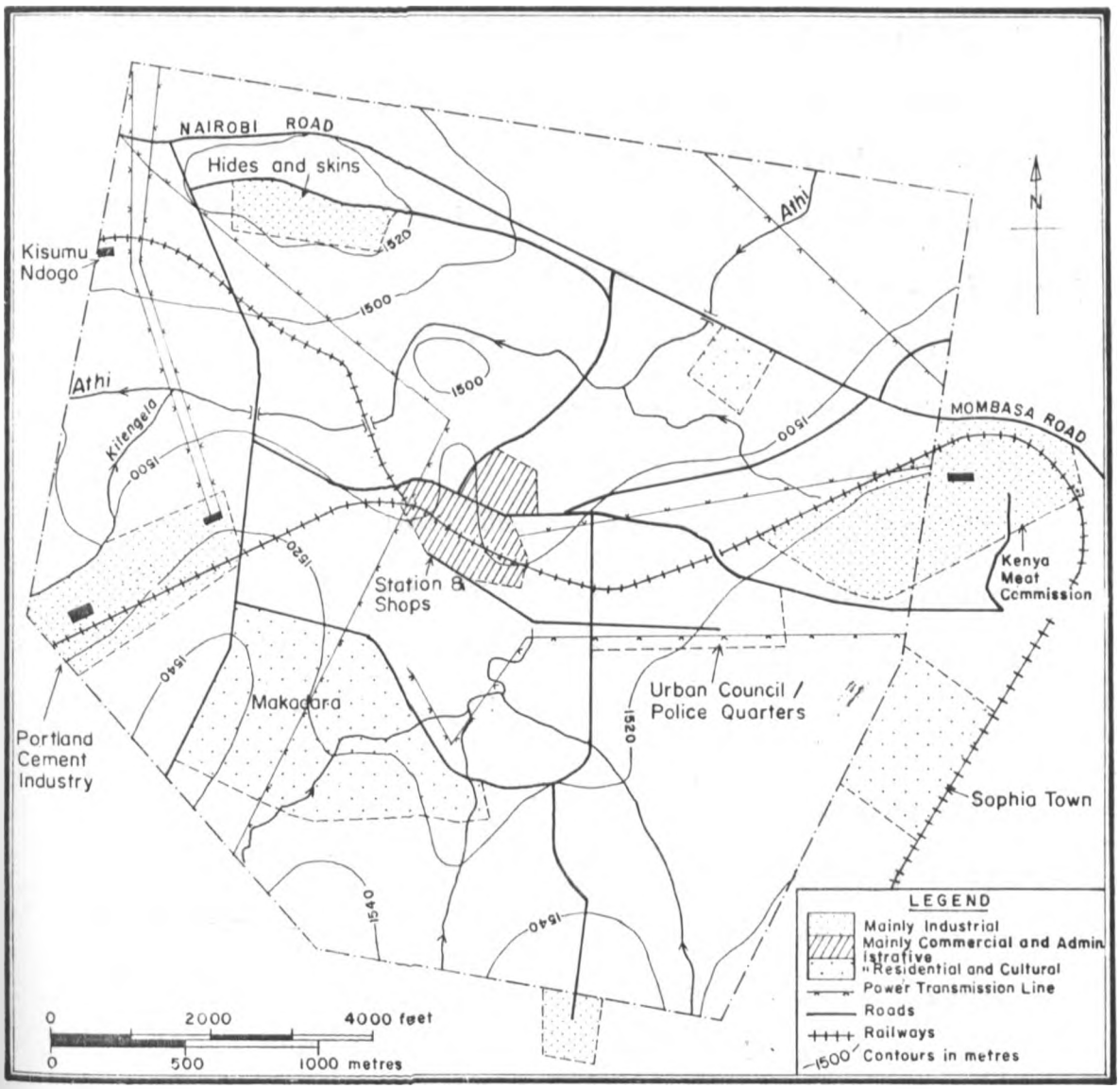



FIG. 1.9 THE LOCATION OF THE ATHI RIVER TOWNSHIP

The siting of the township in a depression and in the rain-shadow of the Mua and Lukenya hills affects both the temperatures and Rainfall experienced in the township. On the average, the town's temperature during the day is about 85°F. While the remperatures are very high, the rainfall amounts received are among the lowest in Machakos district since the town is located in a belt that receives less than 635 mm ($\geq$ 25") in a year. Therefore due to inadequate and unreliable rainfall, the lands bordering the township are mainly used for livestock rearing, although seasonal farming is practised as well during the wet months of the year. The only extensive farming found around the town is carried on under irrigation by commercial enterprises.

However, it is not the seasonal or commercial farming that has and continues to attract the labour force into the township but its industrial activity. These include the following industries: the Kenya Meat Commission plant, the East African Portland Cement plant and a Hide and Skins plant.

## 9. Summary of Chapters

The thesis will be made up of five chapters, an outline of which is presented below.

Within chapter 1, the need for the study of internal migration behaviour and the role of the migration process as a component of population growth and redistribution has been discussed. The causal factors of out-migration from the areas of origin and in-migration in the areas of destination have been pointed out through studies cited. A discussion of causal factors in the out-migration process has pointed to the need for integrated research, hence, the systems analysis approach opted for. In this chapter, the research problem, its significance and the working hypotheses have been included.

Chapter II provides a selective review of related literature to the problem under study. Whereas some of this research was only cited in chapter I, this chapter provides a detailed account of study findings under five major headings: (1) 'Some aspects of spatial mobility in Kenya', shows the extent of internal migration in the country based on the 1969 population census. This discussion sets the stage for determining the role of the towns as areas of destination in the migration process in the country; (2) 'Causes of out-migration from the rural areas' cites and presents

the research findings which confirm that the economic, social and demographic factors jointly influence a person's decision to migrate. The discussion operates on the global, regional and local levels, unlike the first section that concentrated only on Kenyan aspects; (3) the fact that not everyone who is confronted with the causal factors in the out-migration process moves is recognized in this section on 'Migrant selectivity'. It is shown that migration can be selective in terms of demographic, socio-economic and psychological variables; (4) the adjustment of the migrant to the environment of the area of destination has been approached from the social and economic view points. It is argued that most people make the decision to move in response to information passed to them by friends and relatives living in the area of destination. Hence a refutation, in part, of the myth of the 'displaced persons' who lack traditional values and yet reside in the urban environment, characterized by social disorganization. In addition, relatives pass information on the availability of employment opportunities in the areas of destination. To the extent that the in-coming migrant fails to adjust to the urban environment, he will either move on to another destination or return home. Section (5) deals with 'Return migration' and studies cited show that return migration serves to "weed-out" the less successful migrants in terms of employment and social adjustment to the urban environment.

Chapter III, essentially explores the methodological approach to the research problem. In this chapter, the selection of the sample population size and the sampling method used will be discussed. In addition, issues such as choice of research assistants, construction of the interview schedule and its administration, problems encountered in the field, will be pointed out. In cases where these problems do affect the responses, for example, the common tendency of digital preference and mis-statement of age, the data will be scrutinized for accuracy. With regard to age, Whipple's Index will be used to indicate the accuracy of reporting. In so far as problems encountered in the field do affect the quality and coverage of data intended for analysis on the study objectives, the scope and limitations of the data collected will be discussed.

A major section of this chapter will constitute a discussion of the statistical and demographic methods of data analysis. Amongst these will be the calculation of the t - test for related measures to show if there is a differential in the incomes of the rural and the urban area; simple, and multiple regression and correlation analysis, to predict the effect of the causal factors of out-migration from the place of origin; activity rates in the place of destination, and frequency distributions of variables such as future plans for residence and kinship network. Wherever

possible, spatial variations of the above variables will be indicated.

The results of the study will be presented in Chapter IV, the core chapter of the thesis. The mode of presentation will be Tabular, Map and Diagramatic forms on the bases of the assumptions set out in the section on 'research hypothesis'. These tables, maps and diagrams, consequently, will relate to results in connection with the following aspects of the study. (1) Sources of migrants, (2) Causes of in and out-migration, (3) Migrant selectivity in relation to sex and age, (4) Migrant adjustment to the urban environment and (5) Potential return migration.

The results of the study presented in Chapter IV will be discussed/and summarized in Chapter V. In addition, policy recommendations draw on the basis of the findings of the study will be indicated.

The final section of the thesis will be the Appendix and Bibliography. Appendix 1 will constitute the Tables contained in the other chapters of the thesis with the exception of those to be presented in Chapter IV. Appendix II will contain the Interview Schedule that was used to collect data from the field.

# CHAPTER II

## A REVIEW OF RELATED LITERATURE

### (1) Some aspects of Spatial Mobility in Kenya.

In order to comprehend the role of the urban areas in the migration process in Kenya, it is necessary that a general over-view of population movements be discussed. The most recent source of data to facilitate such an analysis is the Kenya 1969 Census. For purposes of comparison the Kenya 1962 Census data will be used. Figure 2:1 presents the current administrative boundaries by province and district. The major towns to be included in the subsequent discussion have also been illustrated by Figure 2:1.

Using the 1969 Kenya Census data, Rempel (1974) showed that at the provincial level the dominant areas of destination were the Rift Valley, Coast and Nairobi provinces. Found within the provinces were the out-standing destination districts of Nakuru, Mombasa, Uasin-Gishu, Kiambu, Nyandarua and Nairobi. However, Nyandarua and Kiambu are situated in a principal out-migration province: Central. Table 2:2 of Appendix 1 and Figure 2:2 indicate the principal in-migration provinces and districts of Kenya according to the 1969 Census. These stand out with highest percentages of in-migrants.

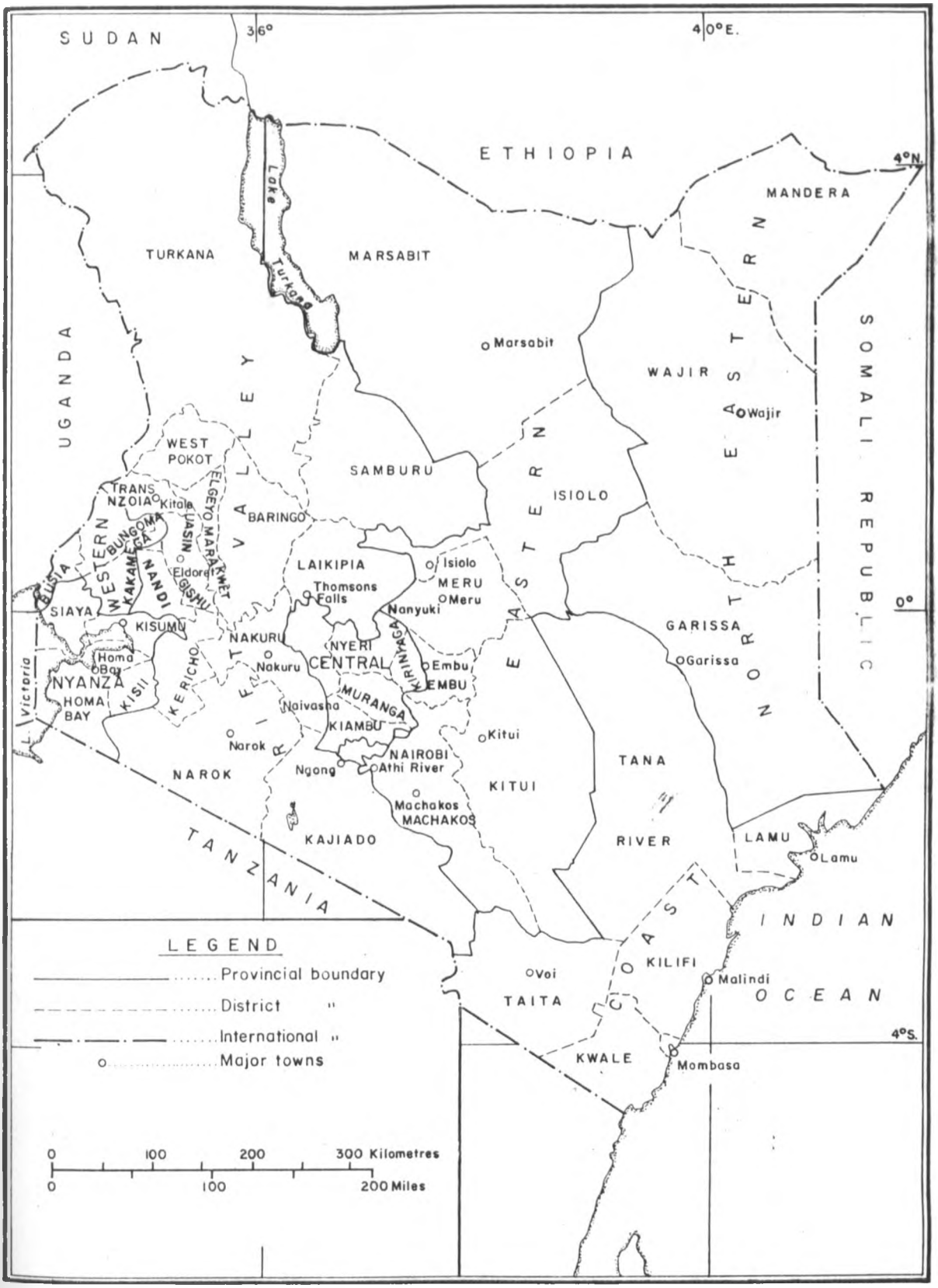
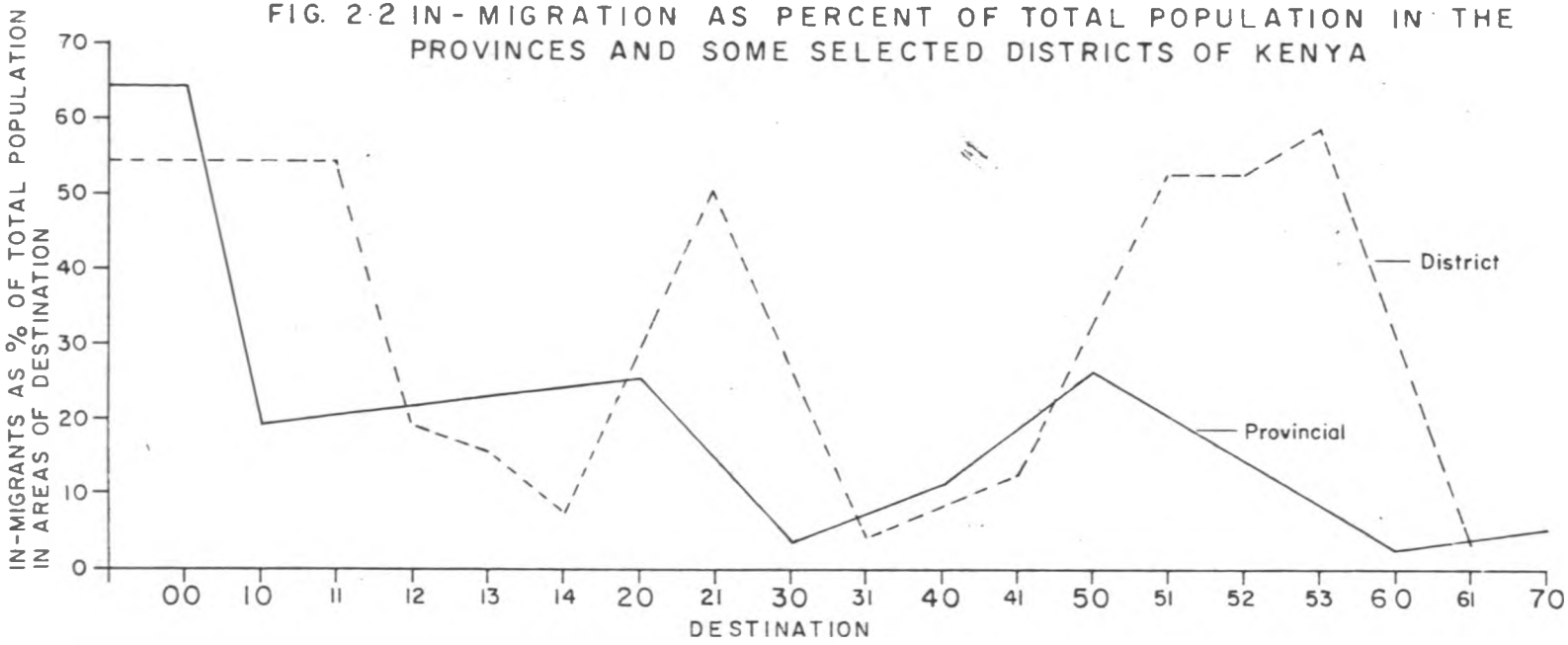



FIG. 2.1 KENYA: ADMINISTRATIVE BOUNDARIES AND MAJOR TOWNS

FIG. 2·2 IN-MIGRATION AS PERCENT OF TOTAL POPULATION IN THE PROVINCES AND SOME SELECTED DISTRICTS OF KENYA




USE TABLE 2.2 ON PAGE 216 FOR PROVINCIAL AND DISTRICT CODES.

Inspite of the fact that the provincial boundaries were changed after the 1962 Kenya Census of population, the areas of destination of the migrants are shown to be the same by Ominde (1968) in his analysis of the 1962 census, as those pointed out by Rempel (1974). Ominde's findings are depicted in the high percentages of persons born outside the enumeration provinces as shown by Table 2:3. Once again, the Rift Valley, Nairobi and Coast Provinces stand out as the dominant regions of destination for the migrant population.

TABLE 2:3

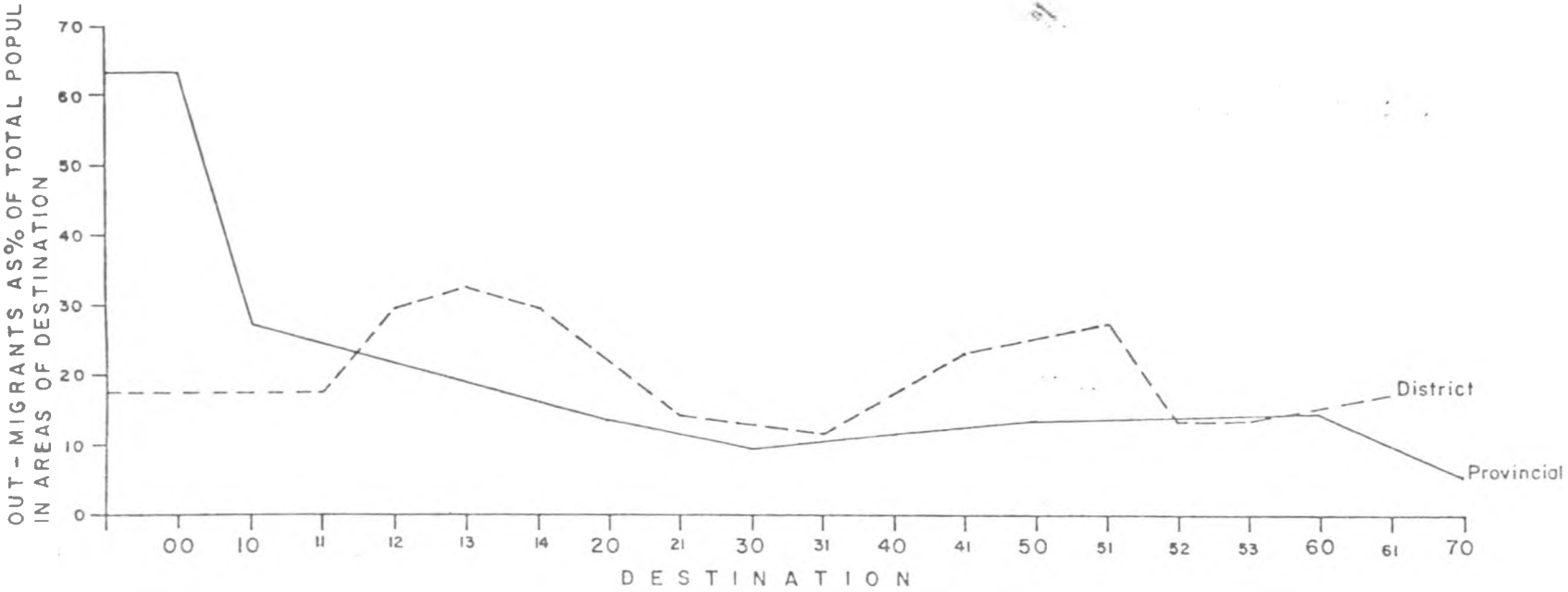
PERSONS BORN OUTSIDE OF ENUMERATION PROVINCE - 1962 KENYAN CENSUS

| | PROVINCE | TOTAL | PERCENT |
|---|---|---|---|
| 1. | Nairobi Extra-Provincial district | 155,558 | 25.73 % |
| 2. | Central | 67,629 | 11.18 % |
| 3. | Coast | 77,626 | 12.84 % |
| 4. | Nyanza | 27,900 | 4.61 % |
| 5. | Rift Valley | 263,333 | 43.55 % |
| 6. | Southern | 12,624 | 2.09 % |
| | TOTAL | 604,700 | 100.00 % |

Source: Ominde, S.H., Land and Population Movements in Kenya (1968), P. 122.

Conversely, the 'non-receiving' provinces during the 1969 census stood out as the source areas of the migrant population. The Nairobi province was shown to play a double role in that it featured as a dominant 'receiving' and 'sending' region for migrants. The source origins of migrants included the Western, Nyanza, Central, Eastern and Nairobi provinces. Found within the provinces were the outstanding source districts of Murang'a, Kakamega, Kiambu, Nyeri, Machakos, Kisumu and Nairobi*. These findings are best illustrated by Figure 2:4 and Table 2:4 of appendix 1, in which the above districts and provinces stand out with the highest percentages of out-migrants.

FIG. 2·4 A SUMMARY OF OUT-MIGRANTS IN THE PROVINCES AND SOME SELECTED DISTRICTS OF KENYA - 1969 CENSUS




USE TABLE 2·4 ON PAGE 217 FOR PROVINCIAL AND DISTRICT CODES.

Similary, Ominde (1968) has shown that the former Central, Nyanza and Southern provinces which now include parts of Central and Nyanza, Western and Eastern provinces, after the boundary changes in 1963 had the highest percentages of birth place inter-provincial migrants, as illustrated by Table 2:5

TABLE 2:5

BIRTHPLACE OF INTER-PROVINCIAL MIGRANTS - 1962 KENYA CENSUS

| PROVINCE | TOTAL | PERCENT |
|---|---|---|
| Nairobi (E.P.D.) | 8,901 | 1.47% |
| Central | 215,356 | 35.61% |
| Coast | 5,741 | 0.95% |
| Nyanza | 211,482 | 34.97% |
| Rift Valley | 41,887 | 6.93% |
| Northern | 14,831 | 2.45% |
| Southern | 106,502 | 17.61% |
| TOTAL | 604,700 | 100.00% |

Source: Ominde, S.H., Land and Population Movements in Kenya, (1968), P. 122.

(2) Migrant Selectivity.

1. Sex:

The differences in the migratory movements according to sex are well depicted in Rempel's analysis shown in Tables 2:2, 2:4 and 2:6.

Table 2:2 shows that in-migration streams to the areas of destination have a preponderance of males over females. This is particularly true of Nairobi, Coast and Rift Valley provinces. A slight excess of males over females is also noticed for the Central and Eastern provinces. Surprisingly, the Nyanza and Western provinces deviate from the normal pattern by having an excess of in-coming females.

In the out-migration streams, a heavy excess of males over females is noted as shown in Table 2:4. The source areas of migrants which include the Nairobi, Nyanza, Western and Central provinces, in particular show this tendency. To a less degree, the Eastern, Coast, Rift Valley and North-Eastern provinces show an excess of males over females.

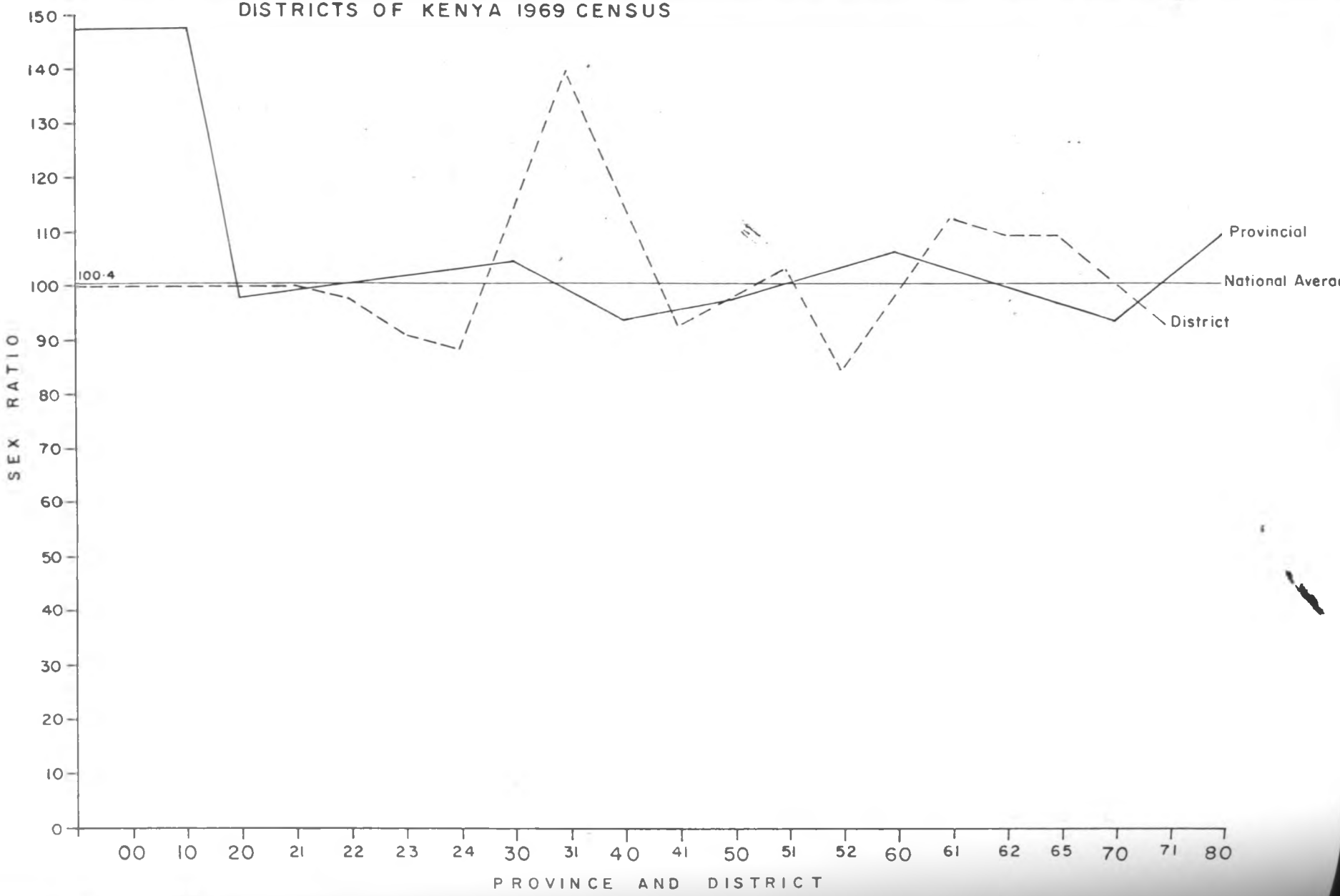
Table 2:6 depicts the net-internal movements, the analysis of which confirms the above findings that: (1) areas of destination of the migrants have a heavy excess of males over females, and (2) the source provinces and districts of the migrants show a deficiency of males and a preponderance of females.

The sex ratios for all the provinces in Kenya and for the selected districts point to the hypothesis of a heavy excess of males in the areas of destination and a deficiency in the areas of origin of the migrants. These sex ratios are presented in Table 2:7. It can be

noted that the "receiving" provinces which include Nairobi, Coast and the Rift Valley have sex-ratios higher than the national average as a whole. Nairobi ranks highest with a sex ratio of 147.1. The sex ratio of 119.4 given for the North-Eastern province has been considered unusually high for the region so that there is supposed to have been an over-enumeration of males in the province.

Conversely,the "sending" districts show low sex ratios compared to the national average of 100.4. These include the Eastern, Western, Nyanza and Central provinces. However, within these provinces stand out districts with high sex ratios, thus featuring as "receiving" districts within "sending" provinces. These include: Kisumu,and Nyandarua. Table 2:7 of appendix 1, and Figure 2:7 illustrate the fore-going discussion.

FIG. 2·7 SEX RATIOS FOR ALL AGE GROUPS BY PROVINCE AND SOME SELECTED DISTRICTS OF KENYA 1969 CENSUS




USE TABLE 2.7 ON PAGE 219 FOR PROVINCIAL AND DISTRICT CODES

(2) Age:

The age distribution of the migrants shows that the majority of the males fall within the 20 to 49 year age bracket while the female migrants fall within the 20 to 29 year age bracket (Rempel, 1974).

2) The role of towns as destinations of migrants

Rempel (1974) has shown that the following districts: Mombasa, Nairobi, Nakuru, Uasin-Gishu and Trans-Nzoia were dominant areas of destination. On the other hand, Murang'a, Kakamega, Nyeri, Kiambu and Machakos were dominant amongst the source regions of the migrants. It can be seen that the districts of destination contain most of the major towns in Kenya. The role of these towns as centers of destination within the districts in which they are found can be gauged by an examination of the magnitude of flows to the towns in relation to the flows in their respective districts. The approximate share of in-migrants by towns in relation to the districts is presented in Table 2:8.

TABLE 2:8

APPROXIMATE PERCENT SHARE OF IN-MIGRANTS BY TOWNS IN RELATION TO THEIR RESPECTIVE DISTRICTS

| PROVINCE | DISTRICT | MAJOR TOWNS WITHIN THE DISTRICT | APPROX. % SHARE OF IN-MIGRANTS |
|---|---|---|---|
| RIFT VALLEY | Nakuru | Nakuru | 38 % |
| | Uasin-Gishu | Eldoret | 22 % |
| | Trans-Nzoia | Kitale | 6 % |
| | | Kericho | 22 % |
| CENTRAL | Kiambu | Thika | 29 % |
| COAST | Mombasa | Mombasa | 50 % |
| NAIROBI | Nairobi | Nairobi | 64.3% |
| NYANZA | Kisumu | Kisumu | 50 % |

Source: Rempel, H., Analysis of the information on Inter-district Migration provided in the 1969 Kenya Census, 1974.

Table 2:8 shows that the percentage share of in-migrants by the major towns within their respective districts are low, apart from the two major towns of Nairobi and Mombasa. This could be due to the fact that in Rempel's analysis, the migration flows from within the districts to the towns are excluded. Nevertheless, the importance of Mombasa and Nairobi towns as areas of destination is distinct. This is further illustrated by Table 2:9 which shows the percentage share of migration flows to Kenya's urban centers with a population of $\geq$5,000 people during the 1969 census.

TABLE 2:9

THE PROPORTION OF THE OUT-MIGRANTS FROM EACH PROVINCE WHO HAVE MOVED TO MAJOR URBAN CENTERS

| SOURCE | TO NAIROBI | TO MOMBASA | TO OTHER TOWNS | TOTAL TO URBAN |
|---|---|---|---|---|
| PROVINCE | % | % | % | % |
| NAIROBI | - | 1.65 | 1.50 | 3.15 |
| NYANZA | 21.20 | 7.05 | 8.65 | 36.90 |
| WESTERN | 24.85 | 5.45 | 20.65 | 40.95 |
| RIFT VALLEY | 5.80 | 0.95 | 3.20 | 9.95 |
| EASTERN | 31.80 | 14.20 | 3.00 | 49.00 |
| COAST | 8.20 | 44.5 | 2.45 | 55.15 |
| NORTH-EASTERN | 6.50 | 3.35 | 2.10 | 11.95 |
| TOTAL | 17.6 | 6.75 | 5.05 | 29.4 |

Source: Adapted from Table 27, P. 68. Rempel, H., Analysis of the Information on Inter-District Migration provided in the 1969 Kenya Census.

The rate of natural increase of the Urban population during the 1962 - 1969 intercensal period was 6.9% versus a 3.3% growth for the whole of Kenya. The growth rate in Nairobi alone was 9.6% while Mombasa and Kisumu had an annual growth rate of 4.7%. In view of this information, it does appear that the 29.4% of out-migrants to the major Urban centers during the 1969 census depicted in Table 2:9 somehow understates the importance of rural to urban migration and the role of urban centers as areas of destination in the Migration process in Kenya.

3) Causes of rural to urban Migration

Internal migration is a multi-faceted process which has attracted the attention of specialists from various disciplines. Its causes are complex and therefore have to be approached from a multi-dimensional plane. Amongst scholars holding this approach to internal migration are Jansen (1969) who points out that migration is a demographic, economic, political, psychological and sociological problem. He further states that these aspects of migration may be present in one single movement of people or one of the aspects may predominate.

As was pointed out in chapter 1, the varying emphasis placed on single causes of rural to urban

migration by various scholars are in part due to the fundamental heritages of their various disciplines. Although the causal factors are reviewed under the following separate categories: (1) Demographic, (2) Economic, (3) Social and (4) Psychological; they are viewed as components of one single process in this study, excluding the psychological factors that were not investigated.

(1) Demographic:

Zelinsky et al. (1970) has noted that rural to urban migration is one of the most distinctive as well as the most important feature of developing societies. They point out that the situation in the developing world is made critical by the increasing rate of population growth due to significant reductions in mortality with high static fertility levels. This in turn has meant an increase, in varying degrees, of population pressure on resources. However, there are variations within countries and within regions of the same country.

Various studies seeking to find possible ways in which society has dealt with the problem of rural population pressure have turned out with two major forms of adaptation (1) out-migration and (2) 'shared poverty'. The 'shared poverty' mode of adaptation is not our concern in this study and it will suffice to

point out that this mode, found in 'closed peasant communities' may be effective over the short term but the long-term consequences are particularly grim.

Out-migration is the most universal mode of adaptation. Some scholars refer to it as 'a safety valve' that works to prevent population pressure on local resources from building up to a danger point (Browning, 1974) . Others think of rural out-migration in terms of the concept of a rural 'resevoir' of potential out-migrants. This second concept of a rural 'resevoir' is more realistic since the 'safety valve' analogy implies that out-migration is an automatic control device. This is too mechanical a view because not all who experience population pressure effects move and moreover, there is the alternative mode of 'shared poverty' to the problem of population pressure.

In Africa, studies showing that high natural increase, as a demographic factor, is one of the variables in the chain links of 'push' factors in the source areas of migrants date back to the beginning of the present century.

As early as 1952, Middleton reporting on migration among the Lugbara of Uganda, found that cash was the primary motive for migration and the highest emigration rates were from areas where population

density was greatest and land pressure most serious. Subsequent studies have had results alluding to Middleton's findings. Ominde (1963) when discussing the reasons for the movements of labour from the Nyanza Province, of Kenya, also related the high level of emigration from the province to the relative balance of economic opportunity which had resulted due to increased pressure on land resources. He states: "It is this inability of the land to cater for the needs of the expanding population that has driven the inhabitants of the area to seek paid employment in the urban areas of Kenya". P. 31.

In analysing the results of the 1962 population census of Kenya on population movements, Ominde (1968) showed that the source regions of the inter-provincial migrants were those provinces and districts where highest population densities were experienced. This is illustrated by Table 2:5 showing that Central, Nyanza and the Southern provinces had the highest percentage of birth place inter-provincial migrants. Analogous findings have been shown by Rempel (1974) in his analysis of the Kenya 1969 census as shown by Table 2:4. The table shows that Nairobi, Central, Eastern, Nyanza and Western provinces had the highest emigration rates during the 1969 census. Ominde and Odingo (1971) have shown that the highest densities of population on the land are

situated within these provinces, which also contain the high potential lands of Kenya. In their discussion of the regional variations in the distribution of population, Ominde and Odingo point out that the central province has some of the highest agricultural densities in the world. Likewise, Oucho (1974) has also shown that the major source regions of migrants into Kisumu town were from areas experiencing high densities of population.

Cleason and Egero (1971) have shown that in Tanzania, population pressure on land resources serves as one of the 'push' factors in the migration process. In discussing interregional migration in Tanzania, they remark: ". . . . . pressure in the form of land shortage or more basic problems of survival under unfavourable conditions may serve as push factors" P. 117.

The demographic and economic factors are closely linked together in that natural increase in the rural area will determine the size and composition of the potential labour-force in the rural 'reservoir'. This resevoir does in time act like a feeder channel through the selectivity of migration to determine the size and composition of the labour-force in the areas of destination of the migrant.

(2) Economic:

Previous research stressing the importance of economic conditions as a stimulus for net in and out-migration have been closely linked to models of economic opportunity. The models postulate that the abundance of economic opportunities attracts and holds a great many in-migrants while the lack of economic opportunities stimulates residents to out-migrate and repels in-migrants. Migrants are therefore assumed to be rational decision makers. They are also expected to allocate themselves spatially so as to maximize the net present value of their 'future streams of returns'. These 'future streams of returns' are measured in terms of the present value of the expected difference in income between the destination and origin regions, net of the direct costs of moving (Rempel and House, 1976). Hence researchers focus on the wage differentials and the distance variables, when investigating the role of the economic factor in the migration process.

Studies showing that wage differentials are a stimulus for in or out-migration rest on the hypothesis that the greater the income of state j in relation to that of state i, the greater the expected migration between i and j. It is often assumed that wage levels are closely related to employment opportunities and labour demand, with the result that it is impossible

to determine their separate influences on migration. The distance variable is related to the transportation costs and since such costs are related to the distance moved, it is regarded as a proxy for transportation costs.

Various researchers in Africa have focussed on the wage differential and distance variables as influences on in or out migration. Amongst these are scholars like Greenwood (1969) who, when studying the causes of labour migration in Egypt showed that the higher the level of mean incomes for various districts, the less responsive persons were to a given income differential. Rempel and House (1976) in analysing the causes and determinants of interregional migration in Kenya came out with three major conclusions:

(1) Relative wages were higher in those districts where employment opportunities were greater.

(2) The population movements were found to be attracted to districts with better economic opportunities as measured by wages and employment rates as well as 'expected' wage levels, and

(3) Population movements were deterred by the distance factor of the move.

Furthermore, Knowles and Anker (1975), working

on the economic determinants of rural to urban migration having wage employment operated to raise significantly rates of rural-urban migration. In conclusion, they observed that the greatest impact on migration rates came from education and from earnings differentials.

When analysing internal migration in Tanzania, Cleason and Egero (1971) showed the interrelationship of the Economic, Demographic and Social factors as influences of out-migration from a given area. However, they illustrated that the economic factor was predominant amongst the 'push' factors because a large part of the recorded migration was noted to have been initiated by the economic incentives.

Almost all studies dealing with the distance factor of the move draw one conclusion that, the frequency of movement is an inverse function of the distance between the place of origin and the place of destination. The question to be considered is what causes the decline in the frequency of migration rates with increasing distance.

The cost of transport, or the money component aspect could cause a deterrent effect on the numbers who move but it is also recognized that there is a non-money component attached to the distance variable. These are the psychic costs which result from the reluctance of individuals objecting to leave their

families and friends and move to unfamiliar surroundings. The subsequent discussion therefore rests on a consideration of the role of social factors in the migration process.

(3) Social

Research dealing with the money component of the distance variable points out that emigration rates decrease in relation to successive distance travelled. However, they rarely account for the reason as to why this is so. A number of scholars have attempted to answer this question and the studies have been mostly carried out in the developed world. Results from the limited available research suggest that they could plausibly answer the same question in the less developed regions.

Recent research includes studies carried out in U.S.A. (Brown and Moore, 1970; Brown, and Horton, and Witick, 1970; Brown and Holmes, 1971(a) and Brown and Holmes 1971 (b). These scholars propose a set of ideas involving the flow of information in a network of human communication. The results of their research show that a person considering the possibility of employment and/or higher earnings in an urban area must depend to a very great degree on his knowledge of alternative possibilities in the surrounding urban areas and contacts with others who might be helpful in

locating a vacancy. Brown and Moore (1970) are positive that essentially, success in finding employment in a particular urban area depends on a person's 'awareness space' which they relate to his kinship ties and other contacts.

Horton and Reynolds (1971) although dealing with urban residents in the U.S.A., have shown that a person's general awareness about other locations declines with distance of those locations from his residence. One could therefore conclude that a migrant's network of contacts and his access to information are both dense in his immediate neighbourhood and increasingly sparse with greater distance from his home. This research finding has been confirmed by Freeman and Sunshine (1976) who after their intra-urban study in the U.S.A. concluded that to the degree that a migrant depends on his network of contacts in locating a vacancy, he will find more opportunities closer to his own area of origin. Thus the tendency of persons finding new employment opportunities close to their own home areas is simply the result of spatial bias in their opportunity to locate vacancies. This study finding could in part explain the ethnic composition of the sample population in the Athi River township and hence the reason why the migrants chose Athi River as an area of destination.

Whereas population pressure on land resources and low wage levels can account for the major patterns of migratory movements and for most differences over large areas, they cannot however, account for the circumstances in which the wealthiest part of a rural area may have an out-migration process to the urban areas. This phenomena must be attributed to the level of aspiration or 'felt - cash-need' which in turn affects a person's standard of living. This rests heavily on the process of modernization which is determined by a person's level of educational experience and his contact with the outside world. Browning (1972) in his study of migrants to cities in developing societies has this to say about the role of the educational system in the less developed world:

> "The educational system stimulates out-migration because it forces young people to leave the community if they are to complete their education. Only rarely do rural communities have facilities going beyond primary school level. Since higher educational facilities most often are found in cities, the student has little recourse but to go there. Excepting the few specializations in agriculture, his

> training is such as to prepare him for urban jobs. In short, everything is stacked against the probability that those who attain an education much beyond the average for the population in their communities of origin will remain there." (p.289).

As early as 1942 , Read in studying groups of villages in Nyasaland (Malawi) found that migration rates were positively correlated with lack of economic opportunity, but they were also affected by variations in levels of aspiration and the standard of living. She noted that even if the economic situation was favourable for growing export crops, sociological considerations, nevertheless, encouraged emigration. These sociological factors arose partly from the degree of contact with the western system of education which had changed the people's outlook and activities.

Southhall (1961) further confirmed Read's hypothesis. In his study of population movements in East Africa, he showed that educational advancement correlated positively with emigration rates at the professional level. This points to the lack of employment facilities that would attract the 'above-average-educated-migrant' in a rural setting.

Therefore the level of aspiration is a social

factor that pulls migrants into the urban areas because the 'kinds of wants' that can not be satisfied by the rural economy are envisaged by the youths and other professionals as existing outside the home area. The attraction of the town lies not in the 'bright lights of the city theory'or other forces of attraction but in the inability of the rural areas to satisfy the aspirations of the migrants at a given standard of living.

It can be seen that the educational factor, affecting a migrant's level of aspiration is closely linked to his contact with the outside world and his 'awareness of space'. Throughout the discussion on causal factors of out-migration, the connectivity of the three sets of factors: Demographic, Economic and Social factors, have been drawn out, wherever possible. This aspect points to the complexity of the migration process.

Not everyone who is affected by either one or more of the factors of out-migration discussed above moves from their place of origin. The question of who moves, can best be answered by a discussion of the selectivity of migration on a given population.

(4) Migrant Selectivity

Migration is selective in that it rarely transfers entire populations but favours only certain categories of people. Barclay (1968) advances an explanation when he remarks that people who migrate are predominantly men in working age-groups. He further argues that very few people would decide to undertake an out-migration move without reference to their livelihood.

There are various ways in which migrants are selected from the populations from which they originate. This could occur on the basis of the conventional demographic variables such as age, sex and marital status; Socio-economic variables such as education and occupation and the psychological variable of risk - taking propensity. Studies will be reviewed under the sub-titles of various migrant-selectivity variables.

(1) Age:

Research considering age as a selectivity variable has shown that migrants to urban places are concentrated in the young adult years. This proposition has been shown to hold true for both developed and developing countries.

Thomas (1938) confirmed the above hypothesis and further commented that of all the migrant selectivity

variables, the proposition of age had been shown to be regular and held through time and space. Almost all subsequent work on this variable has confirmed Thomas' findings. For example, in a study carried out by the United Nations in Mysore (1961) it was found that for all in-migrant male household heads to Bangalore city, 49.9% were within the age range 15-29 at the time of their migration to that city. The comparable figure for Mysore city was 44.4%. In his study of several Latin American Cities, Camisa (1967) showed the following percentages of net migration represented by ages up to 30 years.

| CITY | PERCENT OF MIGRANTS AGED UP TO 30 YEARS |
|---|---|
| 1. Greater Buenos Aires | 53 % |
| 2. Metropolitan Caracas | 67 % |
| 3. Greater Santiago | 69 % |
| 4. Guayaquil | 71 % |
| 5. Panama City | 73 % |
| 6. Mexico City (Distro Federal) | 81 % |

The table shows that only in Buenos Aires are "Older" migrants important as a percentage of the total.

In Africa, researchers on age selectivity have come out with the same findings. In Kenya, Rempel and Todaro (1968) in their study of rural to urban migration showed that most of the migrants to the major urban centers were concentrated within the 20 - 29 year age bracket. The age distribution showed a sudden drop in the number of migrants after the age group 30 - 34, for most of the urban centers. Their findings are presented in Table 2:10 below.

TABLE 2:10

THE AGE DISTRIBUTION OF THE MIGRANTS WITHIN EACH URBAN CENTER - KENYA 1968

| AGE | NAIROBI | MOMBASA | KISUMU | NAKURU | ELDORET | THIKA | NANYUKI | NYERI | TOTALS |
|---|---|---|---|---|---|---|---|---|---|
| 15 - 19 | 87 | 65 | 33 | 18 | 14 | 21 | 6 | 13 | 257 |
| 20 - 24 | 163 | 94 | 37 | 25 | 20 | 45 | 16 | 38 | 438 |
| 25 - 29 | 55 | 52 | 24 | 8 | 7 | 10 | 11 | 18 | 185 |
| 30 - 34 | 29 | 17 | 15 | 9 | 3 | 3 | 2 | 8 | 86 |
| 35 - 39 | 21 | 11 | 8 | 4 | 3 | 1 | 5 | 1 | 54 |
| 40 - 49 | 13 | 9 | 8 | 3 | 4 | 0 | 6 | 4 | 47 |
| 50 - 60 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 5 |
| TOTALS | 373 | 284 | 125 | 67 | 52 | 81 | 46 | 82 | 1072 |

Source: Rempel, H., and Todaro, P., "Rural to Urban Migration in Kenya", Population Growth and Economic Development in Africa, 1968, P. 214 - 231, Ominde, S.H., and Ejiogu, C.N., (Eds).

Sex Ratio:

The age specifity of migrants has been shown to be remarkably consistent through time and space however, the sex ratio of the adult population has showed no such uniformity. At one time, Ravenstein thought that this was so. Formulating 'The Laws of migration' in 1885, he stated that Females are more migratory than Males on the basis of his studies of Great Britain and Europe. No doubt, subsequent research has shown that this is not always true.

In the developing world, two main patterns emerge although variations occur from region to region. In Latin America, there is noticed a predominance of females among migrants to cities (Browning, 1972). In some migration streams, the sex ratio is as low as 75 males for every 100 females, as Browning has reported. To the contrary in African and Asian cities, there is noticed a preponderance of males to females. The ratio of males to females might be as many as 150 males to 100 females. Nairobi in Kenya had a sex ratio of 159 males to 100 females during the 1969 census while the Athi River township had a sex ratio of 164 males to 100 females.

In his study based on Bombay Cotton Mills, Morris (1965) argued that unmarried females were not allowed to leave the house-hold except for marriage in most

Islamic societies of India. He noted that usually they migrated to the Bombay city only when whole families moved. Therefore, it would naturally follow that there would be more males in the cities of Islamic societies than females. However, this cultural explanation is not wholly adequate for the preponderance of males in Afro-Asiatic cities and towns. Much more plausible is the combined effect of the cultural norms and the fluctuating labour demand in the cities and towns. For example, if Afro-Asian cities had a labour surplus, greater than Latin America, females would face 'stiff' competition for the available positions from the males. Furthermore, they would be handicapped by cultural constraints with the result that there would be fewer females in the migration streams to the city.

As pointed out, sex balances are not stable and in the process of economic development of large cities and towns, the sex imbalances even out as young women look for occupations that are only met in the urban area as opposed to a rural one. Caldwell (1969) has already shown that an even balance in the sexes of migrants to cities of Ghana is in process. In Kenya (1974) Rempel has shown that while males predominate in most rural to urban flows of migration, a change has been noticed in the migration flows to Nyanza province in which there is a preponderance of females to males. Rempel concludes that this phenomena was

not readily explainable. It might however be a pioneering movement towards change in the sex imbalances of most migratory streams in Kenya.

(3) Educational Attainment:

The importance of the educational factor in the migration process has been shown in the discussion of Social factors as causes of in or out-migration in an area. Apart from the age factor, the selective factor of education has been shown to have more generality than any of the other mentioned variables. In general, Migrants to cities have higher educational attainment than the populations from which they originate.

Boque and Zachariah (1962) studying the process of urbanization and migration in India found out that for Calcutta, the immigrants had 'considerably higher' average educational attainment than the population of origin, but lower average attainment than the population in the place of destination. The same finding has been reported for Bombay (Zachariah, 1966) . In Africa, Ejiogu in his study of Lagos has reached much the same conclusion (Ejiogu, 1968) .

(4) Occupational Status:

Limited research exists on the selective part played by an individual's occupational status on his decision to migrate. However, if it can be demonstrated that migrants have higher educational levels than non-migrants, then it could also be deduced that migrants to urban areas have, on the average, a higher occupational level than that of the population from which they originate. The difficulty in carrying out research to confirm the above proposition lies in the fact that the researcher has to interview the migrants in the rural and urban setting over a period of time. Furthermore, occupational levels in the place of origin and destination might not be solely determined by one's level of educational attainment because such factors like promotion due to length of service play part.

Speare (1969)[24] carried out a study to compare the occupational levels of male non-migrants and migrants after their move to Taichung in Taiwan. He confirmed the above hypothesis that migrants to urban areas have, on the average, a higher occupational level than that of the populations from which they originate. He also showed that 39% of the migrants had had schooling beyond the primary school level

while only 21% of the non-migrants had reached this level. The results therefore indicated that the level of educational attainment and occupation were closely linked together and their separate effects on the selectivity of migrants can not be independently determined.

Attached to the socio-economic variables discussed is the psychological variable of the propensity to assume risk.

(5) Propensity to assume risk:

Many people who should be migrating in terms of the demographic, social and economic causal factors of out-migration and migration selectivity discussed do not, in fact, move at all. Browning (1972) has suggested that "these are the people who are less venturesome, less ambitious and less restless. Such characteristics, it should be emphasized, are to be considered independently of general intelligence or willingness to conform to the norms of the village or small town environments." (P.291).

It would therefore appear that Migrants to large cities and urban areas are, on the average, more disposed to assume risks than the populations from which they originate.

Data to assess this proposition is scanty partly because the propensity to assume risk is a variable closely tied up with the socio-economic variables of education and occupation. Kuznets (1964) an economist, has shown the importance of the trait of willingness to assume risk. He points this out by posing a question:- "If we assume that the labour needed for the newly emergent production opportunities in a rapidly growing area can be drawn from the resident population, would the alternative of employing newcomers still be preferable?" (P.23-35). He answers this question in the affirmative because he considers that the newcomers (Migrants) are venturesome enough to move to the new area and will therefore be more stimulated to do the job better. However, Kuznets is working on a major assumption that there is a new job awaiting the migrant in the place of destination. Given the rate of unemployment in most urban areas of developing countries, Kuznets' conclusions are in part questionable.

The review of literature on migrant selectivity has pointed out the need to determine whether the selectivity of migrants changes over time. It has been pointed out that with the exception of the age variable, the rest are extremely changeable in time and space. From the discussion, it can also be deduced that with the exception of the sex ratio, the various forms of migrant selectivity tend to go together. As Browning has put it, "...the young migrate, and being young, they are more likely to be single, or at least without large families. And in developing countries there are generally pronounced age-cohort differences in educational attainment, so their education will be higher than that of the adult population as a whole. Finally, willingness to assume risk is linked to age, education and employment, although it is formally distinct". (Browning, 1972, p. 292). Therefore, forms of migrant selectivity with the exception of sex seem to be interrelated. It is most likely that when these variables change, they will change in the same direction and over a relatively same period of time.

5). The adjustment of migrants to the urban environment:

The previous discussion points to the fact that migrants to large cities and other urban areas, generally, are positively selected in relation to the population of origin, through the migration process. If the thesis of positive selectivity is sound, it should follow that migrants to the cities will be better equipped to cope with conditions in the city than the rest of the population from which they originate. It all depends on the socio-economic development of a given country or state in which the selectivity variables operate. This level of development will also influence the nature of the urban environment to which the migrant has to adjust. It can therefore be concluded that the assumption made above is relative and will vary with levels of development in given countries and with the size category of the urban area or city.

The migrants' adjustment to the urban environment in this thesis is viewed in terms of adjustment to, amongst others, two major components: (1) Social organization and (2) Employment.

Research conducted in the past relating to the migrants' adjustment on the basis of these two components has come out with varying results.

This could be attributed to the inherited views of various scholars. For example Schultz, an economist, (1961) believes that rural to urban migration of individuals and families facilitates adjustment to changing job opportunities and is one of the five major ways of improving human capabilities. The others are listed as formal education, adult study programs, on-the-job training, and health services. As has been already pointed out, in most developing countries, most of these opportunities and services are found in the urban area , which are also centers of economic development. Sjaastad (1962) developed and supported Schultz's argument by showing that migration enabled labour mobility which is an inherent part of the development process.

From the discipline of sociology, varying views emerge concerning the adjustment of migrants to urban environments. The majority are predisposed by their training to view the city or urban area in negative terms because it is characterised by what the small community in the village is not. Often, village life is characterised by cultural homogeneity, primary interpersonal contacts and social cohesion. By definition, the city is characterised to the contrary (Lerner, 1967) . They therefore conclude that social and personal disorganization must inevitably accompany the migrant to the city due to differentials in the

environment at the place of origin of the migrant and the place of destination.

In his study of comparative analysis of processes of Modernization, Lerner (1967) makes the following sweeping remarks in relation to the city in modern Africa. He states:
"The most conspicous symptom of the contemporary disorder is what happened to urbanisation in the developing areas. Every student of development is aware of the global spread of slum areas - from "ranchos" of Caracas and "favellas" of Rio, to the "gacekondu of Ankara to the "tin can cities" that infest the metropolitan centers of every developing country from Cairo to Manila.

The point that must be stressed in referring to this suffering mass of humanity displaced from rural areas to the filthy peripheries of the great cities, is that few of them experience the "transition" from agricultural to urban industrial labour called for by the mechanism of development and the model of modernisation. They are neither housed, nor trained, nor employed, nor serviced. They languish on the urban periphery without entering into any productive relationship with its industrial operations. These are the "displaced persons", the DPs, of the

developmental process as it now typically occurs in most of the world, a human flotsam and jetsam that has been displaced from traditional agricultural life without being incorporated into modern industrial life." (p. 21-38).

It can be seen that Lerner is pre-occupied with those who dwell on the "filthy periphery" of the city to the exclusion of everyone else who resides in the city. He also points out that migrants from the rural areas rarely find employment in the city. Apart from being unemployed they are also social misfits since they have left their kin and friends back home in the rural area. In the event that Lerner's assumptions hold on 'his' migrants, they can be said to be socially and psychologically deprived since they must exchange the well integrated interpersonal network of village life for the impersonality and lack of kin and friendship ties that characterize the large city.

To the contrary, Schultz maintains that men from rural areas migrate in response to economic opportunity and that once they have migrated, they do find work.

As can be seen, these views while divergent, and containing some truth, are two extremes. Available research should clarify this. Considering

the social and psychological aspect of adjustment to urban life, available research points to the fact that the great majority of migrants to large cities and other urban areas make the journey to, and the accommodation within the large city as part of a kinship group. In a study carried out in Monterrey, the second largest city of Mexico, Browning (1962) found out that: (1) in most of the moves, whole families were involved and (2) there were kin and friends known to the migrant, already living in Monterrey. Browning reports that in Monterrey, only 19% of the migrants came alone; 39% came with their wives and children; 34% with their parents and 6% with both. He concludes that this pattern is not radically different for other developing countries. Moreover, 84% of the migrants had kin and friends known to the migrant already living in the city of destination.

In her study of influences on residential patterns in the Changamwe area of Mombasa in Kenya, Owino (1975) pointed out that amongst other factors influencing the residential patterns in Changamwe, the availability of relatives and friends had a part to play. Misra (1959) in a study of Jamshedpur, India has also reported that approximately

75% of the migrants to Jamshedpur had relatives or friends already living there. The presence of kin and friends in the areas of destination has also been shown to be true of Ghana. Caldwell (1969) comments: "It can be seen that visits to the towns from families without relatives already living there are practically unkown. These visits precede more permanent migration" (p. 118). Caldwell also found that in his rural survey in Ghana, those households which had members living in town expressed a desire to move or were planning to move to the town.

The retention of kinship ties points to the essential connection between town and village life. It would therefore be a distortion of the truth to completely accept Lerner's view of the "displaced persons".

With regard to employment, as a form of adjustment to urban life, it has been shown that in developing countries employment opportunities in urban areas are not as great as they should be. It is, however, also recognised that inadequate work opportunities pervade the entire social structure - urban and rural alike but given the inadequacy of employment opportunities in the city, "the available job opportunities are demonstrably superior to those in rural or small town

environments," (Browning, 1972).

Basing their study on the United States Saben (1964) and, Lansing and Mueller (1967) found that unemployed persons are much more likely to migrate than are employed persons. Furthermore, among the unemployed, those who migrate are less likely to remain jobless than their counterparts who stay behind. Bogue (1969) confirmed the above earlier findings when he states that in U.S.A. migrants were found to have among their ranks a lower percentage of unemployed and a higher percentage of employed than was found among migrants in either the origin or destination population of the same age.

So far, the above studies confirm Schultz's view that migrants do find work in the place of destination since they migrate in response to the availability of job opportunities. More recent research has a slightly different outlook, most probably, because of the rate of growth of working ages in urban environments and the incapability of the Industrial structures to absorb these masses.

Wen Lang Li (1976) in his study of the relationship between migration and employment in the U.S.A. concluded that the employment rate of migrants to a given city was generally lower than

that of non-migrants residing in the same city. He qualifies his statement by pointing out that it should not be taken for granted that migration had no effect on employment since "migration enables some unemployed and initially disadvantaged persons to improve their employment status, making it more nearly comparable, though not equal, to that of the general population in the place of destination." (p. 565 )

In developing countries, data appertaining to migration and employment is limited but available research suggests that the absorptive capacities of urban areas are not in line with the volume of in-migration. While there might be high rates of unemployment amongst the migrants, and the migrant himself may not directly benefit from his decision to move, his children can benefit, especially as far as educational and health facilities are concerned as pointed out by Blau and Duncan, (1967) and Browning (1972).

The migrants' adjustment to the urban environment is a vital aspect of his migration history because it does determine his future plans for residence; whether to move to another urban area, stay in the place of destination or return to his place of origin.

6) Return Migration:

Reasons for return migration are many and are not easily classifiable. Previous studies have related return migration rates to the stability of labor demand in the cities. This further points to the close relationship between the migrants' adjustment to the urban environment and return migration.

As a proposition, Browning (1972) has shown that if migrants are positively selected from the population in the places of origin, those who return from the cities to the rural areas will be negatively selected from the total group of migrants in the cities, thus increasing the positive selectivity of those who remain in the cities. He points out that those who remain are better equipped to cope with conditions in the city. Therefore, return migration serves to "weed out" the less successful migrants.

Subsequent literature confirms the above views. For example, in his study of rural Ghana Caldwell (1969) included a question about : why people return from towns and do not want to go there again. The results were as shown in Table 2:11 below:

TABLE 2:11

WHY MIGRANTS TO CITIES UNDERTAKE A RETURN MIGRATION MOVE

| TYPE OF RESPONSE | % OF RESPONDENTS |
|---|---|
| 1. Preferred Village Live | 40% |
| 2. Did not succeed in the town | 40% |
| 3. Had made enough money | 20% |
| TOTAL | 100% |

Making a general statement about return migration in Ghana, Caldwell concluded that "migration to large cities typically is made with the expectation of returning eventually to the village at retirement age if not sooner".(P.185).

In another study carried out in India, (Mohsin, 1963) found out that return migration rates from Indian cities were related to the stability of labor demand. He states that the failure of the industrial sector to provide the migrants with decent and stable work facilities and also the seasonal decline of urban employment force these migrants to Indian cities to maintain close ties with their folks at their native places.

Gutkind in his study of 'African responses to urban wage employment' in 1968 takes the same view on the causes of return migration as the previous

researchers. He states that in addition to fluctuations in labour demand, there are inadequate urban facilities for example, housing, transportation and health services. These aspects make life difficult for the migrant who then decides to make a return move. A possible conclusion to be drawn from these studies is that if economic opportunity and living conditions in the cities were to be improved, return migration rates would be lower.

In Kenya, Ominde (1974) noted that according to the Kenya 1969 census, there was strong evidence of return migration to the source districts, especially for migrants aged about 45 and above. He points out that apparently migration seems to be a temporary event in human life for many people in districts such as Kisumu, Kitui, Siaya, Machakos, Nyeri, Murang'a, Kiambu, Nakuru etc. Consequently, one could conclude that in Kenya as well as Ghana, return migration is an expected and accepted way of life.

As far as possible, the author has attempted to show that although the literature review has been done under separate sub-sections, these are all part and parcel of the same large process - Migration. The connectivity between each subset of the system and the others has been attempted and the overall impression presents the complexity of the migration process.

The next chapter will examine the research methodology adopted in the study of migration and employment in the Athi River township.

# CHAPTER III

## METHOD

### 1) Planning

#### a. Choice of the Study Problem

The need for and the importance of studying the internal migration process and its associated chain links was realized as is outlined in chapter 1. An intensive research of related literature review presented in Chapter II was carried out and on the basis of its examination, the study problem was chosen. Specific objectives of the study leading to a formulation of research hypotheses were set. Furthermore, a list of open-ended response items were drawn up to be used in the pilot study. These questions, it was hoped would make one aware of the range of possible answers that could be attributed to each question on the actual interview schedule that was to be formulated later.

In addition, the planning stage saw the definition of important terms and concepts which were to be used in this study. The need for the formulation and definition of these terms presented in Chapter 1 was considered vital because the current usage of certain concepts was not necessarily the meanings that were to be applied in this study. The field staff were made aware of these operational definitions during their training session.

b. Recruitment and training of field staff.

From the several visits I had made to the study area before the planning stage of the survey it was evident that the Akamba tribe was dorminant amongst the tribes residing in the Athi River township as confirmed by the actual survey later. In addition, I noted that the inhabitants of the town could understand either one or more of the following languages; 1. Kamba, 2. Kiswahili and 3. English. Consequently, when choosing the research assistants, their educational level of attainment as well as their language proficiency was critically considered. It was felt that the 'actual' interview schedule could well be handled by research

assistants who had obtained at least a pass certificate in the Form IV examinations. Their training programme took place before and after the pilot study which was conducted between mid-May and June 1977. Altogether, five research assistants were chosen.

During this training session, , the interviewers were helped to comprehend the operational defition of terms used in the study, and presented in Chapter 1. The need for undertaking the study and the questionnaire contents were explained.

In the study area, the research assistants were introduced to administrative Government officials, for example the police officers, the chief and town councillors. Furthermore, the research assistants attended the chief's 'barazas' where they became acquainted with the general public and helped publicize the on-coming survey. The church services were another platform through which we came to know the town-folk. In other areas like Kisumu Ndogo and Makadara, we, as a team went from door to door, introducing ourselves and explaining to the in-mates the purpose of our research survey. The usefulness of the survey as a Government planning tool seemed to draw unexpected support from the low-in-come groups of the township.

Although the actual interview schedule was not used during the pilot study period the interviewers were taught how to establish good rapport with the respondents and to probe answers from respondents without annoying them. Using a sample size of forty respondents drawn up from the eight enumeration areas and an open-ended questionnaire, the research assistants were taught how to interview. This was done as team-work whereby one interviewer administered the questionnaire while the rest rated the performance. Afterwards, a discussion would be held to determine the good and the bad points and how the faults made during the interviewing could have been avoided. A part from creating confidence for the interviewer and imparting skill, the open-ended questionnaire used during the pilot study made us aware of the range of possible answers to be used on the actual interview schedule. This was constructed soon after the pilot study.

c. The Pilot Study.

The pilot study was carried out using a sample size of 40 respondents selected on a random-stratified basis from the population of the town within the eight enumeration areas. Five respondents

were interviewed from each of the enumeration areas so as to 1. estimate the amount of time each researcher will need when administering one interview schedule, 2. gauge and note the range of possible responses to the various items on the open-ended questionnaire, 3. note the reaction of the respondents to some of the sensitive questions that were to be included on the questionnaire, and 4. ascertain which communication language or languages were suitable for each of the enumeration areas.

The results of the pilot study and its uses were evidenced through the following facets of the research design; 1. the range of possible answers on the pilot study open-ended items were used to construct multiple choice questions on the actual survey questionnaire, thus making sure that the information sought was reasonably specific and familiar to the respondents; 2. the field staff were made aware of some of the problems they were likely to encounter during the research survey; and 3. it aided in publicising the on-coming survey in that the field staff had a chance to meet the town-folk and to explain the purpose of the survey. As a whole, the pilot study made the actual interviewing so much of a natural process rather than an exercise to guard against by the respondents.

2) The Sample Design.

This stage in the survey comprised three major phases namely: i) choice of the sample size, ii) questionnaire design and iii)administration of the questionnaire in the field. These phases are briefly discussed below.

i) Choice of the sample size

The sampling frame was the Athi River township which had 1,122 heads of house-holds during the 1969 Kenya Census of population. An estimate of house-hold units, as of 1977, supplied by the urban council, the Kenya Meat Commission and the Portland Cement Offices showed that the house-hold units could have increased to around figure of 1,200 by the time of the survey. A 20% sample size of the 1,200 house-hold units yielding a sample size of 240 units was considered reasonable and sufficient to allow statistical analysis and inference. However, the pilot study revealed a newly built-up slum area (Kitengela) whose records were not available at the urban council offices. Hence, it seemed plausible that an interview of six respondents from the area would be representative of the heads of house-holds residing here. This brought the total number of housing units to 246 observations to be used in the survey.

ii) Questionnaire Design

The questionnaire design process aimed at translating the broad objectives of the study into questions that would extract the necessary information from the respondents.

The pilot study had indicated that a closed questionnaire could best extract the information needed rather than an open-ended questionnaire hence, the possible responses to items on the pilot study questionnaire were used to construct a multiple-choice questionnaire to be used in the actual survey whenever possible. To allow for a certain amount of flexibility, every item included a column entitled "other" in which the interviewer was supposed to record a specific answer given by the respondent when the alternative responses supplied did not apply. Most often however, the responses in the "other" column could be accommodated by one of the alternatives on the questionnaire.

The questionnaire, presented in Appendix II, had a "code" and "column" space. The interviewer was required to indicate the response in the "Code" space while the "Column" space indicated the column space on the computer coding sheets. This format of questionnaire had the major advantage of making

the work of editing and coding much less and accurate.

The items on the questionnaire were related to three major blocks of data, namely, the demographic, economic and social blocks. Although the data fell into these distinct blocks, it was noted that as soon as respondents had to deal with items appertaining to the economic block, they became suspicious. Therefore, after the pilot study it was decided that the items in the economic block be incorporated into the less threatening aspects of data such as the demographic and social blocks.

The complete questionnaire consisted of 30 items. The actual interviewing time ranged from 10 to 15 minutes on the average in cases where respondents were co-operative. It was not unusual, however, to have an interview that would last for as much as 20 - 25 minutes, when respondents proved difficult in answering questions.

iii) Administration of the Questionnaire.

This section discusses: 1. who the subjects are, 2. the method used in locating them and 3. the supervision of the field work.

(1) The subjects in the Study.

The subjects in the study comprise male and female heads of house-holds resident in the Athi River township and making up a total sample size of 246 respondents. These were enumerated in the following residential areas within the township shown below in Table 3:1:

TABLE 3:1

ATHI RIVER TOWNSHIP - ENUMERATION AREAS

| Enumeration Area | Number | Percent (%) |
|---|---|---|
| Kenya Meat Commission | 59 | 24.0% |
| Portland | 23 | 9.3% |
| Makadara | 40 | 16.3% |
| Sophia | 57 | 23.2% |
| Kisumu Ndogo and other slums | 33 | 13.4% |
| Railway Quarters | 19 | 7.7% |
| Urban Council/Police/ Ministry of Works | 9 | 3.7% |
| Vetinary Quarters | 6 | 2.4% |
| TOTAL | 246 | 100.0% |

In addition, the subjects interviewed showed the following age distributions in five-year age groups;

TABLE 3:2

AGE DISTRIBUTION OF RESPONDENTS IN FIVE-YEAR AGE GROUPS

| Age Group | No. of Respondents | Percent (%) |
|---|---|---|
| 0 - 14 | 0 | 0.0% |
| 15 - 19 | 10 | 3.6% |
| 20 - 24 | 37 | 16.6% |
| 25 - 29 | 54 | 22.4% |
| 30 - 34 | 27 | 12.2% |
| 35 - 39 | 33 | 14.2% |
| 40 - 44 | 21 | 9.6% |
| 45 - 49 | 30 | 14.6% |
| 50 - 54 | 5 | 2.3% |
| 55 - 59 | 3 | 1.4% |
| 60+ | 222 | 100.0% |
| Not reported | 24 | |

It should be noted that out of the 246 respondents interviewed 24 of them did not report their age at all. The possible reasons for this will be discussed later.

With regard to marital status, the survey showed that most of the heads of house-holds were married (67.6%). The rest of the distribution in marital status categories is shown below in Table 3:3.

TABLE 3:3

MARITAL STATUS

| Status | Number, Reporting | Percent (%) |
|---|---|---|
| Single | 56 | 23.0% |
| Married | 165 | 67.6% |
| Divorced | 9 | 3.7% |
| Separated | 3 | 1.2% |
| Widowed | 11 | 4.5% |
| Total, reported | 244 | 100.0% |
| Not reported | 2 | - |

At the same time, the tribal composition of the respondents showed the following distribution:

TABLE 3:4

ETHNIC COMPOSITION

| Ethnic Group | Number, Reporting | Percent (%) |
|---|---|---|
| Kamba | 124 | 50.8% |
| Kikuyu | 53 | 21.7% |
| Luo | 30 | 12.3% |
| Luhya | 24 | 9.8% |
| Masai | 1 | 0.4% |
| Somali | 3 | 1.2% |
| Kisii | 8 | 3.3% |
| Other | 1 | 0.4% |
| Total, reported | 244 | 100.0% |
| Not reported | 2 | |

(2) Location of subjects in the field

To control for the representativeness of the sample, stratified-random sampling was chosen as the procedure for locating the sample members in the field. The stratifying variables were geographic location of residential units in the town and wage-earnings per head of house-hold.

The town's population resides in distinct residential areas with corresponding rental and income levels. Eight zones of human settlement were distinguished

and these were used as the strata within which enumeration of subjects and interviewing occurred.

To locate the heads of house-holds within the strata, simple random sampling was used. The total number of respondents from each stratum varied with the estimated size of population residing in each of the eight enumeration areas, at the time of the survey. Thus the Kenya Meat Commission quarters, Sophia town, Makadara and Kisumu Ndogo areas contained the bulk of the town's population while the Portland, Railway, Urban Council, Ministry of Works, Police and Veterinary quarters contained a smaller proportion of the populace in the town.

(3) The Supervision of field-work

The field-staff comprised five enumerators and myself. Two of these resided within the township during the study period while the rest commuted from Nairobi to the Athi River township daily. It was decided that the two research assistants living in the township be assigned to residences in which the heads of house-holds worked on a shift-duty basis. These included those workers attached to the Kenya Meat Commission and Portland areas. It was hoped that these enumerators would work later into the day than those who had to travel back to Nairobi.

Having carried out the pilot study as team work, it was sufficient to allocate the first week of the research survey to team-work interviewing to help the research assistants to get acquainted with the actual interview schedule. After the one week, the interviewers were assigned to their respective enumeration areas.

My major task was one of co-ordination rather than actual interviewing in the field. This was accomplished through making a point of spending a day of interviewing with each of the enumerators in turn so that in a single week, I would have had to work with every enumerator, at least once. At the end of each day, all the field staff met to hand in the completed questionnaires, discuss problems encountered and share interviewing skills such as dealing with problematic subjects.

The completed questionnaires were scrutinised each day before I passed them on to the coding assistant. Should ambigous answers appear on a given questionnaire, reference was made to the appropriate research assistant since the questionnaire form had a section which the interviewer had to fill if he had conducted the interview.

The interviewing was stretched over a period of three months. Although this was a time of very hard work on the part of all the field-staff, it was also a time when we recognized the co-operation and willingness of the town's population during the whole survey period. However, this was not always the case as it is to be shown shortly.

## PROBLEMS ENCOUNTERED IN THE FIELD

The following problems discussed below were amongst the many set-backs to field work in this survey:

a) Suspicion:

Inspite of the fact that the Welfare Officer of the Kenya Meat Commission personally introduced the field-staff to the residents of various camps within the Kenya Meat Commission enumeration area, this turned out to be the most difficult enumeration area to deal with, largely due to suspicion of the interviewers by the interviewed. The items on the questionnaire arousing suspicion were those related to 'wage earnings' and 'number of people residing in the house-hold unit'.

The wage-earnings problem was partially solved through collecting a list of approximate incomes, in the various camps of Kenya Meat Commission and

Portland areas, from the Welfare Officers. When the respondent realized that the interviewer had a rough idea of how much he earned, anyway, he was obliged to answer the questions asked. However, a flat refusal to disclose how much one earned was not uncommon. From a total of 246 respondents, 18 of them did not report their monthly wage earnings at all. This possed the problem of having to deal with 'missing' values during the analysis.

b) Violence and Robbery

During the pilot study, the police officers in the township warned the researchers of the high crime rate in the township, particularly in the Sophia and Kisumu Ndogo enumeration areas. It was therefore decided that two male field-staff should be present at any one given time during the interviewing of respondents within these areas. Inspite of this security measure, thugs attacked the team working in Sophia area at 12.30 p.m. and forced the research assistants to part with Shs. 40 each as a ransom. It is therefore evident that any confidence that we could have had in the residents of the area was undermined with the result that there was more suspicion on the part of the interviewer than the interviewed.

c) Illiteracy and/or Forgetfulness

These were problems in cases where the interviewer referred to items necessitating recall, for example, age, length of stay in the township and number of years completed in school. The problem beset subjects in all the enumeration areas but were particularly noticeable in Kisumu Ndogo, Makadara and parts of the Kenya Meat Commission quarters.

No doubt, these problems discussed introduced an element of error in some of the variables and hence the need to gauge and evaluate the data obtained wherever possible so that the reader is aware of the strengths and weakness of the indices derived. Hence the ensuing discussion below:

3) Preparation for Analysis and Reporting

This section on methodology focusses on these major issues: (i) Coding and punching of data, (ii) Data evaluation and (iii) Methods of data analysis and reporting.

(i) Coding and Punching

The Interview Schedule was designed with the possibility of the use of computer programmes in mind. Hence the 'Column' and 'Code' space provided on the Interview Schedule. After I personally edited the questionnaires, they were passed on to the coding assistant to code the information on coding sheets,

(ii) Data Evaluation:

A look at the problems encountered in the field indicates that amongst other problems, those listed above could have introduced the following errors into the data collected: (a) missing values; (b) mis-statement and (c) underenumeration. These errors undoubtedly affect some key variables that are significant to data analysis in this study. Below, follows a brief discussion of how each one of the errors has been dealt with in this survey.

a) Missing Values

The 'missing values' error affected most of the variables on the questionnaire but was particularly noticeable in the following variables: Age, wage incomes and number of formal school years completed. In all the analyses, the 'not reported' category represents the missing values and these were not included in the analysis but were classified as a separate group. However, the correlation and regression computer package substitutes the mean of the variable for the missing value as their elimination from the analysis would over-estimate the result of the multiple correlation.

b) Mis-statement

The mis-statement error principally affects the age-variable. If present in the data collected,

it would be attributed to deliberate age-mistatement or to digital preference. This error can be effectively detected through the computation of whipple's index. The computed whipple's index for the age variable in this survey is 218.0. Since the index is almost at the midpoint of the scale measuring no concentration (when index is 100.0) and very high concentration (when the index is 500.0) it can be concluded that there was a certain amount of preference for the ages ending in 0 and 5 by subjects in this study and hence, the age mis-statement error affects the ages reported in this survey.

c) Under-enumeration

The under-enumeration error affected the 'total number of persons staying in the house-hold' variable. This variable, however, has not been used in any of the analyses in this thesis.

(iii) Methods of data Analysis:

Frequency distribution counts, maps, graphs, simple and multiple regression and correlation techniques will be used to analyse the data in order to evaluate the hypotheses set. Computer programmed packages will be used to facilitate easy and

quick computation of the above techniques. In addition, the t - test for related measures is used. Results of the study will be in tabular and diagramatic forms as presented in Chapter IV.

# CHAPTER IV

## RESULTS

The results of the study are related to the following facets of the migration process. The spatial allocation of the migrants and migrant selectivity will first be reviewed after which results appertaining to causal factors of out-migration, migrant adjustment and potential return migration will be presented.

### 1) The Spatial Allocation of Migrants

Table 4:1 presents the origins of migrants classified by their source provinces and districts. It shows that at the provincial level, the dominant 'sending' areas comprise the Eastern and Central provinces which account for 50.40% and 21.53% of the total migration rates, respectively. These provinces are followed by the Nyanza (13.01) and Western (10.98%) provinces. The Coast and Rift Valley provinces contribute equal least amounts of 2.03% of the total enumerated population. In addition, the table shows that no migrants were reported for the Nairobi and North-Eastern provinces. A much more detailed analysis of the sources of migrants presented at the district level reveals that the dominant

TABLE 4:1

SOURCE AREAS OF MIGRANTS TO THE ATHI RIVER URBAN CENTER BY PROVINCE AND DISTRICT.

| PROVINCE | DISTRICT | TOTAL REPORTING | PERCENT FOR DISTRICT(%) | PERCENT FOR PROVINCE(%) |
|---|---|---|---|---|
| CENTRAL | Kiambu | 22 | 9.00% | 21.55% |
| | Murang'a | 26 | 10.56% | |
| | Nyeri | 3 | 1.22% | |
| | Kirinyaga | 2 | 0.81% | |
| COAST | Mombasa | 2 | 0.80% | |
| | Kilifi | 1 | 0.41% | |
| | Kwale | 1 | 0.41% | 2.0% |
| | Taita Taveta | 1 | 0.41% | |
| EASTERN | Isiolo | 2 | 0.82% | |
| | Kitui | 4 | 1.63% | 50.50% |
| | Machakos | 118 | 47.98% | |
| WESTERN | Kakamega | 23 | 9.34% | |
| | Bungoma | 1 | 0.41% | 10.98% |
| | Busia | 3 | 1.22% | |
| RIFT VALLEY | Kajiado | 1 | 0.41% | |
| | Nakuru | 2 | 0.80% | 2.03% |
| | Kericho | 1 | 0.41% | |
| | Nandi | 1 | 0.41% | |
| NYANZA | Kisumu | 8 | 3.26% | |
| | Siaya | 18 | 7.32% | |
| | South Nyanza | 3 | 1.22% | 13.01% |
| | Kisii | 3 | 1.22% | |
| TOTAL, reporting | | 246 | 100.00% | 100.00% |

'sending' districts of migrants to the Athi River township are located within the dorminant 'sending' provinces. These include: Machakos (Eastern), Muranga, Kiambu (Central), Siaya (Nyanza) and Kakamega (Western) districts. Figure 4:2 graphically depicts these results.

2) Migrant Selectivity:

Migrant selectivity in this study has been considered on the basis of two variables: (1) sex and (2) age.

(1) Sex

The differences in the migratory movements according to sex are depicted in Table 4:2.

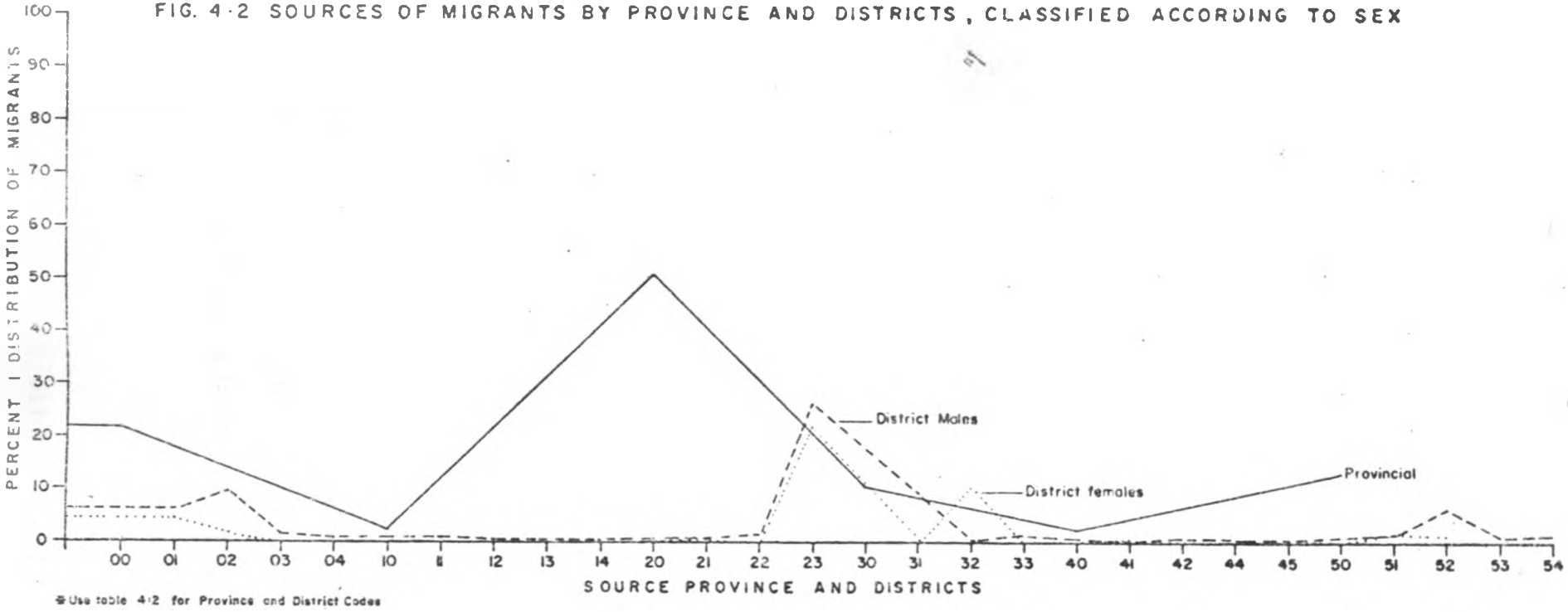
TABLE 4:2

A SUMMARY OF OUT-MIGRANTS FROM THE PROVINCES AND DISTRICTS BY SEX

| CODE | PROVINCE | DISTRICT | NO REPORTING | | PERCENT (%) | | TOTAL(%) |
|---|---|---|---|---|---|---|---|
| | | | MALES | FEMALES | MALES% | FEMALES% | |
| 00 | CENTRAL 01 | Kiambu | 11 | 11 | 4.50% | 4.50% | |
| | 02 | Murang'a | 22 | 4 | 8.94% | 1.6% | 21.55% |
| | 03 | Nyeri | 3 | - | 1.22% | - | |
| | 04 | Kirinyaga | 2 | - | 0.81% | - | |
| | | | | | | | |
| 10 | COAST 11 | Mombasa | 2 | - | 0.80% | - | |
| | 12 | Kilifi | 1 | - | 0.41% | - | 2.03% |
| | 13 | Kwale | 1 | - | 0.41% | - | |
| | 14 | Taita Taveta | 1 | - | 0.41% | - | |
| | | | | | | | |
| 20 | EASTERN 21 | Isiolo | 1 | 1 | 0.41% | 0.41% | |
| | 22 | Kitui | 4 | - | 1.63% | - | 50.40% |
| | 23 | Machakos | 64 | 54 | 26.02% | 21.96% | |
| | | | | | | | |
| 30 | WESTERN 31 | Kakamega | 21 | 2 | 8.54% | 0.80% | |
| | 32 | Bungoma | 1 | - | 0.41% | - | 10.98% |
| | 33 | Busia | 3 | - | 1.22% | - | |
| | | | | | | | |
| 40 | RIFT VALLEY 41 | Kajiado | - | 1 | - | 0.41% | |
| | 42 | Nakuru | 2 | - | 0.80% | - | 2.03% |
| | 43 | Kericho | 1 | - | 0.41% | - | |
| | 44 | Nandi | 1 | - | 0.41% | - | |
| | | | | | | | |
| 50 | NYANZA 51 | Kisumu | 4 | 4 | 1.63% | 1.63% | |
| | 52 | Siaya | 15 | 3 | 6.10% | 1.22% | 13.01% |
| | 53 | South Nyanza | 3 | - | 1.22% | - | |
| | 54 | Kisii | 3 | - | 1.22% | - | |
| | TOTAL | | 166 | 80 | 67.48% | 32.52% | 100.00% |

The out-migration streams show a heavy preponderance of males over females particularly for migrants from the dorminant 'sending' provinces and districts cited above in the discussion on 'sources of migrants'. Table 4:2 also shows that a distinct pattern exists in the distribution of the sexes. The pattern shows (a) no females reported at all in the migration movements originating from the following districts: Nyeri and Kirinyaga (Central province), all the districts of the Coast province, Kitui (Eastern) Nakuru, Kericho and Nandi (Rift Valley province) and, South Nyanza and Kisii districts of Nyanza province; (b) equal numbers of males and females reported in the movements originating from the Kiambu districts of Central province and Kisumu district of Nyanza province; (c) heavy excesses of males over females in the migration streams from the dorminant source districts and (d) no males reported at all in the movements from the Kajiado district of Rift Valley province. This constitutes the exception to the selectivity norms in most flows of rural to urban migration in developing countries. However, it comprises a very small proportion (0.41%) of the total population enumerated in this survey.

FIG. 4-2 SOURCES OF MIGRANTS BY PROVINCE AND DISTRICTS, CLASSIFIED ACCORDING TO SEX




* Use table 4-2 for Province and District Codes

(2) Age:

Apart from sex selectivity, the data has also shown that Age selectivity has occurred in the migratory movements into the Athi River township. Percentage distribution of migrants by sex and age presented in Table 4:3 show that most migrants are concentrated within the young adult years of the 20 to 49 age brackect.

TABLE 4:3

PERCENT DISTRIBUTION OF MIGRANTS BY SEX AND AGE

| Age-group | Percent (%) Males | Percent (%) Females | TOTAL (%) Males + Females |
|---|---|---|---|
| 15 - 19 | 1.63% | 2.44% | 4.07% |
| 20 - 24 | 10.16% | 4.87% | 15.03% |
| 25 - 29 | 14.22% | 7.73% | 21.95% |
| 30 - 34 | 6.51% | 4.47% | 10.98% |
| 35 - 39 | 10.56% | 2.84% | 13.40% |
| 40 - 44 | 7.32% | 1.22% | 8.54% |
| 45 - 49 | 11.78% | 0.41% | 12.19% |
| 50 - 54 | 2.04% | - | 2.04% |
| 55 - 59 | 1.22% | - | 1.22% |
| 60 - 64 | 0.41% | 0.41% | 0.82% |
| 65 - 69 | | | |
| 70+ | | | |
| Not reported | 1.63% | 8.13% | 9.76% |
| Total, reported | 65.85% | 24.39% | 90.24% |
| | | | |
| TOTAL % (reported + not reported | 67.48% | 32.52% | 100.00% |

Note: The 'not reported' category was not included in the analysis.

This broad age bracket accounts for 82.09% of the age - reported population. Within it are found the five-year age groups of 25 to 29 and 20 to 24 which have the greatest impact on migration rates in the township. These five-year age groups contribute rates of 21.95% and 15.03%, respectively, to the total age-reported population. Accounting for relatively lower but substantial rates of migration within the 20 to 49 age brackect is the ten year broad age group of 30 - 49 years.

The table also shows that there is a sudden rise in the rates of migration from the 15 - 19 age group to the 20 - 24 age group with increases from 4.07% to 15.03%. Likewise, a sudden drop is noted after the 40 - 49 age group with a decrease in the migration rates from 12.09% to 2.04%.

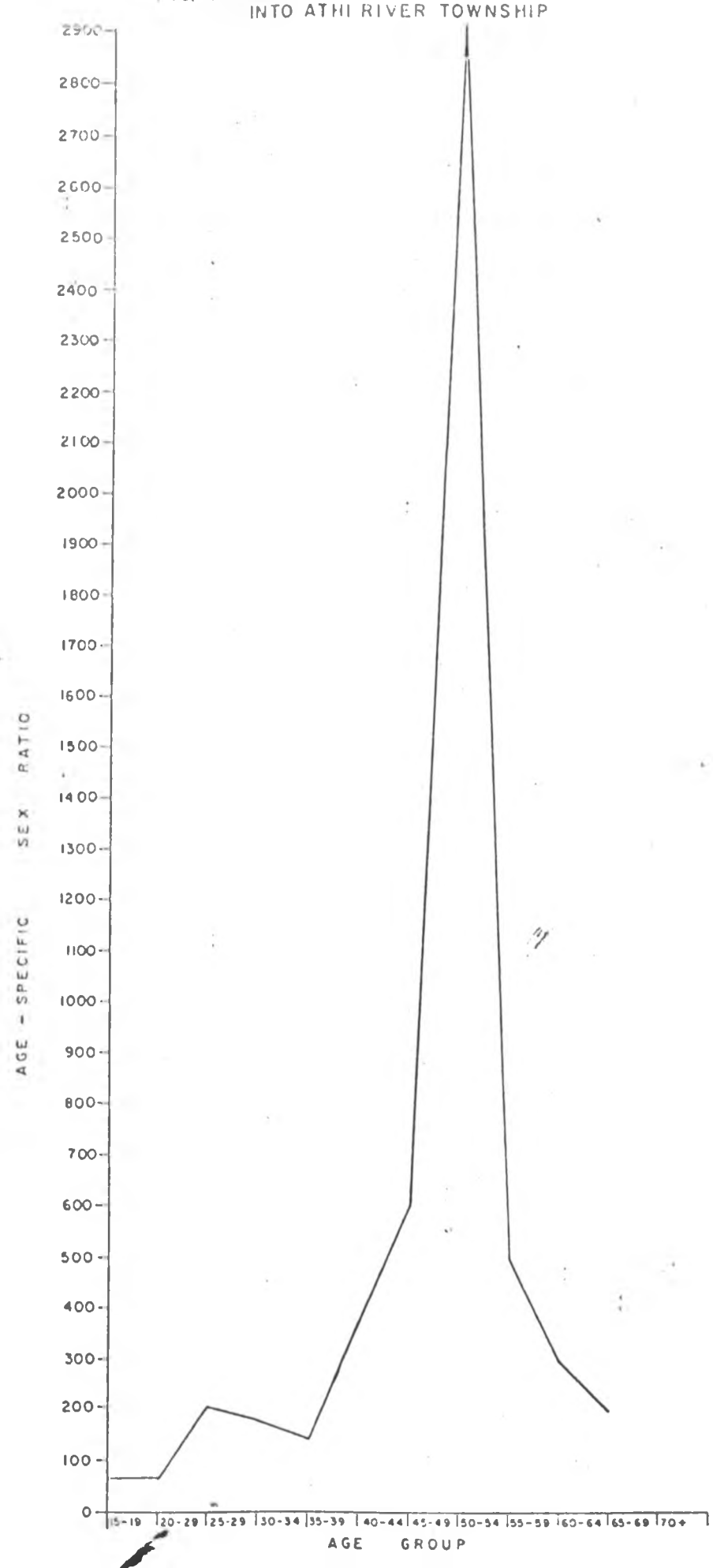
A combination of the two migrant selectivity variables considered show that except for the 15 - 19 and 60 - 64 age groups, males predominate over females. In the 15 - 19 age group, there are reported more females than males while the 60 - 64 age group has equal numbers of males and females. These findings are best illustrated by an examination of age - specific sex ratios for migrants into the township presented in Table 4:4 and Figure 4:4.

TABLE 4:4

AGE-SPECIFIC SEX RATIOS FOR MIGRANTS INTO THE ATHI RIVER TOWNSHIP.

| AGE-GROUP | MALES | FEMALES | SEX RATIO |
|---|---|---|---|
| 15 - 19 | 4 | 6 | 66.67 |
| 20 - 24 | 25 | 12 | 208.34 |
| 25 - 29 | 35 | 19 | 184.21 |
| 30 - 34 | 16 | 11 | 145.46 |
| 35 - 39 | 26 | 7 | 371.43 |
| 40 - 44 | 18 | 3 | 600.00 |
| 45 - 49 | 29 | 1 | 2900.00 |
| 50 - 54 | 5 | | 500.00 |
| 55 - 59 | 3 | | 300.00 |
| 60 - 64 | 1 | 1 | 100.00 |
| 65 - 69 | - | | |
| 70+ | - | | |
| Not reported | 4 | 20 | |
| TOTAL, reported. | 162 | 60 | |
| TOTAL | 166 | 80 | 207.50 |

FIG. 4 4 AGE SPECIFIC SEX RATIOS FOR MIGRANTS INTO ATHI RIVER TOWNSHIP



In summary, it is noted that the migrant population in the township is concentrated in the young adult years and Labour-force working ages since no rates of migration are recorded beyond the 60 - 64 age bracket. Figure 4:4 diagramatically illustrates the above findings.

Whereas the 'who moved?' and 'where from' aspects of the migration process have been examined in the preceding discussion, the reasons as to why the migration move was undertaken have not been determined. Hence the following discussion.

3) Causes of out-migration

The respondents in this study were provided with alternative reasons as to why they undertook a migration move. A frequency distribution of the responses showed that nine major groups of reasons could be derived as shown in Table 4:5.

It shows that about 58.90% of the total, reporting, population migrated due to lack of jobs in the areas of origin, thus pointing to the reality of massive unemployment in rural Kenya. Another grim reality is the population pressure problem comprising 17.31% of the total responses. These dorminant responses belong to the economic and demographic causal factors of out-migration, respectively.

TABLE 4:5

REASONS FOR MIGRATION FROM THE SOURCE AREAS

| | REASONS FOR MIGRATION | NO. | PERCENT (%) |
|---|---|---|---|
| 1 | No job available in area of origin. | 136 | 58.90% |
| 2 | No suitable job available 'suitable' with regard to qualifications. | 14 | 6.06% |
| 3 | No land available for cultivation. | 40 | 17.31% |
| 4 | Too many people looking for jobs. | 18 | 7.79% |
| 5 | No market for products. | 4 | 1.73% |
| 6 | Transferred through employment. | 8 | 3.46% |
| 7 | Appointed to a job in the township and hence migration. | 3 | 1.29% |
| 8 | To obtain education and employment for the children. | 1 | 0.43% |
| 9 | Moved to join family, | 7 | 3.03% |
| 10 | No response. | 15 | 6.49% |
| | TOTAL, reporting | 231 | 100.00% |

Abroad classification of causal factors of out-migration encompassing the results of Table 4:5 is shown in Table 4:6 as follows:

It is shown that reasons (1,2,4,5,6,7) classified under the broad category of Economic opportunity predominate with responses comprising 79.22% of the total, reporting. This category is followed by the Demographic factor of population pressure on the land (reason 3), commanding 17.31% of the responses and lastly, the Social factors (8,9) with a 3.46% of the total responses.

Clearly, the three major factors of out-migration discussed in previous research findings cited have been found to operate in the decisions to move in this survey. However, Table 4:6 illustrates that, the greatest impact on migration rates comes from the reasons appertaining to economic opportunity.

TABLE 4:6

BROAD CLASSIFICATION OF CAUSAL FACTORS FOR OUT-MIGRATION FROM THE RURAL ENVIRONMENT

| GROUP | REASON | NO. REPORTING | PERCENT(%) |
|---|---|---|---|
| A | Economic (1,2,4,5,6,7) | 183 | 79.22% |
| B | Social (8,9.) | 8 | 3.46% |
| C | Demographic (3.) | 40 | 17.31% |
| | No response | 15 | 6.49% |
| | Total,reporting | 231 | 99.99% 100.00% |

TABLE 4:7:(i)

ECONOMIC OPPORTUNITY AS A CASUAL FACTOR FOR OUT-MIGRATION CLASSIFIED BY THE SOURCE PROVINCES OF THE MIGRANTS.

| SOURCE PROVINCE | NUMBER RESPONDING TO ECONOMIC OPPORTUNITY | PERCENT (%) |
|---|---|---|
| EASTERN | 94 | 51.37% |
| COAST | 3 | 1.64% |
| CENTRAL | 40 | 21.86% |
| RIFT VALLEY | 2 | 1.09% |
| NYANZA | 26 | 14.20% |
| WESTERN | 18 | 9.84% |
| TOTAL | 183 | 100.00% |

Table 4:7(i) shows that lack of economic opportunity is prevalent in the Eastern and Central provinces which account for 51.37% and 21.86%, respectively, of the total responses on lack of economic opportunity in the province of origin. The Nyanza and Western provinces account for substantial amounts of 14.20% and 9.84% respectively, while the Coast and Rift Valley provinces jointly account for the least response amounts of 2.78%, thus indicating greater economic opportunities.

In an agricultural country such as Kenya, the main resource for livehood especially in the rural areas is land. It can therefore be nypothesised that lack of economic opportunity will be expected to correlate positively with the number of people reporting the scarcity of land for cultivation. Hence, those provinces rating high on lack of economic opportunities should be expected to account for more responses to population pressure on the land as ademographic causal factor of out-migration. An examination of Table 4:7(ii) presented below should confirm the above hypothesis.

TABLE 4:7 (ii)

POPULATION PRESSURE ON THE LAND AS A CAUSAL DEMOGRAPHIC FACTOR IN THE OUT-MIGRATION PROCESS.

| SOURCE BY PROVINCE | NUMBER RESPONDING TO THE DEMOGRAPHIC FACTORS | PERCENT (%) |
|---|---|---|
| Eastern | 24 | 60.00% |
| Coast | 1 | 2.50% |
| Central | 11 | 27.50% |
| Rift Valley | 2 | 5.00% |
| Nyanza | 1 | 2.50% |
| Western | 1 | 2.50% |
| TOTAL, reported | 40 | 100.00% |

Table 4:7; (ii) shows that the Eastern and Central provinces jointly account for about 87.5% of the total responses to population pressure on the land. This concurs with the expected pattern hypothesised above. But, the table also indicates that although the Nyanza and Western provinces accounted for a relatively greater share of responses to lack of economic opportunity than the Rift Valley and Coast provinces, they now fall in the category of least responses to lack of land as a causal factor in out-migration. This dicrepancy should be clarified through an examination of the tribal composition of the labor-force in the township, as this reflects the population densities on the land in the areas of origin. The ethnic composition of the migrants is presented in Table 4:7;(iii) below:

TABLE 4:7:(iii)

ETHNIC COMPOSITION OF THE MIGRANTS CLASSIFIED BY PROVINCE OF ORIGIN.

| PROVINCE | ETHNIC GROUP | NUMBER | PERCENT(%) |
|---|---|---|---|
| EASTERN | Kamba | 124 | 50.4% |
| CENTRAL | Kikuyu | 53 | 21.5% |
| NYANZA | Luo | 30 | 15.5% |
| | Kisii | 8 | |
| WESTERN | Luhya | 26 | 10.6% |
| RIFT VALLEY | Masai | 1 | 0.4% |
| COAST | Digo | 1 | 1.6% |
| | Somali | 3 | |
| TOTAL | | 246 | 100.00% |

Results of Table 4:7:(iii), show that all the ethnic composition of the Labor-force follows the observed pattern, in that provinces rating high on lack of economic opportunity do report the greatest total percentage of migrants residing in the Athi River township.

The Kamba and Kikuyu tribes of the Eastern and Central provinces, respectively, dorminate the distribution of the labor-force with a 71.9% of the total population. Next in importance are the Luo/Kisii tribes of Nyanza province with 15.5% of the total population. These are followed by the Luhya tribe of Western province which reports 10.6% of the total migrants in the township. It is however noted that the percentages of migrant populations from the Nyanza and Western provinces are rather low. A possible explanation for this unexpected distribution is presented in the discussion chapter.

Altogether, the provinces of Eastern, Central and Western, reporting substantial amounts to lack of economic opportunity account for 98.0% of the total share of migrants as opposed to 2.0% of migrants from the Rift Valley and Coast provinces which have the least share of responses to lack of economic opportunity.

Not only is the Eastern province rural environment a leading repellant area in terms of the economic and demographic factors but also in terms of the social factors as Table 4:7: (iv) illustrates.

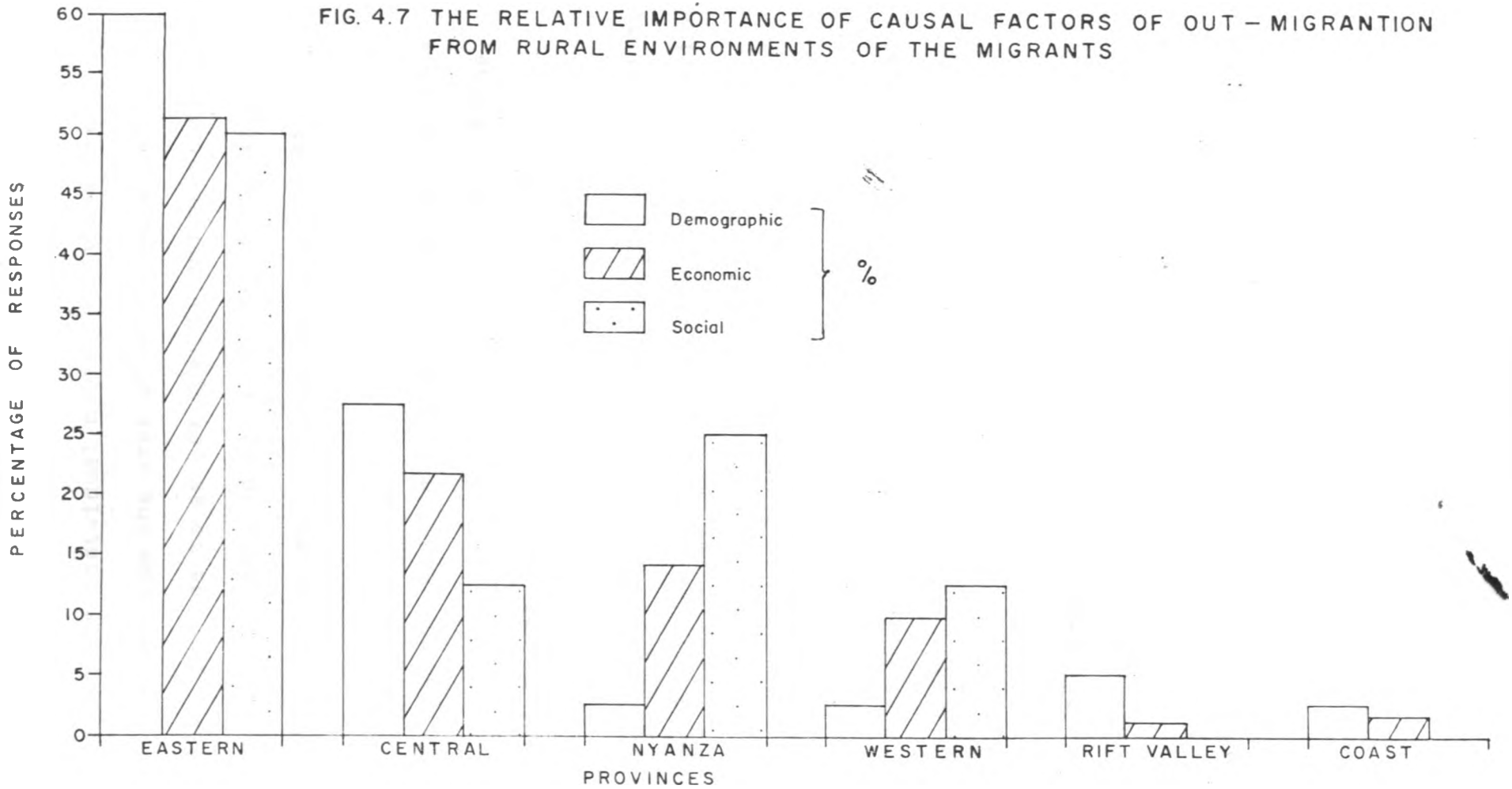
TABLE 4:7:(iv)

THE CAUSAL SOCIAL FACTOR FOR OUT-MIGRATION CLASSIFIED BY SOURCE PROVINCE OF THE MIGRANTS.

| SOURCES BY Province | NUMBER RESPONDING TO SOCIAL FACTORS | PERFECT (%) |
|---|---|---|
| EASTERN | 4 | 50% |
| COAST | - | - |
| CENTRAL | 1 | 12.5% |
| RIFT VALLEY | - | - |
| NYANZA | 2 | 25% |
| WESTERN | 1 | 12.5% |
| TOTAL,reported | 8 | 100.00% |

The results of Table 4:7:(iv) show that the Eastern province had a 50% share of the responses to either migration for the purpose of joining a family or obtaining education for the children. The Nyanza province ranks next in importance with 25% of the responses while the Western and Central provinces share equal substantial amounts of the responses (12.5%). It can be seen that the Coast and Rift Valley provinces report no influence of social factors on the migrants who made moves into the Athi River township.

FIG. 4.7 THE RELATIVE IMPORTANCE OF CAUSAL FACTORS OF OUT – MIGRANTION FROM RURAL ENVIRONMENTS OF THE MIGRANTS




Results of Tables 4:7:(ii), (i) and (iv), are graphically summarized by Figure 4:7.

While the individual migrants' motives for out-migration from the area of origin have been examined, one has to as yet specify and quantitively estimate the underlying determinants of the migration moves from the areas of origin and into the Athi River township.

It can be recalled that the primary aim of this study is to enumerate and evaluate the determinants of rural to urban migration behaviour. Citing the basic behavioural model expanded by Todaro for the less developed countries, geographic labor mobility over time between a rural and an urban centre is primarily a function of the differential in expected incomes between these two sectors. In this study, actual values of wage earnings in the rural and urban environments, have been used in the analysis instead of 'expected' incomes.

To determine whether a differential occurs between the mean wage earnings of the rural and the urban centre, the t-test for related measures is used and results of the analysis are presented in Table 4:8 below.

TABLE 4:8

THE RELATIONSHIP BETWEEN THE WAGE EARNINGS OF THE RURAL AND THE URBAN ENVIRONMENTS.

| ORIGIN OF MIGRANTS BY PROVINCE | NUMBER, REPORTING | d.f. | t. | Probability | |
|---|---|---|---|---|---|
| EASTERN | 115 | 114 | 6.93 | 1% * | 0.5% ** |
| COAST | 4 | 3 | 14.98 | * | ** |
| CENTRAL | 53 | 52 | 6.05 | * | ** |
| RIFT VALLEY | 3 | 2 | 1.34 | NS | NS |
| NYANZA | 32 | 31 | 4.57 | * | ** |
| WESTERN | 24 | 23 | 4.85 | * | ** |
| TOTAL, REPORTING | 231 | 230 | 15.37 | * | ** |
| NOT REPORTING | 15 | - | - | - | - |

* Value of t significant at the 99% probability level

** Value of t significant at the 99.95% probability level

NS Not significant.

Results:

Table 4:8 shows that a significant differential in the mean wage earnings of migrants exists for the total number of migrants reporting, between the rural origins and the Athi River township. Spatial variations on the basis of the province of origin, however, reveal that the t-test is significant for migrants reporting from the Eastern, Coast, Central, Nyanza and Western provinces and it fails to be significant for migrants reporting from the Rift Valley province at both the 99.95% and 99% probability levels.

Therefore, in so far as differentials in wage earnings have a hold on migrants in this study, it is indicated that provinces for whom the t-test is significant show a lack of economic opportunity which stimulates the residents to out-migrate and presumably repels in-migration.

Although the fore-going analysis places primary emphasis on differentials in actual wage earnings between the rural and the urban areas as a determinant of migration behaviour, it is recognised that other explanatory variables are included in the decision-making process. For example, it is expected that the wage-earnings differential can only be obtained at the cost of a move from the area of origin to the area of destination. Subsequently, this draws in the question of distance since distance is directly related to transportation costs. Furthermore, given the differential in wage earnings, an individual may preferably choose an urban setting with social amenities that can suit his level of income and his standard of living which are greatly determined by one's educational experience. In addition, variations in migratory patterns may be observed because of the Land/Man ratio in the place of origin of migrants, signifying the population pressure variable in the migration process.

Consequently, if a migrant undertakes a migration move from rural area i to urban centre j, he probably has weighed the cost and benefit of making the move such that, he thinks he is better off in j.

The Model and the Empirical Results:

The model to be used in this study sets out to explain gross rural to urban migration without explicitly introducing an individual decision function. Rather, migration rates are related to aggregate proxy variables that reflect factors which are likely to influence an individual potential migrants decision to undertake a move. It is also recognised that some of the causal factors in the out-migration process are not easily quantifiable and, that no one set of factors can explain why the migration moves were undertaken by the migrants, to the exclusion of all the other possible factors in the out-migration process. Therefore multiple correlation analysis has been used to ultimately estimate and determine the factors influencing rural to urban migration in this study. The following linear relationship has been assumed:

$Y = f(X_1, X_2, X_3, X_4, e)$

Where $Y = (M_{ij} / P_j)\%$ = Number of migrants in each province, reported.

$$\frac{\text{Number of migrants in each province, reported.}}{\text{Total sample population}} \times 100$$

$X_1$= highway distance (in Kms) between the major town in each province, reporting, and the Athi River township.

$X_2$= mean number of years completed in school for migrants classified by province of origin.

$X_3$= mean acreage of land owned by migrants reporting from each province.

$X_4$= mean monthly wage earnings for migrants before migration, classified by province of origin.

e = random error term.

Results:

Parameters were estimated by least squares and linear relationships were examined. Table 4:9 presented below shows the combined effect of the independent variables on migration rates:

TABLE 4:9

GROSS RURAL TO URBAN MIGRATION FLOWS: MULTIPLE CORRELATION ANALYSIS.

| DEPENDENT VARIABLES | INDEPENDENT VARIABLES | CO-EFFICIENT OF MULTIPLE CORRELATION (R) | CO-EFFICIENT OF MULTIPLE DETERMINATION $R^2$(%) |
|---|---|---|---|
| MIGRATION RATES (Y) | $X1_1$* | | |
| | $X_2$* | | |
| | $X_3$* | | |
| | $X_4$* | 0.820 | 67.24% |

* Significant at the 1.0 percent level.

NS Not significant at the 1.0 percent level.

Results show that all of the independent variables are significant at better than 1.0 percent probability level and that the co-efficient of multiple correlation obtained (R = 0.820) is quite high. Altogether the independent variables explain over half of the total variance in the dependent variable ($R^2$% = 67.24%), thus leaving 32.76% of the variance unaccounted for.

To determine the relationship between migration rates and each of the independent variables, zero order correlation co-efficients will be examined in Table 4:10 presented below:

TABLE 4:10

ZERO ORDER CORRELATION CO-EFFICIENTS OF GROSS RURAL TO URBAN MIGRATION FLOWS:

| INDEPENDENT VARIABLE | SIMPLE CORRELATION CO-EFFICIENT (r) | CO-EFFICIENT OF DETERMINATION $r^2$ (%) |
|---|---|---|
| $X_2$* (Distance) | -0.684 | 46.79% |
| $X_2$* (Educ.) | -0.378 | 14.29% |
| $X_3$* (Land) | -0.359 | 12.89% |
| $X_4$* (Wage) | -0.413 | 17.06% |

* Significant at the 1.0 percent probability level.

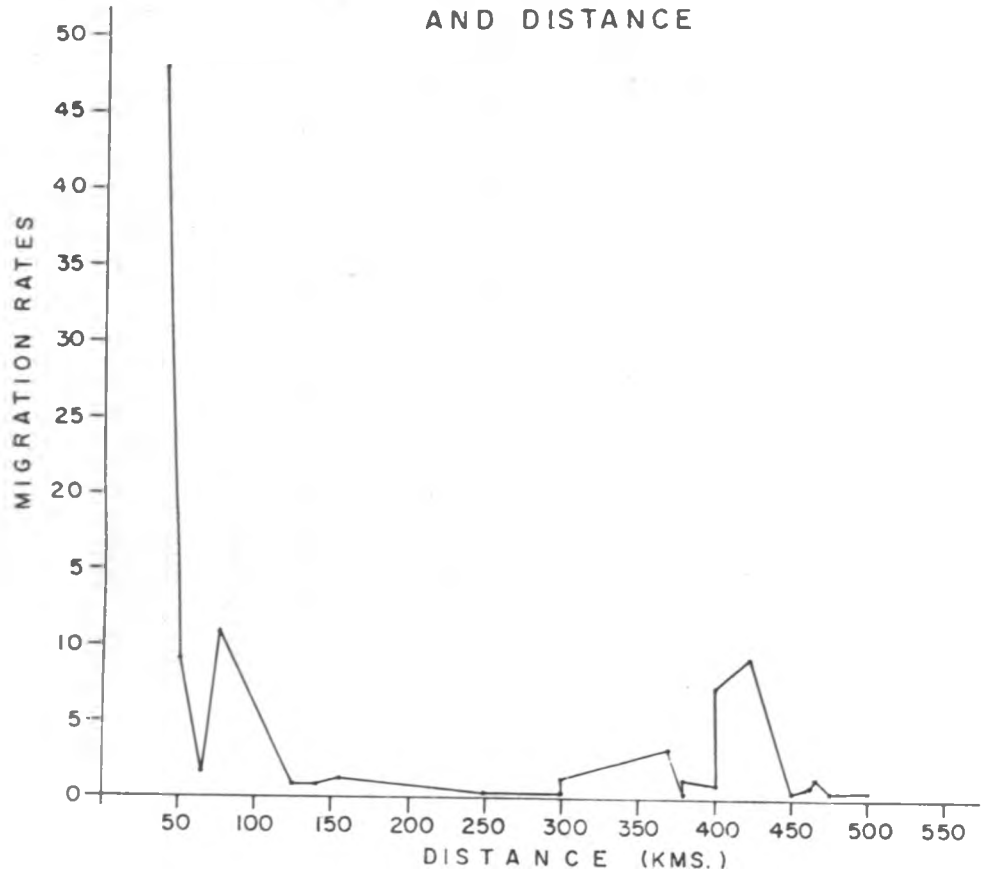
NS Not significant at the 1.0 percent probability level.

Results of Table 4:10 show that the greatest impact on migration rates comes from the distance variable ($r^2$= -0.684) which explains a substantial amount of the total variance in the dependent variable, ($r^2$= 46.79%). This variable is followed by the wage earnings differential (r = 0.413). The number of years completed in school and the amount of land acreage owned explains 14.29% and 12.89% of the total variance in the dependent variable, respectively. Presented below is a detailed analysis of the zero order correlations presented in Table 4:10 above.

(1) The Distance Variable

Results show that the distance variable is significant at better than 1.0 percent probability level and it is negative. Therefore, the shorter the distance, the higher the migration rates. This indicates that moving costs are an important deterrrent to migration between source areas and the Athi River township. Figure 4:10 illustrates this inverse function.

FIG. 4·10 THE RELATIONSHIP BETWEEN MIGRATION RATES AND DISTANCE



(2) The Rural Wage Earnings Variable

The fact that the co-efficient of wage earnings variable is significant and negative (r = -0.413) suggests that the lower the level of wage earnings in the rural environment, the higher the out-migration rate. Conversely, the higher the level of wage earnings, the less responsive persons are to a given wage earning differential between the rural and the urban area. This finding confirms the hypothesis that areas of low economic opportunity stimulate people to out-migrate while areas of high economic opportunity encourage in-migration.

(3) The Land/Man Ratio Variable

The acreage of land owned by migrants in their source provinces is shown to be significant at the 99% probability level and negative (r = -0.359). This finding implies that the lower the amount of land owned in a given source area, the higher the out-migration rate from the area. Thus, the hypothesis that population pressure on the available land in the rural areas is a stimulant to out-migration is illustrated.

(4) The Education Variable

The education variable is significant at better than 1.0 percent probability level and has a negative sign (r = -0.378). This indicates that the source provinces rating low on number of years of completed education have high out-migration rates. This result does concur with the a prior hypothesis set and its implications will be viewed in the discussion chapter.

In summary, the aggregate model relationship illustrates that the economic, demographic and social factors, amongst others, have influenced the migrants decision to move into the Athi River township. The strength of the relationship between migration rates and the independent variables used in this analysis have been illustrated by the foregoing results.

4) The Migrants' Adjustment to the Urban Environment

In the event of succumbing the intervening obstacle of distance between the origin and area of destination the arriving migrant to the urban environment has yet another obstacle to deal with - his adjustment to the new environment. In this study, the migrants' adjustment is viewed in terms of adjustment to, amongst others, two major components: (1) Social organisation and (2) Employment.

(1) Social Organisation

Table 4:11 presented below shows the migrants' kinship system within the Athi River township.

TABLE 4:11

KINSHIP SYSTEM WITHIN THE ATHI RIVER TOWNSHIP

| KINSHIP TIES | NUMBER REPORTING | PERCENT(%) |
|---|---|---|
| Those who have | 186 | 75.92% |
| Those who have not | 59 | 24.08% |
| TOTAL | 245 | 100.00% |
| Not reported | 1 | 0.41% |

Results show that about three-quarters of the migrants (75.92%) had relatives and/or friends residing within the township. Those who did not have kin or friends in the township accounted for 24.08% of the total population reporting. However, Table 4:12 shows that over 50% of the latter have originated from the immediate neighbourhood.

TABLE 4:12

THE RELATIONSHIP BETWEEN THE MIGRATION RATES OF THOSE WITHOUT KIN AND FRIENDS IN THE TOWNSHIP AND DISTANCE

| SOURCE BY PROVINCE | DISTANCE FROM PRINCIPAL TOWN TO ATHI RIVER | NUMBER REPORTING | PERCENT (%) |
|---|---|---|---|
| EASTERN | 40 Kms. | 31 | 52.54% |
| CENTRAL | 68 Kms. | 19 | 32.20% |
| RIFT VALLEY | 190 Kms. | 1 | 1.70% |
| NYANZA | 370 Kms. | 7 | 11.86% |
| WESTERN | 423 Kms. | 1 | 1.70% |
| NOT REPORTED | - | - | - |
| TOTAL | | 59 | 100.00% |

In addition to the fact that the migration rates of those who have no kin and friends in the township decrease with successive distance travelled, most migrants reported that they made frequent visits to their home areas. These findings point to the fact that most migrants still retain their kinship ties and that they are in touch with the traditional set up of their areas of origin.

(2) Employment

Migrant selectivity at the place of origin implies that migrants to the cities are better equipped to cope with conditions in the city than the rest of the population from which they originate. Consequently, migrant populations should have amongst them relatively lower ranks of people who are unemployed.

Table 4:13 below shows a frequency distribution of wage earnings before migration.

TABLE 4:13

FREQUENCY DISTRIBUTION OF WAGE EARNINGS BEFORE MIGRATION

| CATEGORIES OF WAGE EARNINGS | NUMBER REPORTING | PERCENT % |
|---|---|---|
| No income | 160 | 66.1% |
| ≤ 50 | 12 | 5.0% |
| 5151 - 100 | 15 | 6.2% |
| 101 - 250 | 16 | 6.6% |
| 251 - 500 | 26 | 10.7% |
| 501 - 750 | 2 | 0.8% |
| 751 - 1,000 | 6 | 2.5% |
| 1,001 - 2,000 | 5 | 2.1% |
| 2,001 - 3,000 | | |
| > 3,000 | | |
| No response | 4 | |
| TOTAL | 242 | 100.0% |

With regard to those who were unemployed before migration the results show that they accounted for 66.1% of the total population, reporting.

After migration, however, those with no income accounted for 20.9% of the total population, reporting. This is shown by Table 4:14.

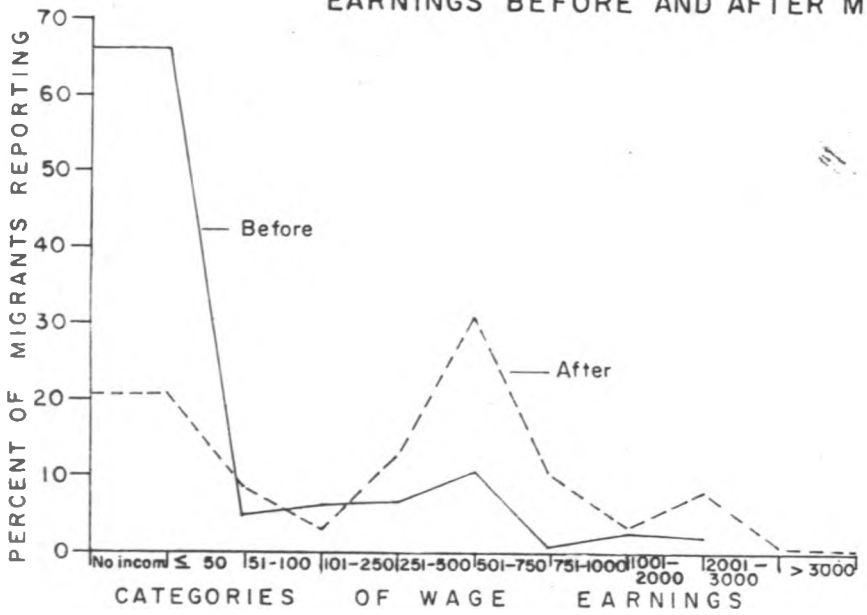
TABLE 4:14

FREQUENCY DISTRIBUTION OF WAGE EARNINGS AFTER MIGRATION

| CATEGORIES OF WAGE EARNINGS | NUMBER, REPORTING | PERCENT % |
|---|---|---|
| No income | 48 | 20.9% |
| ≤ 50 | 19 | 8.3% |
| 51 - 100 | 7 | 3.0% |
| 101 - 250 | 29 | 12.6% |
| 251 - 500 | 72 | 31.3% |
| 501 - 750 | 25 | 10.9% |
| 751 - 1,000 | 8 | 3.5% |
| 1,001 - 2,000 | 19 | 8.3% |
| 2,001 - 3,000 | 2 | 0.9% |
| > 3,000 | 1 | 0.4% |
| TOTAL | 230 | 100.0% |
| No response | 16 | 6.95% |

The tables show that the wage earnings of the urban environment are superior to those of their rural origins as Figure 4:14 illustrates.

FIG. 4 14 FREQUENCY DISTRIBUTION OF WAGE EARNINGS BEFORE AND AFTER MIGRATION



Hence, migration has improved the wage earnings of the migrants and has enabled some initially disadvantaged persons to find employment in the urban environment. This shows that the migrants are part and parcel of the developmental process in the urban areas.

Occupational differentials reported amongst the migrants confirm the fore-going findings as shown by Table 4:15.

Results show that although the bulk of migrants fall within the Industrial/Service manual workers group who are either skilled, semi-skilled or unskilled (61.38%) the unemployed and casual workers account for a relatively low percentage (27.23%) of the labour-force. It is therefore indicated that unemployment, though a problem to content with, does not rank highest amongst the problems facing the migrants in the Athi River township.

In view of the seemingly greater economic opportunities in the township, it would be expected that more people would express a desire to stay in the township in the future rather than undertake a move to another town or return to their places of origin. Table 4:16 shows the migrants' future plans for residence.

TABLE 4:15

OCCUPATIONAL DIFFERENTIAL IN THE TOWNSHIP

| MAJOR GROUP | OCCUPATIONAL CATEGORY | NUMBER REPORTING | PERCENT (%) |
|---|---|---|---|
| (0) | Professional, technical and related workers | 8 | 3.25% |
| (1) | Administrative, Executive and Managerial Workers | 14 | 5.70% |
| (2) | Clerical workers | 6 | 2.44% |
| (3) | Industrial/ service manual workers-skilled | 6 | 2.44% |
| (4) | Industrial/ service manual workers-semi-skilled | 17 | 6.91% |
| (5-6) | Industrial/ service manual workers-unskilled | 128 | 52.03% |
| (7) | Workers not classified by occupation: the unemployed | 67 | 27.23% |
| TOTAL | | 246 | 100.00% |

TABLE 4:16

MIGRANTS' FUTURE PLANS FOR RESIDENCE

| FUTURE PLANS | NUMBER REPORTING | PERCENT % |
|---|---|---|
| Settle in Athi River(stayers) | 88 | 39.29% |
| Move to another town(Movers) | 46 | 20.53% |
| Go back home (Returnees) | 90 | 40.18% |
| Not reported | 22 | 9.82% |
| Total, reported | 224 | 100.00% |

Results show that those who propose to settle in the township do not predominate. If, at all, the dominant group are the 'returnees', followed by the 'stayers' and lastly, the 'movers'. However, it should be noted that the returnees predominate with a very low, percentage of 1.00 over the responses of the 'stayers'. Hence the chances that migrants will settle in Athi River or return to their areas of origin, in the future, are about equal.

The selectivity of those who plan to settle in the township (stayers) is observed in this thesis on the basis of two variables: (1) Age and (2) Occupation.

1) Age.

Table 4:17 presented below shows indicated future plans for residence classified by Age.

TABLE 4:17

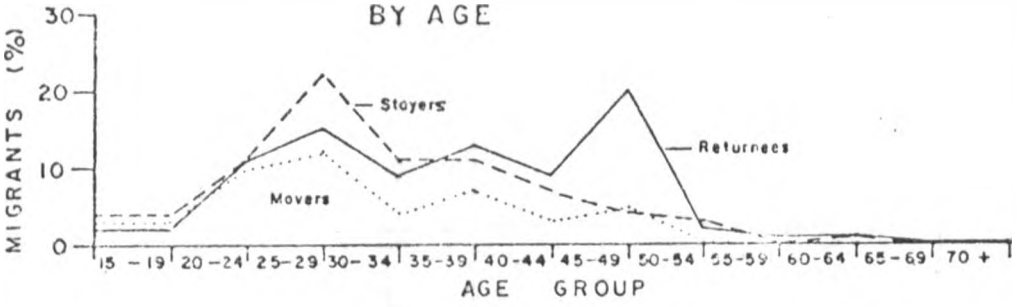
INDICATED FUTURE PLANS FOR RESIDENCE CLASSIFIED BY AGE

| AGE GROUP | RETURNEES | STAYERS | MOVERS | NOT REPORTED | TOTAL | PERCENT (%) |
|---|---|---|---|---|---|---|
| 15 - 19 | 2 | 4 | 3 | 1 | 10 | 4.50% |
| 20 - 24 | 11 | 11 | 10 | 5 | 37 | 16.67% |
| 25 - 29 | 15 | 22 | 12 | 5 | 54 | 14.32% |
| 30 - 34 | 9 | 11 | 4 | 4 | 27 | 12.16% |
| 35 - 39 | 13 | 11 | 7 | 2 | 33 | 14.87% |
| 40 - 44 | 9 | 7 | 3 | 2 | 21 | 9.46% |
| 45 - 49 | 20 | 4 | 5 | 1 | 30 | 13.51% |
| 50 - 54 | 2 | 3 | - | - | 5 | 2.25% |
| 55 - 59 | 1 | - | - | 2 | 3 | 1.36% |
| 60 - 64 | 1 | 1 | - | - | 2 | 0.90% |
| 65 - 69 | - | - | - | - | - | - |
| 70+ | - | - | - | - | - | - |
| Not reported | 7 | 14 | 2 | 1 | 24 | 9.75% |
| TOTAL | 90 | 88 | 46 | 22 | 246 | 100.00% |

The age groups with the greatest impact on return migration rates have been shown to occur between the 20 to 49 age bracket, while the 20 to 30 age bracket is indicated for the 'stayers' and the 20-29 age bracket has been shown to have the greatest impact on migration rates amongst the 'movers'. Hence,with the exception of the movers, the stayers could be said to have been

positively selected from the total population since they are concentrated within, relatively, younger age brackets than those who plan to return to their areas of origin. Results of Table 4:17 are illustrated by Figure 4:17

FIG. 4·17 INDICATED FUTURE PLANS FOR RESIDENCE BY AGE




(2) Occupation

Positive selectivity amongst the 'stayers' should indicate high occupational rates amongst the high income groups and low occupational rates amongst the low income groups compared to occupational rates of either the potential returnees or potential movers.

Table 4:18 illustrates the migrants future plans of residence classified by occupational rates:

TABLE 4:18

MIGRANTS' FUTUTURE PLANS FOR RESIDENCE CLASSIFIED BY OCCUPTATIONAL RATES

| Migrants' future plans for Residence | HIGH INCOME GROUPS | | | | LOW INCOME GROUPS | | |
|---|---|---|---|---|---|---|---|
| | Professional Technical and related workers | Administrative Executive and Managerial workers | Clerical workers | Total for high income groups | Industrial/ Service Manual workers skilled/un-skilled/ semi-skilled | Workers not classified by occupation: Casual/ unemployed workers | Total, for low income groups |
| Potetial Returnees | 5.56% | 2.22% | 6.67% | 14.45% | 71.11% | 14.44% | 85.55% |
| Potential 'stayers' | 1.12% | 6.72% | - | 7.84% | 51.52 | 31.64% | 83.16% |
| Potential 'Movers' | 5.20% | 5.20% | - | 10.40% | 70.20% | 19.40% | 89.60% |

Results show that the potential stayers have been negatively selected from the total population with regard to the high income groups. The potential stayers have a 7.84% share of occupational rates as compared to a 14.45% share and 10.40% share of the total occupational rates of the potential returnees and potential movers, respectively. This indicates that a relatively low percentage of the high income groups have opted to settle in the township in the future.

With regard to the low income groups of major group 4 and 5, the thesis of positive selectivity has occured with reference to the potential stayers, as they contribute relatively low rates of 83.16% in comparison to the other groups which have 85.55% (returnees) and 89.60% (movers) of the total occupational rates. But, it is noted that the potential stayers have within their ranks the highest rates of the unemployed and secondly, the differentials in the occupational rates of the low income groups are very minimal. Therefore, although positive selectivity has occurred with reference to the low income groups of the 'stayers' this group contains the highest rate of the unemployed who plan to settle in the township.

(5) Return Migration

Return migration has been viewed as an instrument that serves to weed out the unsuccessful migrant from the urban environment. Therefore, whereas positive selectivity of migrants, occurs in the area of origin of the migrants, negative selectivity occurs in the area of destination. In this study, potential return migration rates have been used and are discussed on the basis of three variables: (1) Occupation, (2) Age, and (3) Residence. Table 4:19 presented below shows the occupational structure of the potential returnees from the township.

TABLE 4:19

INDICATED RETURN MIGRATION CLASSIFIED BY OCCUPATION

| MAJOR GROUP | OCCUPATIONAL CATEGORY | NUMBER OF RETURNEES | PERCENT (%) |
|---|---|---|---|
| 1 | Professional, technical and related workers | 5 | 5.56% |
| 2 | Executive, Administrative and Managerial workers | 2 | 2.22% |
| 3 | Clerical workers | 6 | 6.67% |
| 4 | Industrial-service manual workers: skilled/semi-skilled/ unskilled | 64 | 71.11% |
| 5 | Workers not classified by Occupation: casual/unemployed workers; Harlots | 13 | 14.44% |
| | TOTAL | 90 | 100.00% |

Results show that workers who rank lowest in the Occupational category and those who are least paid have the greatest impact on return migration rates. These include the Industrial-service skilled/semi-skilled and unskilled workers, and those workers not classified by occupation like the casual/unemployed workers. These categories account for 85.55% of the potential return migration rates. The relatively well paid workers of major group 1,2, and 3 account for an insignificant amount of 14.45% of the rates of potential return migration.

(2) Age

Table 4:20 presents a classification of potential return migration by five year age-groups.

TABLE 4:20

INDICATED RETURN MIGRATION CLASSIFIED BY AGE

| AGE GROUP | NUMBER OF RETURNEES | PERCENT (%) |
|---|---|---|
| 15 - 19 | 2 | 2.22% |
| 20 - 24 | 11 | 12.22% |
| 25 - 29 | 15 | 16.67% |
| 30 - 34 | 9 | 10.00% |
| 35 - 39 | 13 | 14.44% |
| 40 - 44 | 9 | 10.00% |
| 45 - 49 | 20 | 22.22% |
| 50 - 54 | 2 | 2.22% |
| 55 - 59 | 1 | 1.11% |
| 60 - 64 | 1 | 1.11% |
| 65 - 69 | - | - |
| 70+ | | |
| No response | 7 | 7.78% |
| TOTAL | 90 | 99.99%<br>100% |

It shows that the 45 - 49 age bracket accounts for the bulk of the potential return migration rates with a 22.22% of the responses. This is followed by the younger age groups of 25 - 29 and 35 - 39, which account for 16.67% and 14.44% of the rates, respectively.

Potential return migration soaring in the same age groups that reflect high in-migration rates as shown by Table 4:3 are unexpected and can be explained in the light of potential return migration rates classified by Age and Occupation as shown by Table 4:21.

With regard to the age groups 25 - 29 and 35 - 39, results from Table 4:21 show that the greatest impact on return migration rates come from the least paid workers and those who are unemployed. These workers fall within the lowest occupational category of major group 4 and 5 and they jointly contribute 31.13% of the total rates.

TABLE 4:21

INDICATED RETURN MIGRATION CLASSIFIED BY AGE AND OCCUPATION

| Age-group | OCCUPATIONAL CATEGORY | | | | | Total | Percent (%) |
|---|---|---|---|---|---|---|---|
| | Professional, technical and related workers | Administrative, executive and Managerial workers | Clerical workers | Industrial service manual workers/ skilled, semi-skilled and unskilled | Workers not classified by occupation: Casual unemployed; Harlot | | |
| 15 - 19 | - | - | - | 1 | 1 | 2 | 2.22% |
| 20 - 24 | 1 | - | - | 6 | 4 | 11 | 12.22% |
| 25 - 29 | 1 | 1 | 1 | 9 | 3 | 15 | 16.67% |
| 30 - 34 | 2 | - | 1 | 5 | 1 | 9 | 10.00% |
| 35 - 39 | 1 | 1 | - | 11 | - | 13 | 14.44% |
| 40 - 44 | - | - | - | 9 | - | 9 | 10.00% |
| 45 - 49 | - | 1 | 4 | 13 | 2 | 20 | 22.22% |
| 50 - 54 | - | - | 1 | 1 | - | 2 | 2.22% |
| 55 - 59 | - | - | - | 1 | - | 1 | 1.11% |
| 60 - 64 | - | - | - | - | 1 | 1 | 1.11% |
| 65 - 69 | - | - | - | - | - | - | - |
| 70+ | - | - | - | - | - | - | - |
| Not reported | | | | 5 | 2 | 2 | 2.22% |

Table 4:22 below presents the major problems that the potential return migrant has had to put up with during his stay in the township.

TABLE 4:22

MAJOR PROBLEMS IN THE URBAN ENVIRONMENT

| Problems in the Athi River Township | Number | Percent (%) |
|---|---|---|
| Lack of housing facilities | 147 | 59.8% |
| Crime rate too high | 70 | 28.5% |
| Unemployment | 15 | 6.1% |
| Township is arid | 10 | 4.0% |
| Not reported | 44 | 1.6% |
| TOTAL | 246 | 100.0% |

On the whole, the problem of lack of housing facilities pervades the social structure in the Athi River Township followed by the inter-dependent problems of unemployment and resultant crime. Since type of occupation is closely linked to monthly wage earnings which influence the kind of accommodation one would opt for,

it is to be expected that exceptionally high rates of potential return migration should be found within the (1) low income groups and (2) low cost residential areas of the township.

One can classify the residential areas of the town into (1) low, (2) medium and (3) high cost categories on the basis of the type of housing facilities that are found. The low cost areas would therefore include: slum areas like Kisumu Ndogo, Kitengela areas and Sophia. The medium cost areas would include Makadara, Railway/Urban Council/Police and Veterinary quarters while the high cost areas would include most of the Kenya Meat Commission (K.M.C.) quarters apart from the 'Old Camp' and Portland quarters. Across-classification of potential return migration rates by residence and occupation is presented in Table 4:23.

The greatest impact on return migration rates come from the high cost areas of Kenya Meat Commission and Portland; the medium cost area of Makadara and the low cost areas of Kisumu Ndogo and other slum areas. However, Table 4:23 also illustrates that within these residential areas, the greatest impact on potential return migration rates come from the low income groups of the Industrial-service manual workers; skilled/ semi-skilled or unskilled.

TABLE 4:23

INDICATED RETURN MIGRATION CLASSIFIED BY OCCUPATION AND RESIDENCE

| Place of Residence within the township | OCCUPATIONAL CATEGORY | | | | | TOTAL | PERCENT (%) |
|---|---|---|---|---|---|---|---|
| | Professional, technical and related workers | Administrative, executive and Managerial workers | Clerical workers | Industrial-service manual workers skilled/ semi-skilled/ unskilled | Workers and classified by occupation: Casual/ unemployed workers: Harlot | | |
| K.M.C. | 3 | 1 | 2 | 27 | 2 | 35 | 38.89% |
| Portland | - | 1 | 1 | 9 | 1 | 13 | 14.44% |
| Makadara | - | - | - | 8 | 2 | 12 | 13.33% |
| Sophia | - | - | - | 5 | 2 | 7 | 7.78% |
| Kisumu Ndogo | - | - | - | 7 | 5 | 12 | 13.33% |
| Railway | 1 | - | - | 8 | 1 | 10 | 11.11% |
| Urban, Works and Police quarters | - | - | 1 | - | - | 1 | 1.1% |
| Veterinary | - | - | - | - | - | - | - |
| TOTAL | 5 | 2 | 6 | 64 | 13 | 90 | 99.99% |
| Percent (%) | 5.56 | 2.22 | 6.67 | 71.11 | 14.44 | - | 100.00% |

# CHAPTER V.

## DISCUSSION

The discussion of the research findings will be centered firstly, on the spatial allocation of the migrants in this study and the casual factors of out-migration from the source areas. Secondly, in view of the fact that migration rarely transfers whole populations migrant selectivity will be examined. Thirdly, the migrants' adjustment to the Athi River urban environment will be discussed afterwhich the assumption that return migration serves to weed out the less successful migrants from the urban environment is examined.

The study findings relating to the sources of migrants by province and district presented in Table 4:1 reveal the following pattern, that (1) the Eastern and Central provinces dorminate as the source areas of most migrants, (2) the Nyanza and Western provinces contribute substantial rates to out-migration but are less dorminant than the latter provinces and (3) the least out-migration rates are reported by the Coast and Rift Valley provinces. An examination of this pattern points to two major issues that have to be discussed.

Firstly, an account of why the Eastern and Central provinces are dorminant as source origins of migrants in this study and secondly, why the Coast and Rift Valley provinces report equal least amounts of migration rates although they are separated location-wise by varying distances from the study area.

Figure 1:2 illustrates the distribution of population in Kenya as of 1969. It shows that the 'dorminant and less dorminant' source provinces of migrants lie within the belt of highest densities of population in the country. According to Ominde and Odingo (1971), the highest densities of population in the country lie within the Central Cluster of population which comprises parts of the Eastern and Central provinces and has densities of $\geq$ 600 persons per sq. km. They further show that the Nyanza and Western provinces lie within the Western Cluster of population which has densities of $\geq$ 300 persons per sq. km. The dorminancy of these provinces as source areas of migrants into the Athi River township is further confirmed by the Ethnic composition of the Labour force as shown by Table 4:7:(ii). Both these results point to the active role of population pressure on the land as a causal factor of out-migration from the areas of origin,

for migrants in this study and thus, confirms the assumption that areas of high densities of population are associated with high rates of out-migration. Research findings in this study have been shown to support earlier research work carried out in Kenya (Ominde,1968; Ominde and Odingo, 1971; Rempel, 1974 and Oucho, 1974) and Tanzania (Cleason and Egero, 1971), amongst others.

Whereas the Eastern and Central provinces lie within the Central Cluster of population which has a similar population density, the differential in the contributed out-migration rates is outstandingly wide as the Central province contributes less than one-half (21.55%) of the out-migration rates attributed to the Eastern province which accounts for 50.40% of the total out-migration rates. While recognizing the fact that 'the density of population' is a term that can not be interpreted literally, nonetheless, the discrepancy between the contributed out-migration rates of these two provinces needs to be examined.

Zero order correlation co-efficients presented in Table 4:10 show that with regard to the distance variable, a relatively strong negative correlation exists between out-migration rates and distance,

indicating that distance is a deterrent factor in migration and consequently, the frequency of movement would decrease with successive distance travelled. Table 4:12 further shows that over 50% of the migrants originate from the Eastern province in which the study area is located. Thereafter, the out-migration rates decrease with successive distance travelled a part from an anomaly that occurs in the Rift Valley province.

The part played by the distance variable in the migration process, in part explains the differential in the out-migration rates of the Eastern and Central provinces (although they are located in the same population cluster) foremost, and indeed accounts for the differentials in out-migration rates of most of the provinces since out-migration rates decrease with successive distance travelled. Therefore, it is to be expected that provinces closely located to the study area will have higher out-migration rates in relation to those provinces that are placed further away. Previous research dealing with the impact of distance on migration rates has come out with comparatively similar results. Amongst these are Robinson (1951)

Sjaastad (1961), Lowry (1966) , Gallaway, et al. (1967) and Greenwood (1969 and 1970) . The deterrent effect of distance on the migration rates is accounted for by the fact that an important determinant of migration is the cost of the actual move undertaken as it has a monetary and non-monetary component.

The monetary component is the transportation costs of the move which are directly related to distance moved and hence the inverse relationship between migration rates and successive distance travelled illustrated by study findings presented by Figure 4:10. Whereas the above assumption has been found to hold for the total number of migrants, reporting, in this study, it does not however hold for those migrants originating from the Rift Valley province. This unexpected pattern can partly be explained in the light of study findings appertaining to wage earnings differentials between the places of origin of the migrants and the Athi River township, presented in Table 4:8. Results show that for the total number of migrants in this study, the t-test is significant at the 99% probability level. Thus, indicating a lack of economic opportunity in the rural environment and resultant out-migration to the Athi River township. Results therefore support the assumption

that low incomes in the places of origin of the migrants will stimulate exceptionally high rates of out-migration. This finding is a further illustration of earlier research work contacted by Rempel and House (1976), Knowles and Anker (1975) who both were working in Kenya.

However, spatial variations of the t-test at the provincial level revealed that the t-test failed to be significant for the Rift Valley province. Thus, no lack of economic opportunity was indicated for migrants originating from the Rift Valley province and hence the low out-migration rates reported from the province inspite of the fact that the province is relatively closely placed to the study area in terms of distance. Therefore it is indicated that although a given area of origin might be relatively closely placed to the area of destination, low out-migration rates, if any at all, will be stimulated from the source area of the migrants due to lack of a mean wage earning differential. Hence, high levels of economic opportunity in the area of origin have been found to discourage out-migration as is the case with the Rift Valley province. Much the same conclusion has been reached by Greenwood (1969) in his study of Labour migration in Egypt. He found out that the higher the level

of mean income in various districts, the less responsive persons were to a given income differential.

Over the years, the Rift Valley province of Kenya has been shown to be a principal in-migration province. Ominde (1968) in analysing the results of the 1962 Kenya census of population demonstrated this as his results presented in Table 2:3 show. Likewise, Rempel (1974) has reached the same conclusion when analysing the Kenya 1969 census of population as results of Table 2:6 show.

The non-monetary component of the distance factor relates to the social-psychic cost accruing from the reluctance of an individual migrant to undertake a move due to leaving his family and friends and the social well-knit life of the village for an unfamiliar urban environment.

Results of this study have already shown that an inverse function exists between out-migration rates and distance travelled. Furthermore results of the Kin-friendship system in the Athi River township presented in Table 4:11 shows that 75.92% of the migrants have relatives within

the township and 24.08% of the migrants do not. Since information about other localities is likely to be inversely related to distance, the migration rates of the total sample population in addition to decreasing with successive distance travelled should also indicate that the migration rates of these migrants who have no kin and friendship ties in the township should likewise decrease with successive distance travelled. This is only logical because all other things being equal, the degree of estrangement increases with distance travelled and therefore the 'have - nots' of Table 4:11 should be found to originate from the immediate neighbourhood to the study area as Table 4:12 does show. The pattern of the distribution of the 'have-nots' migration rates supports the foregoing proposition as the out-migration rates are dense in the immediate neighbourhood and increasingly sparse with successive distance travelled from the study area. Research findings therefore are in support of earlier research contacted elsewhere (Brown and Moore, 1970; Brown, Horton and Witick, 1970; Brown and Holmes, 1971 (a) and 1971 (b); and Sunshine, 1976).

In summary, it has been indicated that the spatial allocation of migrants according to their areas of origin in this study are greatly determined by the following factors (1) the wage earnings differential between the source areas and the Athi River township, (2) the monetary and non-monetary aspects of the distance factor and (3) the population pressure factor in the areas of origin of the migrants.

The foregoing discussion on the factors affecting the spatial allocation of migrants in this study has not so far considered the individual function decision of the migrant in under-taking the migration move. The discussion will now center on this aspect in order to determine whether the individual responses testify to the existence of the findings in the foregoing discussion.

In so far as the above aggregate results apply to migrants in this study, the following findings derived from individual responses should also be illustrated to have a hold on the migrants and to concur with research findings already discussed. Previous research results imply that (1) the individual responses to lack of economic opportunity as a

causal factor in out-migration should be shown to prevail in all the source provinces of the migrants apart from the Rift Valley province. Furthermore, these response rates should decrease with successive distance travelled, (2) the provinces situated in the Central and Western clusters of population should predominate with responses that relate to population pressure as a causal factor in the out-migration process and, these response rates should likewise decrease with successive distance travelled, (3) since population pressure affects the size of the Labour - force, the spatial distribution of response rates appertaining to demographic factors should be proportional to the spatial distribution of response rates related to lack of economic opportunity as a casual factor of out-migration from the areas of origin and (4) the response rates to the social causal factor of out-migration should predominate amongst migrants from the immediate neighbourhood to the study area and these should decrease with successive distance travelled.

Table 4:5 shows that all of the three sets of factors under consideration as the causal factors in the out-migration process have a hold

on migrants in this study. However, results of Table 4:6 show that response rates appertaining to lack of economic opportunity as a casual factor in the out-migration process predominate over the response rates of the demographic and social factors of out-migration. Thus, it is indicated that lack of economic opportunity is prevalent in most source areas of migrants in this study. Table 4:7: (i) shows the spatial distribution of responses to lack of economic opportunity as a casual factor in out-migration. Results concur with the expected pattern in that response rates are reported for all the source provinces of the migrants, they decrease with successive distance travelled from the Athi River township and finally, the lowest response rates to lack of economic opportunity come from the Rift Valley province which has registered no mean-wage earning differential.

The response rates to population pressure as a casual factor in the out-migration process are shown to be prevalent in the provinces situated in the Central Cluster of population which accounts for 87.50% of the responses as shown by Table 4:7: (ii). This result follows the expected path assumed above. But the response rates from the Nyanza and

Western provinces (about 5.00%) which are located in the Western cluster of population are extremely low even when the distance factor of the move is taken into account. This unexpected result can be explained in the light of the argument that since the response rates appertaining to lack of economic opportunity as a casual factor in out-migration predominate amongst the three sets of factors, it can be assumed that migrants originating from the Nyanza and Western provinces had greater influence from the economic factors than from the demographic factors on their decisions to migrate. Hence the low response rates appertaining to demographic factors as casual out-migration factors from the Nyanza and Western provinces. However, the response rates appertaining to population pressure as a casual factor of out-migration decrease with successive distance travelled as shown in Table 4:7: (ii).

Population pressure on the land affects the size of the labour force in a given area therefore it should follow that the provinces rating high on responses to population pressure as a casual factor in out-migration should also report high rates on lack of economic opportunity. Figure 4:7 illustrates

the relative importance of the three sets of factors in the out-migration process namely: Economic, Demographic and Social factors. Results show that for the Eastern and Central provinces, the high responses due to lack of economic opportunity correspond with high responses to lack of available land. The Nyanza and Western provinces record a differential in response rates to Economic opportunity of 14.2% and 9.84% respectively, but the response rates due to population pressure on the land shows no such differential as both the provinces account for equal amounts of 2.50% each. In consideration of the distance factor, there should be a differential in the demographic rates of the Nyanza and Western provinces such that those of the Nyanza province should be relatively higher than those of the Western province. However, other things being equal, the similar population density of $\geq$300 persons per sq. km. in the Western cluster should be expected to influence equal out-migration rates from the two provinces. Therefore, individual response rates by province of origin related to economic and demographic variables have shown that response rates correspond in magnitude, thus, indicating that the greater the population density on the land, the greater the

lack of economic opportunity and hence the higher the out-migration rate from a given area of origin. This result points to massive unemployment in the rural areas of the Central, Eastern, Nyanza and Western provinces on the basis of results in this study.

Response rates appertaining to the social casual factor of out-migration (Table 4:7:iv) confirm the postulated assumption as they are dense in the immediate neighbourhood and increasingly sparse with distance travelled from the study area. Results therefore point to the importance of social ties on the migrants. One can therefore conclude that the migrants in this study tend to migrate to areas which have sizeable concentrations of their respective populations.

To estimate the magnitude of the determinants of out-migration from the areas of origin for migrants in this study, a model of aggregate relationships was used and results are presented in Tables 4:9 and 4:10. An equally important use of the model was to find out if its results will lend further support to the individual reasons given for out-migration from the source areas.

Results of the aggregate model which uses the least squares technique as shown in Table 4:10 have shown that the model gives further support to individual reasons already given as causal factors for out-migration from the source provinces. It is shown that the greatest impact on migration rates comes from the distance variable thus, the transportation and social-psychic costs for which distance acts as a proxy variable act as a deterrent to migration moves in this study. Therefore, it is to be expected that all things being equal, the greater the distance from origin i to destination j, the lower the migration rate between i and j. Previous research appertaining to the role played by the distance factor in determining the spatial allocation of migrants has already been cited in the foregoing discussion.

The mean of rural wage earnings was used in the model as a proxy variable for the availability of economic opportunity in the area of origin of the migrants. It was expected that, all other things being equal, the greater the income of the Athi River township relative to that of the source areas of the migrants, the greater the expected migration between these two areas. Zero order correlation

co-efficients presented in Table 4:10 show that the wage earnings variable was significant and negative. Results therefore support the hypothesis that lack of economic opportunity stimulates high rates of out-migration and repels in-migration. This is the case of the Eastern, Central, Nyanza and Western provinces. The corollary to the above thesis is true of the Rift Valley province since plenty of economic opportunities repel out-migration and encourage in-migration to the province.

With regard to the population pressure aspect, the mean acreage of land owned by the migrants in their source provinces was used as a proxy variable for the density of population in the source areas of the migrants. Table 4:10 indicates an inverse relationship between the mean acreage of land owned and the migration rates. As was expected, results have shown that the lower the amount of land owned in a given source area, the higher the out-migration rate, a finding that supports the thesis that areas of high density of population are associated with high rates of out-migration. Once again, the results of the aggregate model have supported individual reasons given for out-migration by respondents in this study.

The mean number of completed years in school for migrants, classified by province of origin, has been used as a proxy variable for the level of Government expenditure per capita. The rationale for the use of the Education variable as a proxy for Government expenditure lies in the fact that better social facilities and educational opportunities are likely to be found in areas having high per capita government expenditure therefore individuals are more likely to move away from areas having low per capita government expenditure to areas with high per capita government expenditure in order to benefit either themselves or their children. Hence, the lower the local government expenditure per capita in the source areas, the lower the mean number of years of completed education and Hence, the greater the expected rate of out-migration from a given source area.

The correlation co-efficient of the Education variable is negative and significant thus indicating that an inverse relationship exists between out-migration rates and the level of government expenditure per capita, all other things being equal. This is the expected direction of the relationship and the result supports the hypothesis that the level of Educational attainment correlates

negatively with the migration rates from the areas of origin of the migrants. This result can be interpreted to mean that lack of adequate social facilities and Educational opportunity will stimulate a high rate of out-migration from the rural areas to the urban areas in Kenya. Previous research that has attained similar results has been conducted by Greenwood and Sweetland (1972).

In summary, the aggregate model of rural to urban migration flows has to a great extent supported results on individual reasons given for out-migration from the source areas. The independent variables used to predict the migration rates are all significant at better than the 99% probability level, have the expected signs and jointly account for 67.24% of the variance in rural to urban migration flows, as shown by Table 4:9. Furthermore, the greatest impact on migration rates has been shown to come from the distance variable, a result that is consistent with research conducted elsewhere (Beales, Levy and Moses, 1967; Gallaway et al. 1967; Greenwood 1969 (a), 1970, 1971(a), 1971(b); Greenwood and Gomerly, 1971; Levy and Wadycki, 1972; Lowry, 1966; and Sahota, 1968).

Whereas the spatial allocation of migrants and the causes of out-migration from the rural areas have been discussed, it is recognised that not every potential migrant does migrate because of certain constraints. These are discussed below in the section on migrant selectivity and the selectivity variables considered are sex and age.

With regard to sex, the out-migration streams show that in most of the migration flows, males predominate over females as shown in Table 4:2 and Figure 4:2. This has been illustrated by Rempel (1974) in his analysis of the Kenya 1969 census of population. His analysis showed that in-migration streams to districts of destinations of the migrants showed a heavy excess of males over females as shown by Table 2:2. Likewise, the out-migration streams from the source provinces (Table 2:4) show a heavy excess of males over females. The balance between the in and out-migration streams is depicted by Table 2:7 of Appendix 1 whose results confirm the above research findings, as the destination provinces and districts of migrants record higher sex ratios than the national average while the 'sending' districts and provinces have low sex-ratios compared to the National average.

Furthermore, Table 2:7 shows that the Athi River township is situated in a principal out-migration province (Eastern) and district (Machakos), which account for very low sex ratios of 93.9 and 92.5, respectively, compared to the national average of 100.4 males per 100 females. At the same time, Table 2:9 shows that of the 14 major urban centres in the country, the Athi River township ranked first with the highest sex ratio of 164 males per 100 females, followed by a sex ratio of 159 males per 100 females for Nairobi, the largest urban center in Kenya. Obviously, there are more males migrating to Athi River than females and the pattern of sex distribution of the migrants derived from the study findings confirms this. It shows that in most of the in-migration streams to the Athi River township either (1) no females are reported at all, (2) heavy excesses of males over females are reported or (3) in very rare cases, an equal number of males and females is reported. Such a pattern of distribution of the sexes points to a preponderance of males in most of the migration flows from the areas of origin of the migrants and hence the heavy sex ratio of 207.50 recorded for migrants in this study.

Several plausible reasons can be advanced to account for the preponderance of males in the migration moves into the Athi River township. Amongst these is the fact that most of the in-migration streams into the study area are made with the intention of returning back home to the area of origin since whole families don't move. Secondly, the employment opportunities in the township must favour the male sex. This is evident because most of the Industrial activity in the town is higly mechanised such that the remaining dorminant job opportunities require heavy manual skills which are suitable to the male sex. Thirdly, the preponderance of males over females in the migration streams could have a cultural constraint in that the female sex is obliged to look after the family in the rural areas while the men go out to look for employment in the urban areas. Research findings indicated that 75% of the males in the sample reported that their wives had been left in the rural areas to look after their 'shambas' (small farms) and homes.

Therefore, the pattern of sex distribution of migrants in this study on the basis of province and district of origin conforms to the expected norms in most of the developing countries as males predominate

over females in most of the migration flows. An anomaly occurs in the Kajiado district of the Rift Valley province because no males are reported in the out-migration stream. However, it is noted that the migration rate involved (about 0.41%) is very minimal, relative to the others, as Table 4:2 shows.

A distribution of the sample migrants on the basis of the age variable (Table 4:3)shows that the 20-49 age bracket accounts for 82.09% of the total out-migration rates. Within this broad age bracket the greatest impact on in-migration rates comes from the 20 - 29 ten year broad age group which accounts for 37% of the migration rates. Hence, a supportive result for the thesis that most migrants from the rural areas are concentrated in the young adult years. This has been illustrated by previous research. For example, Rempel and Todaro (1968) in their study of the age structure of migrants to major urban centers of Kenya showed that the 20 - 29 ten year age bracket had the greatest impact on migration rates. Similar results have been reported for Latin America (Camisa, 1967) and Ghana (Caldwell, 1969).

The distribution of migration rates on the basis of age, further shows that there is a sudden rise in the rates to the 20 - 29 age bracket from the 15 - 19 age group. Likewise, a sudden drop in the rates is noticed after the 20 - 29 age group although the pattern fluctuates up to ≤ 49 years. Thereafter, the decrease in migration rates shows a regular pattern.

The sudden rise confirms the expectation that most of the job seekers coming into the Athi River township would be Form IV school leavers who are likely to be aged ≤ 20 years by the time they leave school. The sudden drop after the 45-49 five year age group points to the retirement period of most migrants and the inevitable return migration to the areas of origin of the migrants.

The distribution of migrants by sex and age supports earlier findings that males predominate in most migration moves for all age groups as illustrated by sex ratios presented in Table 4:4. The overall sex ratio of 208 males per 100 females testifies to this. However, the age - specific sex ratios show that the foregoing result holds for all age groups apart from the 15-19 age bracket in which women predominate and the 60-64 age group in which the sex imbalances even out to a perfect sex

The predominance of males in most of the migration streams has been accounted for in the fore-going discussion. The predominance of females in the 15-19 age bracket is unexpected in most migration streams in developing countries and its occurence in this study is not readily explainable. Similar results have however been reported by Rempel (1974) in his analysis of the Kenya 1969 population census. He showed that migration flows to the Nyanza province of Kenya showed a predominance of females over males.

In summary, the results of the study appertaining to migrant selectivity on the basis of sex and age have, to a great extent, followed the expected pattern. That is, males generally predominate over females in most of the migration flows and the highest migration rates are found within the young adult working years. This points to positive selectivity of migrants from their rural populations on the basis of sex and age. At the same time, it has been shown that one's age and sex can be deterrent factors to potential migrants in the rural environment.

Assuming that the migrants in this study have been positively selected from the total population in the rural areas on the basis of sex and age, one should expect that these migrants will be better equipped to deal with conditions in the urban environment than the rest of the population from which they originate. Hence, the following discussion on migrant adjustment and return migration.

In so far as the thesis of positive selectivity and adjustment have a hold on our migrants, the following assumptions should be found true with regard to the migrants: (1) the response rates to future plans of residence for the 'stayers' should predominate over the response rates for either the potential 'returnees' or potential 'movers' and (2) the 'potential stayers' should be positively selected from the total migrant population as compared to the 'potential movers' or 'potential returnees.'

It is to be expected that response rates appertaining to those who propose to stay or settle in the township should predominate over the response rates of those who wish to return or move

to another urban center in view of the greater economic opportunity, positive selectivity and resultant positive adjustment of migrants in this study. Furthermore, economic theory states that plenty of economic opportunity does encourage high rates of in-migration and repels out-migration. Therefore, potential out-migrants, if any at all, should comprise a very low percentage compared to the percentage representing the potential stayers.

Research evidence however indicates otherwise as Table 4:16 shows. Results show that the potential 'returnee' rates predominate above the rates of the potential 'stayers' by about 1.00%. The least rates are contributed by the potential 'movers'. It can be argued that since the 1.00% differential in the rates of the potential 'returnees' and the potential 'stayers' is almost negligable, the assumption that the potential 'stayers' have been positively selected from the total group of migrants, still has a hold on our migrants. It is, therefore indicated that 50% of the time, migrants are planning to settle in the Athi River township as much as undertake a return migration move.

Positive selectivity on the basis of Age for the potential 'stayers' would necessitate that the migration rates of potential 'stayers' be concentrated within relatively younger adult years than the rates of either the potential returnees or the potential movers. Study findings are presented in Table 4:17. They show that with the exception of the 'movers', the potential stayers are concentrated within relatively young adult years in comparison to the potential 'returnees'. The bulk of the potential 'stayers' are concentrated within the 20 - 39 year age bracket while those returning to their areas of origin and those moving to another urban center are concentrated within the 20 - 49 and 20 - 29 age brackets, respectively. The concentration of the migration rates of the 'movers' in the youngest age bracket is expected because the young are often move venturesome and therefore have the propensity to assume risk and are more ready to undertake a migration move to another urban center. This result has been illustrated by Browning (1974). Therefore, with the exception of the 'movers' results have shown that the 'stayers' are positively selected from the total

group of migrants, a fact that points to the young age structure of most urban centers in developing countries as shown by previous research work elsewhere (Camisa, 1967; Rempel and Todaro, 1968).

On the basis of occupation, positive selectivity will only have occured amongst those proposing to stay if their occupational rates predominate amongst the high income groups and are least within the low income groups. Study findings appertaining to occupational rates of the migrants are presented in Table 4:18. They show that with regard to the high income groups, the potential 'stayers' are negatively selected from the total migrant population because they account for the lowest occupational rates in comparison to the rates of the potential 'movers' and potential 'returnees'. This means that the majority of the migrants opting to settle in the Athi River township are found within the low income groups.

The occupational rates of the low income groups confirm the foregoing conclusion. Results show that the potential 'stayers' contribute the highest occupational rates amongst the casual and

unemployed workers thus indicating negative selectivity. This is unexpected in view of positive selectivity and adjustment that has already been established amongst our migrants. Therefore, results indicate that high rates of the low income groups and the unemployed plan to settle in the Athi River urban environment.

In summary, the total migrant population in our sample have been found to have positively adjusted to the urban environment in terms of social organisation and employment. An examination of the migrants' future plans for residence in part support the foregoing conclusion because the potential 'stayers' account for relatively equal rates as those of the potential 'returnees'. Furthermore, potential 'stayers' indicate positive selectivity in terms of age but fail to support the thesis of positive selectivity in terms of occupation. Consequently, although the young plan to settle in the township in the future, they form the bulk of the unemployed.

Whereas positive selectivity is supposed to occur amongst the potential 'stayers', negative selectivity is expected to occur within the ranks of the unemployed since return migration serves

to weed out the unsuccessful migrant from the urban environment. This assumption is made on the basis of three variables, namely: (1) Occupation, (2) Age and (3) Residence.

Table 4:18 presents the migrants future plans for residence classified by occupational rates. With regard to the high income groups, potential 'returnees' are shown to have the highest occupational rates thus indicating positive selectivity from the total population, reporting Likewise, the low income groups of the potential 'returnees' have within their ranks the lowest % of the unemployed. Therefore, results show that the greatest impact on occupational rates of the high income groups are derived from the potential 'returnees' while the least occupational rates come from the low income groups of the potential returnees. On the basis of occupation, research evidence has therefore shown that in fact, the potential returnees have been positively selected from the total sample migrant population, contrary to the expectations of research hypothesis set.

However, Table 4:19 indicates that the greatest impact on occupational rates within the ranks of the potential returnees are derived from the low income groups of major group 4 and 5, thus pointing to the assumed negative selectivity of potential returnees, on the basis of occupation. We can therefore conclude that although the potential 'returnees' are shown to be positively selected from the total migrant population on the basis of occupation (Table 4:18) a detailed examination of occupational rates of the potential 'returnees' (Table 4:19) reveals that the least paid and the unemployed workers account for the highest % of the occupational rates. Therefore, results support the thesis that return migration serves to weed out the unsuccessful migrant from the urban environment. Positive selectivity of the potential returnees would require that the rates of the high income groups should predominate and this is not the case. Similar research in support of the study findings has been reported (Browning, 1974; Mohsin, 1963; Gutkind, 1968).

Age-wise, Table 4:17 has shown that the potential returnees are negatively selected from the total group of migrants reporting since their

migration rates are concentrated within relatively older age groups in comparison to the rates of the potential 'stayers' or potential 'movers'.

A detailed distribution of potential return migrants by Age is presented in Table 4:20. Results show that the majority of the potential 'returnees' are concentrated within the 45 - 49 five year age bracket. As has been pointed out before, this result points to the retirement period when most migrants are inclined to return to their areas of origin. Return migration is thus assumed to be an expected way of life. Other researchers have pointed to this fact in their research findings, for example, Ominde (1974) for Kenya and Caldwell (1969) for Ghana.

Furthermore, Table 4:20 shows that the broad age bracket of 20 - 49 years has the greatest impact on return migration rates. The concentration of potential return migration rates in earlier age groups is however unexpected since the same age bracket has been shown to have the greatest impact on in-migration rates for migrants in this study. Potential return migration rates cross classified by Age and occupation partly lends an explanation.

Table 4:21 shows that the least paid workers and the unemployed have the greatest impact on the potential return migration rates of the relatively young 20 - 39 age bracket. Thus the potential 'returnees' falling within this age bracket could be said to be negatively selected from the total sample population in terms of occupation. This can be interpreted to mean that lack of economic opportunity and resultant unemployment are factors underlying most potential return migration moves from the Athi River township.

Unemployment and low income levels have been shown to be negative forces in the Athi River urban environment. Likewise response rates appertaining to problems facing the migrant in the township should testify to the existance of these problems. Such response rates are presented in Table 4:22 and results show that the major problems pervading the social structure in the township are, in order of importance, lack of housing facilities, unemployment and a high crime rate. These problems are logical products of lack of employment facilities and low incomes.

Similary, it is to be expected that since wage levels determine, to a great extent, the choice of a residential area by the arriving migrants the highest return migration rates should be reported by the low income groups who live in low income residential areas. Contrary to this expectation are the study results presented in Table 4:23 which show that potential return migration rates are selected from the high, medium and low income areas. However, a cross classification of return migration rates and occupation within the residential areas of the town reveals that the greatest impact on potential return migration rates are derived from the low income groups.

To summarize, results on indicated return migration have confirmed the hypothesis set, that the potential return migrants are negatively selected from the total sample population in this study. Thus, indicated return migration is viewed as a weeding instrument to uproot the unsuccessful migrant from the urban environment.

## Summary and Conclusions.

The primary objective of this thesis was to determine the factors that could have influenced out-migration from the area of origin of the migrants and in-migration into the Athi River township. Furthermore, it was assumed that in cases where the urban environment fails to offer solutions to the initial causal factors of out-migration from the rural areas of origin, the affected migrants will express a desire to undertake an out-migration move from the township. Hence, while positive migrant selectivity was expected to have occurred amongst the potential out-migrants in rural populations, negative migrant selectivity was expected to be indicated for migrants who propose to out-migrate from the township. Negative selectivity of the potential return migrants from the Athi River township will obviously increase the positive selectivity of those migrants who propose to stay or settle in the township.

In order to determine the causal factors of out-migration from the areas of origin, two basic approaches were followed. These were (1) the use of a model of aggregate relationships approach and

(2) the use of disaggregated data based on individual decision function.

The variables used in the model of aggregate relationships, predicting rural to urban migration rates were found to be significant at better than the 1.0% probability level,carry with them the expected signs and were jointly found to account for 67.24% of the variance in rural to urban migration flows. The greatest impact on out-migration rates have been shown to come from the distance factor and the mean wage earnings differentials, as shown by Table 4:10. Contributing less but substantial amounts of variance explained in the independent variable - the migration rates, are the proxy variables for the population pressure and the level of per capita government expenditure. Hence, the aggregate model results suggest that generally migrants in this study tend to: (1) originate from the immediate localities to the study area and their numbers decrease with successive distance travelled, (2) move away from areas of low economic opportunity to areas of relatively high economic opportunity and (3) move away from areas of high population pressure and low Government per capita expenditure to areas

where the level of per capita Government expenditure is relatively high.

The second approach based on disaggregated data lends further support to the results of the aggregate model relationships. Both the research findings related to the two approaches have been shown to be consistent with findings of previous research work, as has been pointed out in the discussion section of this chapter.

The results of the study have shown that the in-coming migrants to the township were positively selected from their rural populations on the basis of sex and age. Results therefore show that most migration streams are predominantly made up of males, who are concentrated in the young adult working years. Furthermore, the assumption that positive selectivity of migrants from the rest of the rural populations of origin will necessarily lead to positive adjustment to the urban environment has been confirmed on the basis of Social and Occupational organisation. Likewise, potential 'returnees' have been shown to be negatively selected from the rest of the population residing in the Athi River township. The potential stayers

are assumed to be better equipped to deal with the problems of the urban environment than the potential 'movers' or potential 'returnees', a fact that has been demonstrated by the study results.

On the whole the working hypotheses set have to a great extent, been confirmed by the results of the study. In addition, the research findings are shown to concur with previous research work reported elsewhere, as indicated in the discussion section of this chapter.

While previous research work has indicated that rural to urban migration can either be desirable or undesirable, depending on given circumstances, the study findings seem to suggest that for migrants in this study, rural to urban migration is both desirable and undesirable. It is desirable because most of the migrants have been shown to have been stimulated into undertaking migration moves from the areas of origin by the high economic opportunity in the Athi River township. On the other hand the urban environment in the Athi River township has been shown to be beset with social and economic problems,

tabulated in Table 4:22. These problems are caused or at least intensified by the pressure of population on the resources of the urban environment. Admittedly, policy makers should consequently concentrate on policies that, while recognise the inevitability of rural to urban migration, given the present and past developmental economic structure, should discourage excessive flooding of the urban areas by rural migrants. One such approach would be to decentralise the Economic activity and Social services which are concentrated mostly in the urban areas to rural areas so that an equittable allocation of activities should discourage excessive rural to urban migration. This has been shown to be an area of priority by the Kenya Government which has set out to achieve maximum development of the rural areas including the promotion of production and employment opportunities so as to slow down the rate of migration from the rural areas.

Such a policy approach would benefit the potential return migrants who either plan to return due to lack of employment facilities in the urban environment or wish to be re-united

with their families in old age, in cases where migration is an expected way of life. Hence, decentralization of employment generating activities will help curb the intensification of the detrimental impact of the urban centers on the surrounding rural areas. The urgency of this policy approach is realized more when one considers the fact that potential 'returnees' intend to add to the rural resevoir of migrants who had been negatively selected from the total rural populations of origns and hence could not out-migrate. If no gainful employment is available for them, they are bound to swell the ranks of masses comprising the unemployed of the poverty stricken rural landscape.

In addition, implied negative migrant selectivity of the rural populations from which the actual migrants in this study originate, points to the undesirable aspects of migration on the 'sending' source areas. In an agricultural country like Kenya, one such effect would be the robbing of the young adults by the urban environment, from the land. This study has not attempted to determine the impact that out-migration has had on the

source origin of the migrants as is done in Okun (1968) - A fruitful avenue of approach for further research in the process of rural to urban migration.

APPENDIX 1

TABLE 2:2

A SUMMARY OF IN-MIGRANTS IN THE PROVINCES AND SOME SELECTED DISTRICTS OF KENYA - 1969 CENSUS

| PROVINCE AND DISTRICT | Born outside of district of Enumeration | | In-migration as percent of Total population | | |
|---|---|---|---|---|---|
| | Males | Females | Males % | Females % | Total % |
| 00 NAIROBI | 210,622 | 119,781 | 70.0 % | 58.6 % | 64.30 % |
| 10 CENTRAL | 161,749 | 159,577 | 20.1 % | 18.6 % | 19.35 % |
| 11 Nyandarua | 47,700 | 47,654 | 54.9 % | 53.9 % | 54.40 % |
| 12 Kiambu | 49,759 | 43,897 | 21.2 % | 18.3 % | 19.75 % |
| 13 Nyeri | 27,505 | 27,795 | 16.2 % | 14.9 % | 15.55 % |
| 14 Murang'a | 15,851 | 18,821 | 7.6 % | 8.0 % | 7.80 % |
| | | | | | |
| 20 COAST | 137,413 | 99,025 | 29.0 % | 21.8 % | 25.40 % |
| 21 Mombasa | 80,331 | 46,704 | 56.0 % | 45.3 % | 50.65 % |
| | | | | | |
| 30 EASTERN | 37,088 | 30,035 | 4.0 % | 3.1 % | 3.55 % |
| 31 Machakos | 15,966 | 13,050 | 4.7 % | 3.6 % | 4.15 % |
| | | | | | |
| 40 NYANZA | 111,807 | 122,654 | 10.7 % | 11.5 % | 11.10 % |
| 41 Kisumu | 26,128 | 25,016 | 12.9 % | 12.9 % | 12.80 % |
| | | | | | |
| 50 RIFT VALLEY | 315,139 | 256,798 | 28.1 % | 24.3 % | 26.20 % |
| 51 Nakuru | 83,963 | 69,175 | 54.8 % | 50.8 % | 52.80 % |
| 52 Trans-Nzoia | 34,359 | 31,278 | 52.8 % | 52.7 % | 52.75 % |
| 53 Uasin-Gishu | 59,197 | 52,942 | 59.8 % | 58.2 % | 59.00 % |
| | | | | | |
| 60 WESTERN | 33,181 | 41,468 | 5.2 % | 6.0 % | 2.54 % |
| 61 Kakamega | 11,261 | 16,018 | 3.0 % | 3.9 % | 3.45 % |
| 70 NORTH-EASTERN | 8,009 | 4,740 | 6.0 % | 4.2 % | 5.10 % |

Source: Rempel, H., Analysis of the Information on Inter-District migration provided in the 1969 Kenya Census (1974), p. 8.

TABLE 2:4

A SUMMARY OF OUT-MIGRANTS IN THE PROVINCES AND SOME SELECTED DISTRICTS OF KENYA - 1969 CENSUS

| PROVINCE AND DISTRICT | Enumerated outside of district of birth | | Out-migration as % of total population | | |
|---|---|---|---|---|---|
| | Males | Females | Males % | Females % | Total % |
| 00 NAIROBI | 148,807 | 154,773 | 63.2% | 64.7% | 63.45% |
| | | | | | |
| 10 CENTRAL | 270,942 | 231,518 | 30.0% | 24.8% | 27.4% |
| 11 Nyandarua | 8,830 | 8,915 | 17.9% | 18.0% | 17.95% |
| 12 Kiambu | 82,007 | 77,847 | 30.7% | 28.4% | 29.55% |
| 13 Nyeri | 69,701 | 60,653 | 32.9% | 27.6% | 30.25% |
| 14 Murang'a | 97,030 | 74,377 | 33.6% | 25.6% | 29.6% |
| | | | | | |
| 20 COAST | 62,944 | 45,950 | 15.7% | 11.5% | 13.6% |
| 21 Mombasa | 10,942 | 9,114 | 14.8% | 13.9% | 14.35% |
| | | | | | |
| 30 EASTERN | 124,859 | 70,681 | 12.4% | 6.9% | 9.65% |
| 31 Machakos | 58,008 | 33,660 | 15.2% | 8.7% | 11.95% |
| | | | | | |
| 40 NYANZA | 140,205 | 110,996 | 13.1% | 10.5% | 11.8% |
| 41 Kisumu | 55,274 | 49,983 | 23.8% | 22.6% | 23.2% |
| | | | | | |
| 50 RIFT VALLEY | 135,557 | 120,848 | 14.4% | 13.1% | 13.75% |
| 51 Nakuru | 25,203 | 26,189 | 26.7% | 28.1% | 27.4% |
| 52 Tans-Nzoia | 4,787 | 4,410 | 13.5% | 13.6% | 13.55% |
| 53 Uasin-Gishu | 6,226 | 6,046 | 13.5% | 13.7% | 13.6% |
| | | | | | |
| 60 WESTERN | 123,780 | 93,116 | 16.9% | 12.6% | 14.75% |
| 61 Kakamega | 93,454 | 64,752 | 20.4% | 14.3% | 17.35% |
| | | | | | |
| 60 NORTH-EASTERN | 7,914 | 6,196 | 5.9% | 5.5% | 5.7% |

Source: Rempel, H., An Analysis of the Information on Inter District Migration provided in the Kenya 1969 Census, 1974, P. 8 - 9

TABLE 2:6

NET INTERNAL MOVEMENTS IN KENYA - 1969 CENSUS

| PROVINCE AND DISTRICT | NET INTERNAL MOVEMENT | | |
|---|---|---|---|
| | MALES | FEMALES | TOTAL |
| 00 NAIROBI | 61,815 | 34,992 | 26,823 |
| 10 CENTRAL | 109,193 | 71,941 | 181,134 |
| 11 Nyandarua | 38,870 | 38,739 | 77,609 |
| 12 Kiambu | 32,248 | 33,950 | 66,198 |
| 13 Nyeri | 42,196 | 32,856 | 74,252 |
| 14 Murang'a | 81,179 | 55,556 | 131,105 |
| | | | |
| 20 COAST | 74,469 | 53,075 | 127,544 |
| 21 Mombasa | 69,368 | 37,590 | 106,958 |
| | | | |
| 30 EASTERN | 87,771 | 40,646 | 128,417 |
| 31 Machakos | 42,042 | 20,610 | 62,652 |
| | | | |
| 40 NYANZA | 23,398 | 11,658 | 16,740 |
| 41 Kisumu | 29,146 | 24,967 | 54,113 |
| | | | |
| 50 RIFT VALLEY | 179,582 | 135,950 | 315,532 |
| 51 Nakuru | 58,760 | 42,986 | 101,746 |
| 52 Trans-Nzoia | 29,572 | 26,868 | 56,440 |
| 53 Uasin Gishu | 52,971 | 46,896 | 99,867 |
| | | | |
| 60 WESTERN | 90,599 | 51,648 | 142,247 |
| 61 Kakamega | 82,193 | 48,734. | 130,927 |

Source: Rempel, H., Analysis of the Information on Inter-District Migration provided in the 1969 Kenya Census, (1974) P. 8 - 9.

TABLE 2:7

SEX RATIOS FOR ALL AGE GROUPS BY PROVINCE AND SOME SELECTED DISTRICTS - KENYA 1969 CENSUS.

| PROVINCE | DISTRICT | SEX-RATIO |
|---|---|---|
| KENYA as a whole | | 100.4 |
| NAIROBI | | 147.1 |
| CENTRAL | | 97.0 |
| | Nyandarua | 100.0 |
| | Kiambu | 97.9 |
| | Nyeri | 91.3 |
| | Murang'a | 88.4 |
| COAST | | 104.8 |
| | Mombasa | 139.1 |
| EASTERN | | 93.9 |
| | Machakos | 92.5 |
| NYANZA | | 97.4 |
| | Kisumu | 103.6 |
| | Siaya | 84.8 |
| RIFT VALLEY | | 106.4 |
| | Nakuru | 112.4 |
| | Trans-Nzoia | 109.6 |
| | Uasin Gishu | 109.5 |
| WESTERN | | 93.4 |
| | Kakamega | 92.6 |
| NORTH-EASTERN | | 119.4 |

Source: Central Bureau of Statistics.

# APPENDIX II

UNIVERSITY OF NAIROBI

DEPARTMENT OF GEOGRAPHY

## A MIGRATION - EMPLOYMENT SURVEY OF THE ATHI RIVER TOWNSHIP

CONFIDENTIAL: Information given will be treated as strictly confidential.

| | CODE | COLUMN |
|---|---|---|
| 1. ENUMERATION AREA<br>Zone 1 = K.M.C.<br>Zone 2 = Portland<br>Zone 3 = Makadara<br>Zone 4 = Sophia<br>Zone 5 = Kisumu Ndogo and other slum areas | | 1 - 2 |
| 2. BUILDING SERIAL NUMBER | | |
| 3. RESPONDENT'S NAME ---------- | | |
| (b) Respondent's Number ---------- | | 6,7,8,9 |
| 4. SEX: Male = 1<br>Female = 2 | | |
| 5. AGE: (in years)<br>Not reported = 999 | | 13 |
| 6. RELATIONSHIP TO HEAD OF HOUSEHOLD<br>Head = 1<br>Wife = 2<br>Relative = 3<br>Employee = 4<br>Other = 5 Specify-----<br>Not reported = 9 | | 14,15,16<br>17 |

| | CODE | COLUMN |
|---|---|---|
| 7. MARITAL STATUS: | | |
| Single = 1 | | |
| Married = 2 | | |
| Divorced = 3 | | 18 |
| Separated = 4 | ☐ | |
| Widow = 5 | | |
| Widower = 6 | | |
| Not reported = 9 | | |
| 8. ETHNIC GROUP: | | |
| Kamba = 1 | | |
| Kikuyu = 2 | | |
| Luo = 3 | | 30 |
| Luhya = 4 | ☐ | |
| Masai = 5 | | |
| Somali = 6 | | |
| Kisii = 7 | | |
| Other = 8-Specify---- | | |
| Not reported = 9 | | |
| 9. PLACE OF BIRTH; | | |
| A: PROVINCE; | | |
| North-Eastern = 1 | | |
| Eastern = 2 | | |
| Nairobi = 3 | | |
| Coast = 4 | | 31 |
| Central = 5 | ☐ | |
| Rift Valley = 6 | | |
| Nyanza = 7 | | |
| Western = 8 | | |
| Not reported = 9 | | |

| | CODE | COLUMN |
|---|---|---|
| 9. | | |
| B: DISTRICT: | | |
| Nairobi = 01 | | |
| Kiambu = 11 | | |
| Muranga = 12 | | |
| Nyeri = 13 | | |
| Kirinyaga = 14 | | |
| Nyandarua = 15 | | |
| Kisumu = 21 | | |
| Siaya = 22 | | |
| South Nyanza = 23 | | |
| Kisii = 24 | | |
| Kakamega = 31 | | |
| Bungoma = 32 | | |
| Busia = 33 | | |
| Mombasa = 41 | | 32,33 |
| Kilifi = 42 | | |
| Kwale = 43 | | |
| Lamu = 44 | | |
| Tana River = 45 | | |
| Taita Taveta = 46 | | |
| Laikipia = 51 | | |
| Narok = 52 | | |
| Kajiado = 53 | | |
| Turkana = 54 | | |
| Samburu = 55 | | |
| Nakuru = 56 | | |
| Baringo = 57 | | |
| Kericho = 58 | | |
| Uasin Gishu = 59 | | |
| Trans-Nzoia = 61 | | |
| Elgeyo-Marakwet = 62 | | |
| West Pokot = 63 | | |
| Embu = 71 | | |
| Meru = 72 | | |
| Isiolo = 73 | | |

| | CODE | COLUMN |
|---|---|---|
| 9. B: cont. | | |
| Kitui = 74 | | |
| Machakos = 75 | | |
| Marsabit = 77 | | |
| Garissa = 81 | | |
| Wajir = 82 | | |
| Mandera = 83 | | |
| Not reported = 99 | | |
| Somalia = 92 | | |
| Ethiopia = 93 | | |
| Uganda = 94 | | |
| Other African Countries = 96-Specify----- | | |
| 10. RELIGIOUS AFFILIATION: | | |
| Moslem = 1 | | |
| Protestant = 2 | [ ] | |
| Catholic = 3 | | |
| Traditional = 4 | | |
| Other = 5, Specify------ | | |
| Not reported = 9 | | |
| 11. EDUCATIONAL ATTAINMENT: | | |
| None = 0 | | |
| Primary 1 to 4 = 1 | | |
| Primary 5 to 7 = 2 | | |
| Secondary = 3 | | |
| H.S.C. = 4 | [ ] | 37 |
| University = 5 | | |
| Technical College = 6 | | |
| Not reported = 9 | | |
| 12. SOCIAL STATUS: | | |
| Self employed = 1 | | |
| Unemployed = 2 | | |
| Casual Worker = 3 | | |

CODE COLUMN

12. cont.

Seasonal Farmer = 4
Housewife = 5
Civil Servant = 6
Student = 7
Industrial worker = 8 Specify concern

13. RECORD INFORMATION ABOUT SPOUSE(S) AS BELOW:

Number of wives:

1 Wife = 1
2 Wives = 2
3 Wives = 3
4 Wives = 4
None = 0
Not reported = 9

14. NUMBER OF PEOPLE LIVING IN THE HOUSEHOLD:

1 to 4 = 1
5 to 9 = 2
10 to 14 = 3
15 to 19 = 4
20+ = 5
Not reported = 9

15. RENTAL VALUE OF THE DWELLING UNIT

(a) Specify amount in Kenya shillings:
K----------

41,-43

(b) Categories of rental value of dwelling unit per month in shillings:

CODE | COLUMN

15 (b) cont.

| | | |
|---|---|---|
| Less than 24 | = | 1 |
| 25 - 49 | = | 2 |
| 50 - 99 | = | 3 |
| 100 - 149 | = | 4 |
| 150 - 249 | = | 5 |
| 250 - 499 | = | 6 |
| 500 - 549 | = | 77 |
| 550+ - | = | 8 |
| Not reported | = | 9 |

15(c)
Would you be willing to move to another dwelling unit within this town?

| | | |
|---|---|---|
| Yes | = | 1 |
| No | = | 2 |

If "Yes", ask:-

(i) Why?_____

_____

_____

(ii) Where?_____

_____

(d) Whom did you put up with when you first came to stay in this town?

| | | |
|---|---|---|
| A relative | = | 1 |
| A friend | = | 2 |
| A rented room | = | 3, place ____ |
| A rented house | = | 4, place ____ |
| K.M.C. quarters | = | 5 |
| Portland Labour quarters | = | 6 |
| Other | = | 7, specify____ |
| Not reported | = | 9 |

CODE | COLUMN

16. OCCUPATION

What kind of job do you do here in Athi River?

Occupation Categories:

0 MAJOR GROUP 0:

Professional, Technical and related workers

00 Architects, Engineers and Surveyors
01 Veterinarians and other related scientists
02 Physicians, Surgeons and Dentists
03 Professional Medical Workers not elsewhere classified.
05 Teachers
06 Clergy and related members of religious orders.
07 Other professional, Technical and related workers.

[ ][ ] 68,69

(1) MAJOR GROUP 1

Administrative, Executive and Managerial Workers

10 Administrators and Executive Officials
11 Directors, Managers
12 Other

(2) MAJOR GROUP 2

Clerical Workers

20 Book-keepers and Cashiers
21 Stenographers and Typists
22 Other Clerical Workers

| | | CODE | COLUMN |
|---|---|---|---|
| (3) | MAJOR GROUP 3 | | |
| | Industrial/Service Manual Workers-skilled | | |
| 30 | Farm Managers | | |
| 31 | Electricians | | |
| 32 | Carpenters | | |
| 33 | Other | | |
| (4) | MAJOR GROUP 4 | | |
| | Industrial/Service Manual Workers-Semi-skilled | | |
| 40 | Whole sale and retail traders | | |
| 41 | Salesmen | | |
| 42 | Drivers and Firemen, Railway engine | | |
| 43 | Drivers, Road transport | | |
| 44 | Telephone, Telegraph and related telecommunications operators | | |
| 45 | Knitters and Tailors and other related workers | 〃 | |
| 46 | Watchmakers | | |
| 47 | Other | | |
| (5) to (6) | MAJOR GROUP 5 - 6 | | |
| | Industrial/Service Manual Workers-unskilled | | |
| 50 | Shop Assistants and other related workers | | |
| 51 | Kiosk Owners | | |
| 52 | Domestic Servants: Housewives, Maids, Cooks | | |

| | CODE | COLUMN |
|---|---|---|
| Group 5 - 6 cont. | | |
| 53 Seasonal Farmers, farm/non-farm labourers | | |
| 54 Miners and quarrymen | | |
| 55 Conductors and brake-men, railway | | |
| 56 Security guards | | |
| 57 Moulders and related metal workers | | |
| 58 Bricklayers, Plasterers and other construction workers | | |
| 59 Packers, Labellers, Slaughter-men and other related workers | | |
| 60 Bartenders, Barbers and Hairdressers | | |
| 61 Sweepers | | |
| 62 Others, not elsewhere classified | | |
| 63 Brewers of Chang'aa, sellers of charcoal, and sellers of bones | | |
| (7) MAJOR GROUP 7 | | |
| Workers not Classified by occupation | | |
| 70 Workers seeking employment - casual employed workers | | |
| 71 Members of the Armed Forces, Police force and others. | // | |
| 72 Workers not reporting any occupation | | |
| 73 Harlots | | |
| 17. INCOME LEVEL | | |
| Approximately how much money would you say you receive per month? | | |
| (a) Specify actual figure in Kenya shillings: K_____ | | |
| (b) Categories of Monthly income: | | |
| No income = 0 | | |
| 1 - 50 = 1 | | 48-49 |
| 51 - 100 = 2 | | |

| | CODE | COLUMN |
|---|---|---|
| 17(b) cont. | | |
| 101 - 150 = 3 | | |
| 251 - 500 = 4 | | |
| 501 - 750 = 5 | | |
| 751 - 1000 = 6 | | |
| 1001 - 2000 = 7 | | |
| 2001 - 3000 = 8 | | |
| 3000 = 9 | | |
| No response = 10 | | |
| 17(c)What other income (other than the employment income) do you receive? | | |
| None = 0 | | |
| From relative = 1 | | |
| Brewing = 2 | [ ] | 52 |
| Sale of farm crops at home = 3 | | |
| Sale of bones and/or Charcoal = 4 | | |
| Other = 5 Specify | | |
| No response = 9 | | |
| 18. ABOUT HOW MUCH WERE YOU EARNING BEFORE MIGRATING TO ATHI RIVER TOWN? | | |
| (i) Specify actual amount in Kenya shillings K:_____ | | |
| (ii) Categories of wage earnings before migration | | |
| No income = 0 | | |
| 1 - 50 = 1 | | |
| 51 - 100 = 2 | | |
| 101 - 250 = 3 | | |
| 251 - 500 = 4 | [ ][ ] | 55-56 |
| 501 - 750 = 5 | | |

| | CODE | COLUMN |
|---|---|---|
| 18(ii) cont. | | |
| 751 - 1000 = 6 | | |
| 1001 - 2000 = 7 | | |
| 2001 - 3000 = 8 | | |
| 3000 = 9 | | |
| No response = 10 | | |
| 19. (i) For how long have you been living in Athi River? | | |
| Less than a year = 1 | | |
| Less than 5 years = 2 | [ ] | |
| 6 to 10 years = 3 | | |
| 11 to 15 years = 4 | | |
| 16 to 20 years = 5 | | |
| 21 to 25 years = 6 | | |
| 25 years and over = 7 | | |
| Can't remember = 9 | | |
| (ii) In which year did you move to stay in this town?---------- | [ ][ ] | 60 - 61 |
| 20. WHY DID YOU CHOOSE TO LIVE IN THIS AREA OF THE TOWN? | | |
| (a) Because it is nearest my place of work = 1 | | |
| (b) Labour quarters for---------- industry = 2 | | |
| (c) Because my relative/ friends stay in this area = 3 | | |
| (d) Other, Specify ----= 5 | | |
| (f) No response = 9 | | |

| | CODE | COLUMN |
|---|---|---|
| 21. DO YOU HAVE ANY RELATIVES OR FRIENDS IN THIS TOWN?<br>Yes = 1<br>No = 2 → "ASK" | | 73 |
| What is the relative position of your acquiatance's house?<br>Sharing a house = 1<br>Next door = 2<br>Same block = 3<br>Elsewhere in enumeration area = 4<br>Outside enumeration area = 5<br>Not reported = 9 | | |
| 22. REASONS FOR MIGRATING TO ATHI RIVER TOWNSHIP<br>(i) Why did you decide to leave your home area (usual place of residence) and come to stay here in Athi River township?<br>(a) No job available at home area = 1<br>(b) Suitable job not available at home area("Suitable" with regard to qualifications) = 2 | | |

| | CODE | COLUMN |
|---|---|---|
| 22.cont. | | |
| (ii) If the answer is (2) ask: | | |
| - Was job found in Athi River? ---------- | ☐☐ | 66-67 |
| Yes=(a) | | |
| No =(b) | | |
| - When? ---------- | | |
| (c) No shamba available at home = 3 | | |
| (d) No employment facilities since there are too many people looking for jobs = 4 | | |
| (e) Market for his/her products not sufficient in home area = 5 | | |
| (i) Specify type of skills and trade ---------- | | |
| (ii) Are you satisfied with the present opportunities in Athi River?---------- ---------- | | |
| (f) Transferred to Athi River by employment = 6 | | |
| (g) Appointed to a job straight-away and hence migration = 7 | | |
| (h) Migrated for the sake of educating/training/obtaining employment for the children = 8 | | |
| (i) Moved to stay with husband/ wife or any other relative = 9 | | |
| (j) Other = 10 Specify | | |
| (k) Not reported = 99 | | |

| | CODE | COLUMN |
|---|---|---|
| 23. (i) Do you regard Athi River as your home?<br>Yes = 1<br>No = 2<br>Don't know = 3 | ☐ | |
| (ii)(If answer is (2), ask:)<br>Do you hope to (a) go back home or<br>(b) move to another town in the future? | ☐ | |
| 24. Can you please give me the following information about members of your household. (Interviewer,deal with Tables 1,2 and 3. | | |

TABLE 1 PERSONS PRESENTLY LIVING IN THE HOUSEHOLD BY SEX AND AGE

Interviewer: List the head of the household first

| NAME | RELATIONSHIP TO HEAD | AGE IN YEARS | SEX | | PLACE OF BIRTH | | YEAR OF FIRST ARRIVAL IN TOWN | EDUCATIONAL ATTAINMENT (Grade) |
|---|---|---|---|---|---|---|---|---|
| | | | MALE | FEMALE | DISTRICT | TOWN | | |
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 5. | | | | | | | | |
| 6. | | | | | | | | |
| 7. | | | | | | | | |
| 8. | | | | | | | | |
| 9. | | | | | | | | |
| 10. | | | | | | | | |
| 11. | | | | | | | | |
| 12. | | | | | | | | |

| 24. 1. TABLE 1: | CODE | COLUMN |
|---|---|---|
| INTERVIEWER: Using Table 1, record the following information: | | |
| (i) Total number of persons living in the household | | 19-20 |
| (ii) Number of persons in the household aged 0 - 15 years | | 21 |
| (iii) Number of persons in the household aged 16 - 64 years | | 22-23 |
| (iv) Number of persons in the household aged 65+ | | 28 |
| (v) Total number of males living in the household | | 34 |
| (vi) Total number of females living in the household. | | 35 |

24. 2. TABLE 2

NUMBER OF CHILDREN BY SEX BORN IN THE LAST 12 MONTHS IN THE HOUSEHOLD

| NAME OF CHILD | SEX | | BORN, HOW MANY MONTHS AGO? | MOTHER'S NAME | CODE | COLUMN |
|---|---|---|---|---|---|---|
| | M | F | | | | |
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | 24-25 |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |
| 9. | | | | | | |
| 10. | | | | | | |

24. 3. TABLE 3

DEATHS IN THE HOUSEHOLD IN THE LAST 12 MONTHS BY SEX AND AGE

| NAME | SEX M | SEX F | AGE AT DEATH IN YEARS OR MONTHS | TOTAL | CODE | COLUMN |
|---|---|---|---|---|---|---|
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | 26-27 |
| 5. | | | | | | |
| 6. | | | | | | |

| | CODE | COLUMN |
|---|---|---|
| 25. EXTENT OF PRESENT CONTACT WITH HOME AREA | | |
| (i) How often do you visit your home area, since you started to stay in Athi River? | | |
| Quite often = 1<br>Sometimes = 2<br>None at all = 3 | [ ] | |
| (ii) Do you own a house and/or land back home? | | |
| Yes = 1<br>No = 2<br>Not reported = 9 | [ ] | |
| (iii) (Interviewer, if answer is (1), ask:) Approximately, how much land do you own? (Specify amount in acres:)_____ | [ ][ ] | 63-64 |
| (iv) Are you still engaged in: | | |
| Cultivation = 1<br>Live-stock raising = 2<br>Other = 3,specify--<br>---------- | [ ] | |
| at your home area? | | |
| (v) Now that you are here, who looks after your house and/or land? | | |
| My father/father-in-law = 1<br>My mother/mother-in-law = 2<br>My brother/sister = 3 | [ ] | |

| | CODE | COLUMN |
|---|---|---|
| 25(v) cont. | | |
| My uncle = 4 | | |
| Leased = 5 | | |
| Lying undeveloped = 6 | | |
| Other (specify)____ = 7 | | |
| (vi) Do you support your (extended) family back home? | | |
| Have no relatives to support = 1 | | |
| Relatives are self-sufficient = 2 | | 70-71 |
| ____ I have to support them = 3 | | |
| Why?---------- | | |
| ---------- | | |
| ---------- | | |
| 26. WHAT WOULD YOU SAY ARE THE MAJOR PROBLEMS FACING THE INHABITANTS OF YOUR HOME AREA? | | |
| 1) Failure of rain and hence lack of food = 1 | | |
| 2) Pressure on land = 2 | | |
| 3) Lack of employment opportunities = 3 | | |
| 4) Other | | |
| Specify ---------- | | |
| ---------- | | |

CODE COLUMN

27. HOUSING CONDITIONS AND OTHER SOCIAL AMENITIES

1. TYPE OF ACCOMMODATION:

a) Detached bungalow = 1
b) Semi-detached house/ maisonette = 2
c) Flat = 3
d) One room = 4
e) A shanty-hut/room = 5
f) Attached to back area of shop = 6

2. NUMBER OF ROOMS OCCUPIED BY THE HOUSEHOLD

a) Bedroom(s) ----------
b) Livingroom(s)----------
c) Dining room(s)----------
d) Living/dining room(s)------

TOTAL NO. OF ROOMS = _____

78

3. DWELLING TENURE:

Own = 1
Free,related to owner = 2
Rent subsidized = 3
Full rent = 4
No rent = 5
Other = 6,
Specify ----------

4. TYPE OF MATERIAL USED FOR THE WALLS OF THE HOUSE

Cement blocks = 1
Mud/bricks or blocks, plastered with cement = 2
Mud only = 3

CODE COLUMN

27. 4 cont.

Iron sheets = 4
Other = 5,
Specify ----------

5. TYPE OF FLOOR OF THE HOUSE

Concrete/cement finish = 1
Mud finish = 2
Tiled = 3
Other = 4,
Specify ----------

6. TYPE OF ROOF OF HOUSE

Asbestos = 1
Concrete/cement/tile = 2
Thatched roofing = 3
Other = 4
Specify ----------
----------

7. ELECTRICITY SUPPLY AVAILABILITY AND USE

Available and being used = 1
Available but not being used = 2
Not available = 3

What fuel is used in case of (3)?

Firewood = 1
Paraffin = 2
Paraffin/charcoal = 3
Other = 4,
Specify----------

| | CODE | COLUMN |
|---|---|---|
| 8. WATER SUPPLY FOR THE HOUSE | | |
| Pipe-borne water in the house = 1 | | |
| Pipe-borne water from street nearby = 2 | | |
| Pumpwater/Wall water = 3 | | |
| Water from river or stream = 4 | | |
| Other = 5, | | |
| Specify ---------- | | |
| ---------- | | |
| 9. KITCHEN FACILITIES IN THE HOUSE | | |
| Separate kitchen within the house = 1 | | |
| Kitchen shared with others = 2 | | |
| Back-yard of compound used = 3 | | |
| No kitchen = 4 | | |
| 10. TYPE OF LATRINE AVAILABLE | | |
| (a) Water closet system = 1 | | |
| (b) Bucket/pit latrine = 2 | | |
| (c) Public street latrine = 3 | | |
| (d) Back-yard used = 4 | | |
| (e) Other = 5, | | |
| Specify ---------- | | |
| ---------- | | |
| 11. MEDICAL FACILITIES AVAILABLE AND USE | | |
| (a) Private hospital/clinic/ practitioner = 1 | | |
| (b) General hospital = 2 | | |
| (c) Dispensary: | | |

| | CODE | COLUMN |
|---|---|---|
| 27. 11 cont. | | |
| i) Government - Urban Council<br>ii) Kenya Meat Commission<br>iii) Portland | | |
| (d) Native Doctor/Medicine-man = 4<br>(e) Spiritual healing = 5<br>(f) Other = 6,<br>Specify----------<br>(g) Not reported = 9 | | |
| 28. WHAT IS THE CHIEF MEANS OF TRANSPORT FOR YOUR HOUSEHOD?<br>(a) Private car = 1<br>(b) Public transport(e.g. bus, 'matatu', train) = 2<br>(c) Walk = 3<br>(d) Other = 4,<br>Specify ----------<br>---------- | | |
| 29. (Interviewer, refer to Table (1) and ask:)<br>HAVING STAYED HERE IN THIS TOWNSHIP SINCE 19..., WHAT WOULD YOU CONSIDER AS THE MAJOR PROBLEMS FACING THIS TOWNSHIP?<br>(a) Lack of housing facilities = 1<br>(b) Crime rate is too high = 2<br>(c) High rate of unemployment = 3<br>(d) The township is too arid = 4<br>(e) Other = 5,<br>Specify---------- | | 74<br>75<br>76<br>77 |

| | CODE | COLUMN |
|---|---|---|
| 30. INSPITE OF THE PROBLEMS, DO YOU PLAN TO: | | |
| (a) Settle in Athi River town = 1<br>(b) Move to another town? = 2<br>(c) Go back home? = 3<br>(d) Other = 4 | [ ] | 72 |
| A. Estimated time of interview: _____ minutes | | |
| B. Interviewer identification No: _____ | | |
| C. Respondent's honesty in answering questions:<br>(1) Reliable = 1<br>(2) Not reliable = 2<br>(3) Unco-operative = 3 | [ ] | |

CODING MANUAL

| QUESTION NO. | VARIABLE NO. | DESCRIPTION | COLUMN | RANGE |
|---|---|---|---|---|
| 1 | 1 | Enumeration area | 1 - 2 | 08 |
| 4 | 2 | Sex | 13 | 2 |
| 5 | 3 | Age | 14 - 16 | 999(080) |
| 6 | 4 | Relationship to head of house | 17 | 5 |
| 7 | 5 | Marital status | 18 | 5 |
| 24: 1(i) | 6 | Total number of persons | 19 - 20 | 14 |
| 24: 1(ii) | 7 | Persons aged 0 - 15 years | 21 | 9 |
| 24: 1 (iii) | 8 | Those aged 16 - 64 | 22 - 23 | 07 |
| 24: 2 | 9 | Births | 24 - 25 | 02 |
| 24: 3 | 10 | Deaths | 26 - 27 | 03 |
| 24: 1 (iv) | 11 | Persons aged 65+ | 28 | 2 |
| 8 | 12 | Ethnic group | 30 | 8 |
| 9 (A) | 13 | Province | 31 | 9 |
| 9 (B) | 14 | District | 32 - 33 | 99 (75) |
| 24: 1(v) | 15 | Males in household | 34 | 9 |
| 24: 1 (vi) | 16 | Females in household | 35 | 7 |
| 11 | 17 | Educational level | 37 | 6 |

| QUESTION NO. | VARIABLE NO. | DESCRIPTION | COLUMN | RANGE |
|---|---|---|---|---|
| 15: (a) | 18 | Rental value | 41 - 43 | 280 |
| 17: (a) | 19 | (i) Wages paid per month | 48 - 49 | |
| 17: (b) | | (ii)Categories | 48 - 49 | 10(09) |
| 17: (c) | 20 | Other income apart from wages | 52 | 4 |
| 18: (i) | 21 | Wages paid per month before migration | | |
| 18: (ii) | | (ii) Categories | | 10(07) |
| 19: (ii) | 22 | Length of stay | 60 - 61 | 99(36) |
| 25: (iii) | 23 | Land owned at home | 63 - 64 | 99(40) |
| 22 | 24 | Reasons for migration | 66 - 67 | 99(34) |
| 16 | 25 | Occupation | 68 - 69 | 99(73) |
| 26 | 26 - 27 | Problems at home area | 70 - 71 | 99(34) |
| 30 | 28 | Future residence | 72 | 9(4) |
| 21 | 29 | Relatives in Athi River | 73 | 2 |
| 29 | 30 - 33 | Problems in Athi River | 74 - 77 | 9999 |

| QUESTION NO. | VARIABLE NO. | DESCRIPTION | COLUMN | RANGE |
|---|---|---|---|---|
| 29: (a) | (i) 30 | Lack of housing facilities | 74 | 9(4) |
| (b) | (ii) 31 | Crime rate too high | 75 | 9(4) |
| (c) | (iii)32 | Unemployment | 76 | 9(4) |
| (d) | (iv) 33 | Aridity | 77 | 9(4) |

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