

SETTLEMENT PATTERNS IN NYERI DISTRICT //

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A B S T R A C TSETTLEMENT PATTERNS IN NYERI DISTRICT

Buildings are a physical imprint of man's occupation of an area and they represent a summary of man's activities and his way of life in given circumstances. This study is aimed at presenting a detailed description, classification and explanation of settlement patterns in Nyeri District.

This study was done on two geographical scales. On a small scale it tried to identify the settlement patterns whereas on a large scale it checked if the settlements can be classified according to the general settlements classification. In both cases the study tried to identify the locational factors.

The rank-size rule formula was applied to the urban centres in Nyeri District in order to check whether they are lognormally distributed. Nearest neighbour analysis was applied to each of the remaining categories of designated centres in the District, whereas for settlements below local centres the analysis was done in 7 sampled locations.

Four settlement categories were identified in a descending order of complexity, namely urban centres, Ichagi (villages), Matuura (hamlets) and Micii (isolated homesteads).

Further results of this study showed that Nyeri is a primate urban centre (town). This is due to the fact that Kenya is a developing country, urban phenomenon is recent and that Nyeri was preferentially created and helped to grow.

The patterns of each category of other designated centres is between random and clustered. For settlements other than designated centres the patterns are as follows:--

- i) Naromoru and Mweiga locations -- between clustered and random but with a higher tendency towards clustering.
- ii) Tetu location - nearest to complete random but with a tendency towards dispersion.
- iii) Othaya, Chinga, Muhito and Gikondi locations - nearest to complete random but with a tendency towards clustering.

The general observation was that each pattern is a result of an interplay of factors natural, economic, social and intrusive.



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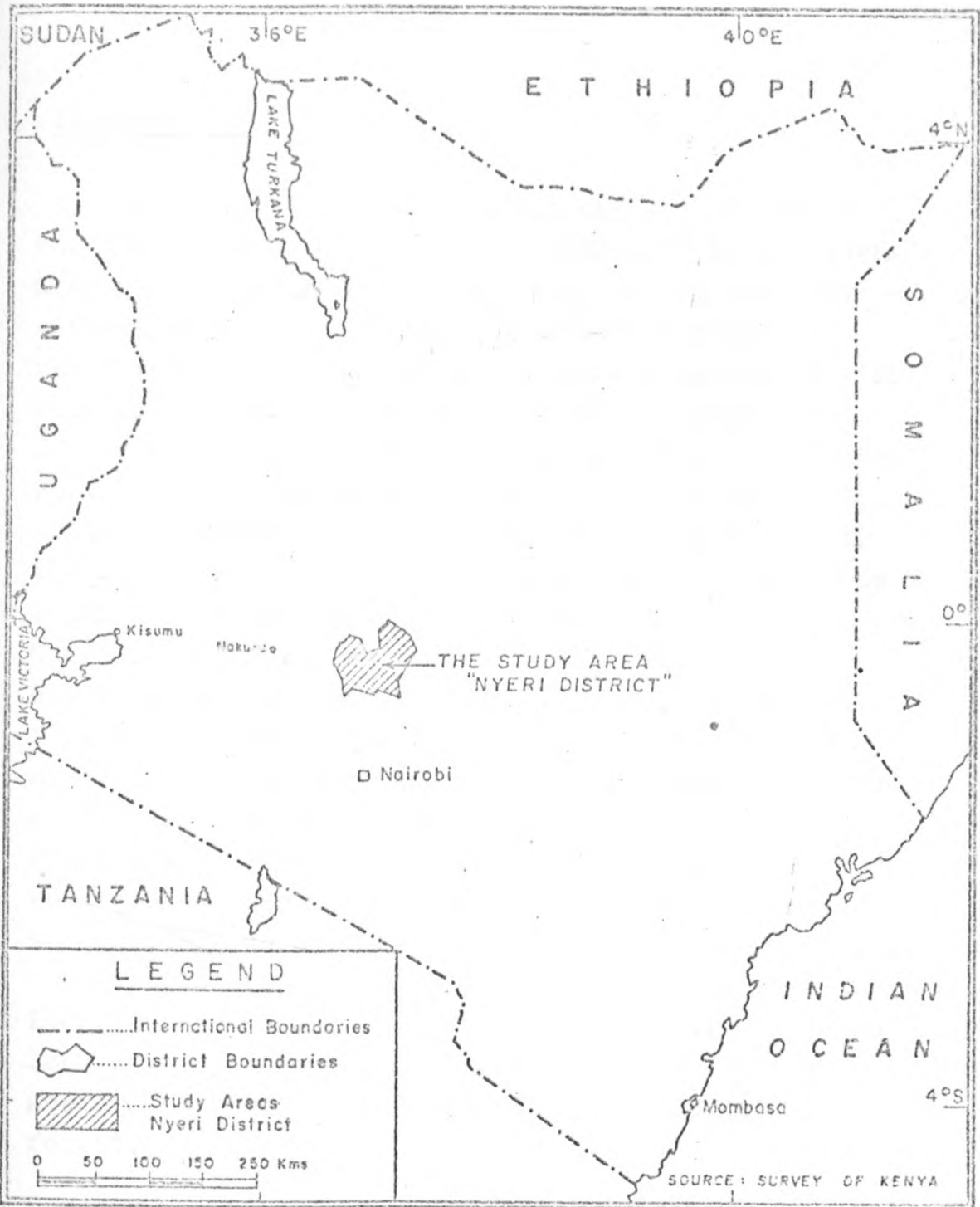
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FIGURE 1 THE LOCATION OF NYERI DISTRICT IN KENYA



A STUDY OF SETTLEMENT PATTERNS IN NYERI DISTRICT  
OF KENYA

CHAPTER 1

1. INTRODUCTION

Myeri District is situated between Mt. Kenya and the Aberdare ranges. Its topography is affected to a great extent by these mountains, and by the many rivers running from them. The District receives relatively high rainfall and is characterized by rich volcanic soils. These characteristics, plus the favourable climate, have made the area one of the most fertile districts in the country. A wide range of agricultural activities is carried out in the District. The people of Myeri belong to the Bantu ethnic group known as the Kikuyus. Like all the Kikuyu people, the Myeri inhabitants are traditionally attached and dependent on soil for their livelihood. That is the reason why they fought tirelessly to speed up the achievement of independence for their country from the British colonialists. As a result of the Mau Mau revolt, the British introduced villages in the Kikuyu country and this has had both short-term and long-term effects on settlement patterns in Myeri District. The District is divided into 20 administrative locations in which most of the human settlements are located. But there are a few settlements in the Aberdare National Park and Forest, and in Mt. Kenya forest.



## 1.1 STATEMENT OF THE PROBLEM

The study of human settlements in East Africa is in its initial stages. As yet there is relatively little published geographical material on settlements in Kenya, and Myeri District is no exception. There is therefore a need for research work awaiting geographers, in the various aspects of settlement geography in Kenya. It is with these observations in mind that this study is done.

There are problems as to what settlement geography covers although the subject has been in existence since the Roman times. The terminology and the objectives of the subject are indistinct. There has been some debate on the definition of the subject. Jordan (1966) criticises some aspects of Stone's (1965) definition of settlement geography. Stone defines settlement geography as,

"the description and analysis of the distribution of buildings by which people attach themselves to the land"

He calls for a focus, of attention on .....

"buildings where they are and why they are there" (Stone, 1965, P. 347).

Jordan felt that Stone's definition was too narrow and its boundary too sharp to be accepted without some criticisms. Jordan gave his definition of settlement geography as,

"the study of the form of cultural landscape, involving its orderly description and attempted explanation"

(Jordan, 1966, p.27)

The combination of the two definitions gives what is generally accepted as the core of settlement geography. It deals with two related phenomena:-

- a) Buildings - including their distribution, their nature, that is, temporary, permanent, big, or small.
- b) Phenomena related to buildings - such as field patterns, fences, roads and even the topography of the area.

Buildings, may they be forming an isolated homestead or a town, are a physical imprint of man's occupation of an area - they represent a summary of man's activities and his way of life. These dwellings of people are called human settlements irrespective of size. Tidswell (1976) says that settlements reflect the attitudes and the values of the society which prevail at any given point in time. As such, settlement geography is concerned with the character of these settled places and their relationship with the physical environment, the society and with each other.

This study aims at presenting a detailed description, an attempted classification and explanation of the settlement patterns in Nyeri District. It is important to identify settlement patterns and the factors that cause them for planning purposes.

Rural planners in Kenya face the difficult task of devising programmes for rationalizing the provision of services such as health units, water and roads. It is less expensive to provide such services as piped water, telephones and electricity when houses are close together than when they are widely spaced. Clustered settlements would enable a more efficient distribution of various services which would be extremely expensive to provide to individual houses when they are widely scattered. Planning is a helpful way of settling our priorities. There are many things that should be done to improve the welfare of the people in Kenya, such as building more schools, more health centres and providing more credit facilities for small farmers. If the resources were unlimited all that is desired would be done, but Kenya's resources are limited. Planning is the way that helps the government make sure that the most important needs are taken care of first. The knowledge of the area where public services should be installed is important. Settlement patterns are part of the necessary knowledge of a region for planning purposes. The Kikuyu settlement patterns hold a store of information about their adaptation to their environment which should be used in the planning of their future development.

The argument in this study is that the patterns of settlement in Nyeri District are a result of certain identifiable factors.

Whichever settlement type predominates depends upon the combination of natural geographical features and the human influences within that particular region. Buildings have something to say about the technological and social levels of their time .

The study of settlement patterns in Myeri District will be done on two geographical scales. On a small scale the study will try to identify the settlement patterns, whether they are dispersed or clustered or random and also identify the locational factors. On a large scale the study will identify the settlement types in the District and check if they can be classified according to the general classification used in settlement geography. This study also tries to identify the locational factors influencing the different settlement types.

The concepts used to refer to settlement types can be divided into two groups. Firstly, there are those generally accepted concepts in settlement geography and secondly there are those used in Kenya by the various government bodies concerned.

#### 1.1.1 Accepted general concepts in settlement geography

Authors such as Iverson and FitzGerald (1973), Briault and Hubbard (1968) and Trewartha (1960) give a general division of settlement types (in ascending order of complexity) as :-

- a) isolated homesteads
- b) hamlets

- c) villages
- d) towns

Briault and Hubbard say that questions of defining and separating features which grade into one another are difficult. In different parts of the world, in both India and West Africa, for example, large agricultural villages form the typical unit of settlements, housing all the farmers and farm workers. These are instances of compact or nucleated rural settlements. A settlement catering for the needs of the surrounding countryside by being a centre for such things as social and religious life of the community is certainly more than a hamlet. They further say that in Scotland the hamlet is the characteristic unit of rural settlement whereas in Upland Wales there are many scattered and incredibly isolated farmhouses. Dispersed settlements are common in much of Highland Britain.

Jones (1964) says that the fundamental division which is usually accepted in rural settlement geography is between dispersed and nucleated patterns of settlement. But there are very many degrees of dispersion, and different forms of nucleation within these broad categories.

McMaster (1962) points out that certain factors are invoked in both hamlet and village. Firstly is the concept of grouping of dwellings, that is nucleation, and secondly is the size of the grouping (although he does not specify the criteria he uses for defining size).

However, he says that size carries with it less explicit implications of increasing complexities of organisation and functions. But the function especially implied in the usage of both terms is an ecclesiastical one, the presence or absence of a parish church - therein lies one of the main difficulties of applying both these words clearly in Kenya. As a result therefore, either suitable words should replace these English words with foreign connotations, or a classification using local criteria should be done for Kenya. In this study both alternatives will be adopted where necessary.

Geographers such as McLaster (1968), Lee (1969) and Moughtin (1964) say that each of the settlement types mentioned above has a form, that is a layout, or a physical appearance. For example, village forms vary greatly and include among others the linear street villages, those which radiate from central cross-roads, and villages clustered around a central rectangular square or triangular green. This means therefore that settlement form is a subset of settlement pattern, for in form settlements are considered on a larger scale than in pattern.

Below are methods for classifying settlements that various settlement geographers have suggested.

(a) Number of buildings

This method states that a hamlet has more buildings than an isolated homestead, a village more than a hamlet and a town more than a village.

But the problem is where to draw a dividing line between them since there is no standard number of houses constituting a particular settlement type. This method is therefore, very subjective and is only fit for classifying settlements smaller than villages. However in higher types of settlement other methods, discussed below, are more appropriate.

(b) Population

The number of people may be used for deciding what population size is required for a settlement to be called a village, a town, or even a city. Although this method is mostly used for classifying large settlements such as towns, it can also be used to classify small settlements types such as hamlets and isolated homesteads.

(c) Functions

In most cases isolated dwellings and hamlets have no service functions. Villages and towns on the other hand have such functions, the former having fewer and lesser complex functions than the latter. Sometimes there is no clear-cut dividing line between functions in settlement types and hence the division is somewhat subjective. In villages, hamlets and isolated homesteads, the majority of the people are engaged in primary activities such as farming, whereas in towns the majority of the population is engaged in secondary and tertiary activities such as industry and commerce.

(d) Administrative division.

Using a combination of some criteria mentioned above, or using other criteria, government bodies classify settlements into various types. For example, according to the definition of Iranian Bureau of statistics any locality with a population of 4999 or less at the time of the census, aside from some exceptions is considered a village (Manootchehr 1978). In this case Massuleh is a village although it does not have a rural economy since its inhabitants engage in trade and handicrafts.

1.1.2 Classification of human settlements in Kenya

- In Kenya there exists a hierarchical network of human settlements which function as both service centres and growth centres. These centres are grouped into four categories depending on the services performed, the economic potential of the area served, the population served and the spatial distribution of the centres required to promote development throughout the nation (refer to appendix 1). The Kenya Development Plan, 1979-1983 (1979) and the National Environment Secretarial (1980, pp 109-110) define the qualities each of the categories should fulfil.



In ascending order of complexity these categories are:

- a) Local centres
- b) Market centres
- c) Rural centres
- d) Urban centres.

Appendix 2, shows the service centres in Nyeri District.

Kenya's Ministry of Economic Planning (1978) reports that,

"to be productive economic growth requires some degree of concentration of activities and people in order to secure some degree of economic and technical efficiency. These concentrations of activities and people, whether they are the smallest village or the largest metropolis are called human settlements. Human settlements therefore play an essential role as agents of economic growth by providing favourable locations for productive investment" p. 31)

These human settlements also have service, economic and residential functions.

From the two types of concepts discussed above, general and local, a parallel can be drawn (refer to table 1)

TABLE (1)

A COMPARISON OF SETTLEMENT  
CLASSIFICATIONS

Settlement geography classification	Kenya administrative classification.
isolated homesteads	?
hamlets	?
villages	Local centres
	Market centres
	Rural centres
towns	Urban centres

In Kenya, urban areas are defined as those settlements having a population of 2,000 people or more. Therefore what is referred to as an urban centre in the Kenyan classification is a town in the general settlement geographic classification. Many centres smaller than urban centres serve as essential links between the formally defined urban areas and the economic activities that are strictly rural in character and setting. In the general classification the term village is given to a sizeable cluster of buildings which are not in the town category. In the Kenyan administrative classification there are three categories, rural centres, market centres and local centres, which are clusters of buildings with some degree of concentration of activities and people for economic and technical efficiency. Therefore these centres, though smaller than towns (urban centres) can not be paralleled to hamlets. They are subdivisions of what is referred to as villages in the general classification. The Kenya administrative definition is more efficient here in that it shows that the settlements called villages in the general classification vary in complexity and in the services they offer. But it fails in that it considers only settlements which have been designated as service centres and leaves out the multitude of settlements smaller than those which are dispersed throughout the countryside. The table above shows that there are no parallels in the Kenyan administrative classification which the general classification calls hamlets and isolated homesteads.

In this study all buildings ranging from a single dwelling to the large settlement of Nyeri Municipality will be regarded as settlements and of equal weights in importance.

This study tries to establish traditional terminologies of settlement and with these and the above discussed concepts a more complete classification of settlements in Nyeri District will be attempted. This task will be undertaken in chapter 4.

#### OBJECTIVES OF THE STUDY

There are a number of objectives that this study wants to achieve and they are based on the problems identified above. The objectives are as below:-

- a) To identify and describe the settlement patterns in Nyeri District. This will be achieved by applying nearest neighbour analysis to each category of the service centres for the whole District. For settlements below local centres the analysis will be done for 7 sampled locations.
- b) The study will try to offer a more comprehensive classification of settlements derived from the knowledge of the general classification, the Kenya administrative classification of settlements and the Kikuyu traditional concepts of various settlements.

- c) Find out if the urban centres in Nyeri District fits the rank-size rule formula. This involves getting the population data of each of the urban centres in this District and applying the formula. If the urban centres fit the formula it means that towns in this District are lognormally distributed. This would mean that urban centres are properly distributed in the District.
- d) Identify the factors influencing the settlement patterns in the District and to account on how they do it.

#### 1.3 HYPOTHESES TO BE TESTED

- a) Settlements in Nyeri District are both urban and rural. This study seeks to answer the question. Are urban centres in Nyeri District lognormally distributed? Rank-size rule formula will be used to test the distribution of urban centres in the District.

In this study, nearest neighbour analysis is also used. It gives an index,  $R_n$ , for describing the extent to which a two dimensional distribution of settlements approaches complete nucleation or complete even distribution. The index is also used to determine how closely it resembles the randomly generated distribution of the same number of points in the same area. The index is not only descriptive but it allows an inferential test, and therefore it is necessary to calculate the significance of the results.

This study examines the following hypotheses.

b)  $H_0$  There is no significant difference between the patterns of rural, market and local centres in Nyeri District and a random point pattern.

$H_1$  There is a significant difference between the patterns of rural, market and local centres in Nyeri District and a random point pattern.

Level of rejection is decided at 0.05 statistical test is nearest neighbour analysis.

c)  $H_0$  There is no significant difference between the patterns of settlements (other than the designated centres) of 7 sampled administrative locations in Nyeri District and a random point pattern.

$H_1$  There is a significant difference between the patterns of settlements (other than the designated centres) of 7 sampled administrative locations in Nyeri District and a random point pattern.

Rejection level is 0.05

Statistical test is nearest neighbour analysis.

1.4 RESEARCH LIMITATIONS

This study is based on both primary and secondary data.

Nyeri District is covered by twelve 1:50,000 scale sheet maps, published by the Survey of Kenya. The problem here is that the Survey of Kenya is not able to revise the topographical maps regularly due to financial limitation. They do not revise all of the maps, say Nyeri District, in one particular year. Table (11) below shows the topographical maps containing Nyeri District, the sheet numbers and the dates of their publication.

A number of problems arise as a result of different editions of these topographical maps.

TABLE (11)

TOPOGRAPHICAL MAPS CONTAINING NYERI DISTRICT

SHEET NAME	SHEET NUMBER	SHEET PUBLICATION	SHEET REVISION
1. Karatina	121/3	1963	
2. Nyeri	120/4	1967	1975
3. Mt. Kenya	121/2	1961	1974
4. Ndaragwa	120/1	1971	1973
5. Kangema	134/2	1962	1975
6. Ongobit	120/2	1973	
7. Embu North	121/4	1962	
8. Nanyuki	107/3	1967	
9. Kinangop	134/1	1967	
10. Kipipiri	120/3	1968	
11. Naromoru	121/1	1970	
12. Murang'a	135/1	1962	1975

SOURCE: The Survey of Kenya.

a) Ten out of twenty administrative locations were sampled for this study (this will be discussed in details in chapter 2). It was necessary to apply nearest neighbour analysis in order to get the patterns of settlements in each of the sampled locations. But three of these locations are in the Karatina map sheet 121/3 of which there is no recent revision. The 1963 edition shows that the settlements in the area are of the village type. This was true at that time because people had not completely moved from the emergency villages to their farm plots. But the survey of the area during the period of the research, show that the settlements are no longer clustered as the map shows, but most people live in their individual farm plots. The change observed in this area is similar to the one observed in areas where topographical maps have been revised for example Kangema sheet 134/2. A comparison of air photographs taken in 1969, of two areas ( 1 area covered by the Karatina map, 121/3 and the other by the Murang'a map sheet 135/1 ) show that settlements are distributed in a similar manner.

This means that the Karatina sheet does not show settlements as they are today and so it was not possible for a nearest neighbour analysis to be done for the three locations covered by this map.

b) Due to lack of a recent revision of the Karatina map, it was hard to know the exact boundary of Mweiga location on a 1:50,000 scale. The boundary of Mweiga location was affected by the municipality boundary of Nyeri District and since the Karatina map is not revised the section that falls in this sheet does not show the present boundary.



The same problem of boundary concerns a section of Mount Kenya forest. Since administrative locations were chosen for sampling it was important to know where the boundaries passed through.

c) If topographical maps, say of Nyeri District, were revised all in one year it would be easy to do a historical study of settlement evolution between specified dates such a study is impossible for the whole District because the revisions as shown on table (11) are of different dates. If one resorts to sampling for such a study, the sample would be biased because one has to choose only those locations whose revisions are done on two same dates, for example those locations in map sheets 134/2 and 135/1 (1962, 1975).

d) Classifying settlements into different types was problematic in cases where these did not fall clearly in a particular category. This was especially the case when the concept of the interviewed person, and that of the interviewer, or even that of the administration, was different with regard to a particular settlement.

e) Few informants who did not understand the aims of the study and those who just wanted to be difficult were reluctant to give answers whereas some outrightly refused to give the required information especially concerning questions on size of farm plots.

f) Although sample areas were taken, there was still a lot of travelling involved. Time offered for the research was limited and the problem of communication and transport in some parts of the District was acute.

The research grant also was too little to allow an exhaustive research to be done in this study.

## 1.5 LITERATURE REVIEW

This study is the first one of its kind to be done on Nyeri District. It was found necessary to review two types of work in order to put this study in its proper perspective. Firstly, a review is done on the literature available on settlements in Nyeri District in particular and on a wider scale in Kenya. Secondly, the literature on settlement patterns in other countries is undertaken.

Sillitoe (1962) discusses the effects of physical redistribution of the population that resulted from the complete consolidation of fragmented landholdings and the introduction of villages by the government. The villages imposed an alien and strongly disliked way of living on the people. Villages were first introduced as an administrative and disciplinary measure during the emergency (that was in the 1950s when the Kikuyu violently opposed the British colonial rulers) and this factor may well account for the repugnance expressed by the Kikuyu towards villages.

When Sillitoe wrote his article people had their fragmented plots consolidated and this influenced the distribution of buildings. Today other factors are moving farmlands towards fragmentation. The population increase coupled with the Kikuyu custom of gavelkind inheritance causes a father to subdivide his once consolidated farm among his sons.

Those people who can afford to buy land do not necessarily buy one adjacent to their farm, but wherever the plot is available. These factors have an effect on settlements in the District that Sillitoe was not in a position to comment on. Since he wrote soon after the emergency period, it would be appropriate to comment on the long term effects of the emergency villagization. Mburu (1975) points out that there were villages introduced by missionaries long before the emergency ones although their effects were limited in both time and space.

Sorrenson (1967) pointed out that the Kikuyus prefer to live in dispersed settlements and not in villages. The Kikuyu country is dissected by numerous streams. The pattern of alternating ridges separated by deep valleys has had an important influence on the Kikuyu settlement pattern. A household (usually built on the edge of a ridge) consisted of a husband's hut (thingira) a wife's hut (nyumba) and a grainstore (ikumbi). If a man had many wives each of them had to have a hut and one or more grainstores. In this study it is therefore important to check how the settlements are distributed today and how such factors as physiography and traditional settlement customs have influenced the present day settlements in the area.

McMaster (1968) says that the most impressive recent sequence of settlement pattern in East Africa is that of Kikuyuland: considerable dispersion, then the decreed nucleated villages of the emergency, and subsequently, the secondary dispersion brought about by land consolidation. Although this is a historical summary of the evolution of settlements in Kikuyuland, it does not give a quantitative

In this study of settlement patterns in Nyeri District the distribution of settlements will be determined by using nearest neighbour analysis and applying the rank-size rule formula to the towns. These methods enable a more precise description of pattern found in the District. McMaster concludes that the patterns of settlement are spatially both complex and dynamic constantly adjusting to the changing conditions over time. The conditions that so much affected settlement at the time he refers to were political. But this suggests that when other factors are present the settlements would also be affected and this study tries to examine this aspect.

In Dakeyne's (1962) study of patterns of settlement in Central Nyanza, he stated that the general pattern is one of nucleated villages. This reflects family loyalties of both ethnic groups (the Nilotic Luo composing 85% of the total population, and the Bantu Abuluyia the remaining 15%). Both ethnic groups are sedentary agriculturalists, with animal husbandry an important secondary occupation. He also pointed out that there is an uneven spread of these villages over the landscape due to the environmental factors plus social barriers which act against the free movement of people from place to place. This study disagrees with Dakeyne's definition of the term village. He uses this term in Central Nyanza to mean a 'homestead' or a family unit. He says that in the Kikuyu area the term village means enforced agglomeration of homesteads into large villages during emergency period.

As a result therefore, Dakeyne's use of the word village in his study is opposed to the word village in this study of Nyeri District. What he refers to as a village is referred to as a homestead in this study. Generally the term village in Nyeri District has a connotation of enforced agglomeration by British rulers but there are instances, especially today, when the term village just means a cluster of buildings such as workers dwellings in a large coffee estates.

The Bantu of Western Kenya, such as the Maragoli have settlements similar to the Bantu of Nyeri District. Gunter (1970) says that in the whole of North Kavirondo the individual family constitutes the basic social group that co-operates most widely and intensely in the activities of everyday life. As a rule each individual family lives in an isolated homestead, erected in the middle of the family gardens. Most homesteads, beside the storage space in the living hut, have a few granaries that are grouped in a rough circle round a hard trodden yard. In those parts of Kavirondo where is still danger from leopards or where the owner of the homestead wishes to protect himself against theft or sorcery, the homestead is surrounded by a hedge of thorn bushes or euphorbia interplanted with various protective plants. Narrow paths connect the various homesteads, winding through the fields or the banana groves which in Maragoli are planted behind most homesteads.

Isolated homesteads are not the types of settlements lived in by all the ethnic groups in Kenya.

The Masai country, as Morgan (1967) points out, has clustered settlements. The Maasai village or "enkang" is usually made up of 2-5 families. The huts are built in a large circle and are surrounded by a thorn bush stockade for the protection of stock from wild animals. The stock then occupy the centre of the circle and are protected by the circle of huts and the outer thorn bush stockade. The "enkang" consists of 20-50 huts and is for married people and their families. There is a second type of kraal called the "Manyatta" and is inhabited by members of one age group who after circumcision attach the prefix Ole to their name. These "Manyattas" in which several hundred people live in 50-100 huts are not fenced in. Due to their social organisation and daily occupation of grazing the Masais prefer to live in clustered settlements rather than in isolated homesteads like the Kikuyus who are agriculturalists. This shows that the type of occupation people are engaged in has an effect on their settlement patterns.

Ligale (1966) like Dakeyne says that there are certain identifiable factors that influence settlement patterns. Some of them are cultural, physical and administrative factors. This study tries to identify such factors so as to offer some explanation of the settlement patterns that are observed.

The field of settlement patterns has received more attention in some other parts of the world. Demangeon (1962) and later Tidswell (1976) emphasized that settlement pattern is a result of physical and economic factors.

Tidswell, however, says that the role of physical environment has been emphasized almost to the exclusion of other considerations. No attempt is being made to deny the significance of physical factors which have helped create a settlement pattern. Yet, upon close examination we are forced to ask 'why here and not there?' when the physical terrain is identical. Hence the influence of other factors is important.

When studying the disintegration of nucleated settlements in Eastern Nigeria, Udo (1965) shows that given certain conditions the settlement pattern can alter. Originally the settlement pattern in Eastern Nigeria was nucleated due to the **traditional** system of block-farming (communal) land-tenure and for defence purposes. But with the increasing demand for farmland due to increasing population, and with the peaceful condition in the country dispersion is taking place. Yet village reintegration is taking place in Abakaliki province due to the recurrence of robberies and crimes. The government encourages people to cluster for the efficient spread of development in the area. This study throws some light on the dynamism of settlement pattern due to changes in certain factors. A similar study of Nyeri District is necessary to show how the settlements have been affected by such factors as settlement schemes and the long term effect of the colonial rule.

Minshull (1975) states that the modern geographer's attention is turned to how settlements function in space now and how far they are good or bad responses by man to the problems of using space and overcoming distance.

Nucleated villages are usually the best spatial arrangement for serving man's social needs.

Dispersed settlement with isolated farms makes least provision for man's social needs but if a farmer has his land all in one plot building at the centre of it is more economical for he can devote most of his time to his farm instead of involving himself in a lot of travelling. Having identified the elements and the basic functioning of the system, the geographer should look for a satisfactory explanation of why it functions in the way it does.

One of the factors which conditions the level of economic and social service afforded by a unit of investment in the rural sector is the pattern of settlement (Moore, 1979). Tanzania, like much of East Africa, was characterized by a highly dispersed rural population with only a few areas where nucleated villages were the norm. Despite the advantages of dispersal especially in respect of access to farmland, the costs of providing social and economic infrastructure to a thinly scattered population proved a considerable constraint on rural development. Dispersal also tended to militate against the political and economic integration of such an ethnically diverse and often physically peripheral nation as Tanzania. With the ultimate goal of collective production, Ujamaa villages were to be formed through the voluntary association of farmers with an orderly progression from completely individual farming towards fully communal production. Villagisation requires planning if it has to succeed. It is important that the traditional systems of settlement be taken into consideration when planning for the Ujamaa villages.



Georgulas (1967) had earlier remarked that a useful dimension to the study of African development might be the classification and analysis of existing patterns of settlement. Such an approach would reveal those elements which are likely to hinder or to encourage desired changes in settlement pattern; conceivably different types of settlement present different kinds of problems requiring different development objectives and policies.

Orni and Efrat (1966) pointed out that in Israel wherever peace and order reign, rural settlements tend to develop along important roads and **thoroughfares**. But in periods of war, however, villages kept their distance from the highways with the armies marching there. Hills were settled but the coastal plain and the Jezziel and Bet She'an valleys were neglected and abandoned. This idea has caused an interest to check where settlements in Nyeri District were located during the emergency period and what factors generally influence their locations.

From the above literature review there seems to be a need to identify the settlement patterns in Nyeri District and also to identify what factors influence their location. There is a need to get the original terminologies of settlements used before European **interference** and also what terminologies are used today. This study will also try to classify settlements in Nyeri District.

## CHAPTER 2

2.

### METHODOLOGY

The success of this study depends on the availability of relevant data, the methods used to collect them and the statistical analysis applied. This chapter is subdivided into 4 subsections namely:-

- (i) Data required
- (ii) Areas of study
- (iii) Sources of data and methods of data collection
- (iv) Analytical techniques.

#### 2.1 DATA REQUIRED

Data is required for the description and explanation of settlement patterns in Nyeri District. These data can be divided into two broad categories. First, data needed for the application of rank size rule and nearest neighbour analysis, the two tests used to quantitatively define settlement distribution in the District. Secondly data required for the explanation of settlement patterns identified. Below is a list of the required **data**.

- 2.1.1 a) The 1969 and 1979 population data for Nyeri District and for the 7 sampled administrative locations.
- b) The 1979 population data for Nyeri Municipality, Karatina and Othaya urban centres.
- c) The areas of Nyeri District and of each of the 7 sampled locations.

- d) The number of, and distances between:
  - (i) Rural centres
  - (ii) Market centres
  - (iii) Local centres.
  
- e) Numbers of all settlements below local centres and the distances of the sampled 50 with their nearest neighbours for each of the 7 sampled locations.
  
- f) The classification of settlements used in settlement geography and in Kenya.

2.1.2 To add to the above data information is needed for explaining the identified patterns. Factors which influence settlements in Nyeri District include among others;

- a) Soils - soil groups in Nyeri District will be mapped.
- b) Rainfall - The distribution patterns of rainfall will be mapped for the District.
  
- c) Transport - A map of Nyeri District showing roads, railway line and airfields will be included. Road categories will be shown in a table.
  
- d) Land-tenure - A map and table showing land ownership structure in Nyeri District is necessary.
  
- e) Physiography - Included will be a map showing the physiography of the District.

## 2.2 AREAS OF STUDY

Most of the population in Nyeri District is concentrated in the 20 administrative locations with a few people living in the Aberdares and Mt. Kenya forests. To study the whole District would require a lot more money and time than can be afforded with the limited resources available. But **selecting** samples is an important method of overcoming that problem and as a result 10 locations were chosen to represent the parent population.

A map of Nyeri District was taken and the 20 administrative locations numbered from 01 to 20. Random number tables were used to select 10 of these. Figure 2 shows the locations in the District with the sampled areas shaded.

The rank-size analysis of the urban centres used data for the whole District. This was also the case when doing nearest neighbour analysis for each category of the lower centres. But when doing nearest neighbour analysis for settlements lower than the local centres, 7 administrative locations were used as samples out of the 10 sampled locations. These locations are Othaya, Chinga, Muhito, Naromoru, Mweiga, **Gikondi** and **Tetu**.

## 2.3 SOURCES OF DATA AND METHODS OF DATA COLLECTION.

This study made use of both primary and secondary data.

FIGURE 2 NYERI DISTRICT ADMINISTRATIVE LOCATIONS



2.3.1 Sources and methods of collecting primary data

- a) This data was obtained from inhabitants interviewed in various parts of Nyeri District, and it can be divided into:-
- (i) how the inhabitants categorise their settlements and settlements in the neighbourhood- this includes the traditional terminologies given to the settlements.
  - (ii) Factors influencing their settlements
  - (iii) The evolution of settlements in the area. A questionnaire was prepared to help in getting the important information from the people interviewed (refer to appendix 3).

Questionnaire design

Questions 1 to 3 identified the area where the particular questionnaire was given out. This identification is important because the information in a certain area may not be the same as that of another area. Questions 4 a) b) c), examined the respondent's concepts, terminology and criteria used for the settlements in this immediate region. Where it was possible to point at a settlement, the respondent was asked what he calls the settlement and where settlements of different sizes were visible, he was asked what he called each of them and why. Question 5 examined the respondents' understanding of the term village, a term which has penetrated into the Kikuyu vocabulary with an unclear meaning.

Questions 6 and 7 grouped the settlement visited in any of the categories according to administrative and planning bodies and also according to my criteria (refer to appendix 4). The settlement visited was classified by the owner (Question 4d), the interviewer, and in the light of official classification. Since the administrative classification has local centres as the lowest group, I gathered from the Provincial Physical Planner, Central Province, what terms he would give to various settlements below the official classification. With that it was possible to group the settlements visited in the various categories.

In most cases the three groups were in agreement as to what classificatory type the settlement should belong to. But in a few cases there was some disagreement in which case the interviewer's criteria was used to classify the settlement. This is because the researcher was influenced by the social and economic conditions of the area and also the physical impression the settlement imparts. For example, in Hiriga area in Ruguru location, there were only about 4 houses built in a large area. The physical impression the settlement gave is that of an isolated homestead. When one of the inhabitants was confronted with the questionnaire he called the settlement a village because the land on which they have built is owned by the county council. According to the county council the settlement is called a village because it is built on public land. In this case the term village does not have a connotation of clustering as it has in settlement geography. When analysing the questionnaire such settlements were under isolated homesteads category because that is the physical impression they give on the landscape.

Question 8 identified the factors that influenced the respondent's settlement. It sought explanations as to why a respondent lived in his particular settlement type and also why his building was erected on the particular site it was on. Question 8(A) was left open-ended and the respondent was asked to give all the factors that influenced his settlement. If his answers were not satisfactory the interviewer asked specific questions directing his answers to social and natural factors. Questions 8(B) were asked directly if the respondent did not answer them on his own accord.

Question 9 and 10 sought to know the advantages and disadvantages the respondent has by building on the particular area, whereas question 12 looked for the evolution of settlements as given by the respondent.

#### Number of the questionnaires and methods of distribution

In order to examine a representative sample size a pilot sample was carried out. Ruguru location was chosen for the pilot survey because it was the first one picked by the random numbers and it is my home location, and the familiarity with the area was of help in the initial stages. Line sampling was used to select areas where the questionnaires would be distributed. Ruguru location, on scale 1:50,000 was placed in a rectangular grid subdivided into squares of 2 by 2 centimeters. A two digit number was assigned to each margin line and random numbers were used to select sample lines for the study.



For the pilot sample two lines were taken and 36 questionnaires distributed along them. Starting from any place on the sample line the direction of the line was followed and 1 questionnaire was given to the inhabitants of **every** fifth settlement. Each line had 18 questionnaires thus a sample of 36 questionnaires was taken. This is because the central limit **theorem** states that,

" If we imagine taking all possible samples of similar size from a single population, the sampling distribution of their means will be approximately normally distributed about the character on the population distribution provided the samples are fairly large (say over 30)" (Hammond and McCullagh, 1974 p.119).

Using the results of the pilot sample, it was possible to calculate the representative sample for the 10 sampled locations. The formula used for this is:-

$$n = P\% \times q\% \times \frac{z^2}{d^2}$$

n= Sample size

P= Percentage of settlements in the pilot sample that are isolated homesteads. In this study they were 61%

q= Percentage of settlements in the pilot sample other than isolated homesteads - this was 39%

d= 4% tolerable margin of error

z= 95% confidence limits taken from the z table

$$n = 61 \times 39 \times \frac{1.96^2}{4}$$

n= 571

The minimum sample size required is 571 at 4% margin of error. But for convenience this study chose to use 600 questionnaires distributed proportionally in the 10 sampled locations.

Population size has an effect on human settlements. Where there are many people there are also many houses for their dwellings. Therefore the locations having higher population had more questionnaires than those having lower populations. The 1969 population data was used in determining how many questionnaires should be distributed in each location (the 1979 provisional data were not available then). An example is shown below how this was arrived at.

10 locations with a population of 192431 people had 600 questionnaires. So Ruguru location with 21895 people had

$$\left( \frac{600 \times 21895}{192431} \right) \text{ questionnaires}$$

refer to table (iii) below.

The pilot sample done for Ruguru location was taken as part of the study and so only 32 more questionnaires were added. These were distributed in two other areas chosen by other 2 sampled lines selected in the same manner as was done for the pilot sample.

Table (111) QUESTIONNAIRES PER LOCATION

<u>LOCATIONS</u>	<u>1969 POPULATION DATA</u>	<u>NUMBER OF QUESTIONNAIRE</u>
1. Ruguru	2'895	68
2. Kirinukuyu	20925	65
3. Gikondi	12272	38
4. Muhito	19606	61
5. Othaya	23667	74
6. Chinga	11352	35
7. Aguthi	28794	90
8. Tetu	18932	59
9. Haromoru	11554	36
10. Liveiga	23434	73
TOTAL	192431	599

Sample lines were chosen in the other 9 locations using the method described above. Questionnaires were distributed as in Ruguru locations but research assistants were employed in some areas. Before they embarked on the task they were instructed among other things on such concepts as settlement patterns and types and land - tenure. They were also instructed to follow the particular direction chosen by sample lines, and to give out one questionnaire in every 5th settlement. In case they found necessary information that they could not fit in the questionnaire they were asked to write it down.

The task of distributing questionnaires to different parts of the District was undertaken between November 1979 and April, 1980.

- b. Data on areas of each of the sampled locations was also necessary for the application of nearest neighbour analysis. However, the areas of Tetu and Mweiga locations were calculated because the areas shown on the 1969 census reports has been affected by the Nyeri Municipal boundary, and no recent data was available. Weighing method was used for it looked more accurate.

Procedure

- (i) A map of Nyeri District, on the scale shown below was used.



- (ii) A thick paper was cut into a square of 5 by 5 Km according to the above scale. The area was calculated and was  $25 \text{ Km}^2$ .
- (iii) Using the same scale the areas of Mweiga and Tetu locations were also traced on the same thick paper and cut along the boundary very neatly.
- (iv) The paper representing a  $25 \text{ Km}^2$  was weighed using a very sensitive weighing machine. It was then possible to calculate the weight of a  $X \text{ Km}^2$  paper since the machine gave the weight of a paper representing a  $25 \text{ Km}^2$ .
- (v) Mweiga and Tetu locations were weighed in turn. After getting the weight it was possible to use stage (iv) to calculate the areas of each of these locations.

2.3.2

Sources and methods of collecting secondary data

- a) Data on population was extracted from 1969 and 1979 Kenya population census reports (Central Bureau of Statistics).
- b) The areas of Nyeri District and locations sampled for nearest neighbour analysis (apart from Mweiga and Tetu locations for which areas were calculated) were extracted from the 1969 Kenya population census reports.
- c) Data on the category and number of urban, rural, market and local centres came from the Kenya Development Plan, 1979-1983. The requirements that each category of centres should have is outlined by the National Environment Secretariat (March 1980).
- d) A map was obtained from the Physical Planning Department showing the rural, market and local centres. From this map, three maps were drawn each showing the locations of centres of each category. These centres were numbered and distances measured from one centre to its nearest neighbour.
- e) Settlements other than the designated centres were traced from the topographical maps (refer to chapter 1) on scale 1:50,000 for 7 out of 10 sampled locations for which there is a recent edition. This was necessary for the application of nearest neighbour analysis.

The rest of the information used for the explanation of settlement patterns in the District was extracted largely from government departments especially the Physical Planning Department and the Survey of Kenya.

These will be summarised below.

- f) The report on soils in Nyeri District came from the National Environment Secretariat (March 1980). The mean annual rainfall map came from the Physical Planning Department. A map showing the transportation network was also obtained from the Physical Planning Department. The location of airfields on the map was added by the National Environment Secretariat. This information was used for this study. Land tenure system in the District was extracted from the Ministry of Economic Planning and Community Affairs C.B.S. (1978). The physiography of Nyeri District was traced from topographical map of Nyeri District at scale 1:250,000, but heights were converted from feet to meters.

Other sources of information were journals, books on settlement geography, observation of the area and discussions with people in Nyeri District.

## 2.4 ANALYTICAL TECHNIQUES

### 2.4.1 Rank-size rule

In Kenya urban centres are defined as those having a population of 2,000 or more people (Kenya Development Plan, 1979-1983, Part 1 p.45). In Nyeri District only 3 such centres pass this criteria, and they are; Nyeri Municipality, Karatina and Othaya. Rank-size rule is a test used to search for order in the landscape (Tidswell, 1978).

Zipf (Berry and Horton, 1970) stated the rank-size rule mathematically as

$$Pr = \frac{p^1}{r^q}$$

that is the population of the  $r^{\text{th}}$  ranking city  $p_r$  equals the population of the largest city  $p_1$  divided by rank  $r$  raised to an exponent  $q$  (the slope of the line in the diagram) which generally has a value very close to unity. If this formula is followed in a country the largest city would be having twice the population of the 2nd city and 3 times the population of the 3rd city and so on. When cities follow this formula the distribution is said to be lognormal. Rank-size distribution holds that there should be fewer large cities and more smaller ones; if such a case occurs a straight line results if a graph is drawn showing the city distribution. Roughly at the same time that Zipf introduced the concept of rank-size rule regularity to describe the distribution of city sizes, Mark Jefferson (Berry and Horton 1970) introduced the concept of the primate city. Primacy is present, according to Jefferson, when the largest city is several times the population of the one that is second in rank. Later authorities have applied the term to whole distribution of cities of different sizes. They say primacy exists when a stratum of small towns and cities is dominated by one or more very large cities and there are fewer cities of intermediate sizes than would be expected from a rank-size rule distribution.

Geographers are interested in the search for order in the landscape. Berry and Horton (1970) analysed 38 countries to check if their cities are lognormally distributed or if primacy occurs.

Since this study tries to seek the patterns of settlement in Nyeri District it was found useful to apply rank-size rule to the 3 urban centres to see the type of distribution exists in the District.

The 1979 provisional census data was used. Nyeri Municipality had a population of 35758 people, Karatina 2929 whereas Othaya had 2157. The formula was applied to get the ranks of Karatina and Othaya urban centres. Nyeri was the largest urban centre against which the others were measured.

$$Pr = \frac{p^1}{r^q}$$

The rank for Karatina urban centre is:-

$$2929 = \frac{35758}{r^1}$$

$$2929 r = 35758$$

$$r = \frac{35758}{2929}$$

$$r = 12.2$$

The rank for Othaya urban centres is

$$2157 = \frac{35758}{r^1}$$

$$2157r = 35758$$

$$r = \frac{35758}{2157}$$

Karatina the 2nd largest urban centre should be the 12th ranking urban centre and Othaya 3rd largest should be the 17th ranking urban centre if lognormal city distribution exists in Nyeri District.



This will be discussed further in chapter 5.

2.4.2 a) Nearest neighbour analysis

The main statistical analysis adopted in this study is nearest neighbour analysis. The reasons for the choice are firstly to overcome the subjective descriptive method of settlements. This technique enables a precise description of pattern to be obtained. A single index is provided for any given distribution running on a continuous scale from one extreme when all points are distributed uniformly over the whole area to the other extreme when points are completely clustered. Hence more exact comparisons can be made than hitherto. Secondly, this analysis demonstrates when point patterns are not random and which also requires explanation.

b) Limitations of nearest neighbour analysis

(1) Nearest neighbour analysis does not distinguish between single and multi-clustered settlement patterns. An extreme example of this might be a series of pairs of towns on either side of a river, each pair at some distance from the next, making a linear pattern on the landscape. Because each town forms the nearest neighbour of the other town of the pair the  $R_n$  index will be near 0. Vincent (1976) demonstrated that different point patterns may have the same nearest neighbour statistic - where the distance between reciprocal neighbours is always smaller than the distance between the pairs of points. Nearest neighbour analysis "averages out" sub-patterns which may exist within an area, and may thereby hide contrasting sub-patterns which cancel each other out when put together to give a false impression of randomness.

- (ii) The fact that a pattern emerges with an index approaching 1 does not mean that the real phenomena are purely by chance. The distribution of one kind of phenomena may largely determine that of another. But nearest neighbour analysis cannot identify unambiguously the locational factors and generating processes - the causes - of any pattern.
- (iii) Further problems arise as a result of boundaries. The statistic assumes that the pattern in question consists of an infinite number of points located within an infinite area, and this is not applicable to real life. When applying the formula to a relatively small number of points within finite areas problems occur:-
- An index indicating more dispersion than the theoretical maximum index of 2.15 can be obtained especially where point population is small. But in this study point population was large.
  - Boundary effect is the cause of underestimation of Dran and Tran Pinder (1978) has given a formula for **correcting** these underestimations, and these are used in this study.
  - Boundary effect vary with area shape. Pinder (1978) demonstrates this point and concludes that the boundary effect with a rectangle is likely to be increased whereas the boundary effect is likely to be lessened with shapes possessing ratios less than those of the equivalent square. He suggests that the modified technique must only be applied to square study areas if it is to truly accurate.

The  $R_n$  values in this study lack accuracy because area shapes are not square. But using the corrected formulae gives more accurate indices than using the uncorrected formulae.

- (iv) Hudson and Fowler (1966) argue that pattern should refer to the distances and angles separating individual points, that is, the internal geometrical properties of a point set without regard to the region containing the points. Dispersion by contrast refers to the areal extent of a point set in relation to the region which contains that set. Hence nearest neighbour analysis cannot describe pattern for it deals with density of points. Sibley (1976) demonstrates two distributions in a region with the same dispersion but different patterns. As the area of the region is increased the point sets become less dispersed and so the randomness ratios indicate increasing clustering. Only when dispersion is at a maximum are their pattern characteristics correctly defined by the randomness ratio. In this study nearest neighbour analysis was applied to administrative locations, and the District and the areas are not enlarged. In this case the analysis is valid since dispersion is within a definite and unincreasing area.

c) A simplified outline of nearest neighbour analysis

- (i) The administrative boundary of Nyeri District was used for the analysis of rural centres, market centres and local centres.
- (ii) Within the district 7 administrative locations were sampled for the analysis and the administrative boundaries used.

These locations are Mweiga, Naromoru, Othaya, Chinga, Tetu, Gikondi and Muhito. 7 locations were used for the analysis instead of all the 10 used for the distribution of questionnaires because Ruguru, Kirimukuyu and Aguthi locations were contained in the old Karatina map sheet 121/3 (1963) (refer to chapter 1).

- (iii) Nearest neighbour analysis was applied to each category of centres in turn. A map of Nyeri District showing the positions of these centres was taken, each centre was given a number (for illustration see appendix 5). Measurements were obtained from the centre of the symbol representing the centre to its nearest neighbour, (for illustration See appendix 8).
- (iv) For the sampled locations the analysis was applied to individual houses. These were traced from the most recently published topographical maps, 1:50,000 after which they were enlarged to 1:25,000 to make the task of numbering easy. Each dot was numbered. Where maps show symbols for populated areas (for example in Tetu location topographical map, sheet 120/4 (1975), grid reference 6952 or areas of permanent buildings (for example grid reference 6751 Tetu mission) and these being settlements not designated as service centres, the centre of the settlement is given a point number. Apart from Nyeri Municipality and Karatina urban centres the topographical maps do not show the boundaries of the centres. To enable the application of nearest neighbour analysis to settlements other than service centres, a boundary was given to these centres and all the buildings within the boundary were not numbered. This marking the boundary was subjective because a line was drawn usually surrounding the area with permanent buildings where a centre occurs.

- (v) Dots on the periphery of the study area present a problem because their nearest neighbour may be outside that area. Since a large number of dots is involved within the locations under study the dots on the periphery are numbered and their nearest neighbours found within the location. Except in a few occasions however this problem was not encountered because the boundaries follow physical features such as rivers to a great extent, and so the problem of having settlements on the boundaries is minimised.
- (vi) After numbering all the dots in each location, random numbers were used to give a sample of 50 dots from which to measure to their nearest neighbour. Tidswell (1976, p.206) says that when a large number of dots is involved (as in this study) random numbers should be used to give a sample of 30 dots from which to measure to their nearest neighbours. This method of sampling was chosen to avoid restricting the sample to any one area of a location. Nyeri District being an area of diversified physiography could have a region influenced by some particular factors only and if such an area is sampled it would be unrepresentative of the whole region.
- Direct distance from each selected point to its nearest neighbour was measured in mm. These were then converted into Km since the areas of the sampled locations is given in Km<sup>2</sup> (Refer to appendix 9).
- (vii) All the distances recorded in column 3 were added and divided by the number of measurements taken to obtain the mean. This is the observed or measured mean, Dobs.

(viii) The density of points in the study area was determined by the formula:

$$\text{Density} = \frac{\text{Number of points in the study area}}{\text{Area of the study area.}}$$

(ix) The expected mean in a random distribution was calculated by using the corrected formula

$$\bar{d}_{ran} = c \sqrt{\frac{a}{n}}$$

Where a is the study area, n is the number of points and c is the reduction coefficient

$$0.497 + 0.127 \sqrt{\frac{4}{n}}$$

(x) Random scale value (Rn) was determined by the formula:

$$\text{Degree of randomness} = \frac{\text{observed mean distance}}{\text{Expected mean distance in random distribution}}$$

$$\text{or } R_n = \frac{\bar{D}_{obs}}{\bar{d}_{ran}}$$

The Rn scale is as below:

Maximum regular spacing is	2.15
Completely random is	1
Clustering along lines is	0.23
Absolute clustering	0

- (xi) Hypotheses were formulated and rejection level decided upon, for the descriptive statistic  $R_n$ . Pinder gave a formula for correcting the underestimation of  $\sigma_{ran}$

$$\sigma_{ran} = v \cdot \bar{d}_{ran}$$

$$\text{Where } v = 0.0098 + 0.4701 \bar{d}_{ran}$$

### CHAPTER 3

## BACKGROUND TO SETTLEMENT PATTERNS IN NYERI DISTRICT

Nyeri is one of the 5 administrative Districts in Central Province and has an area of 3284 km<sup>2</sup>. The description and classification of settlement patterns can be achieved by studying the influences that determine them. In order to explain types of rural settlement one has to rely, according to time and place, upon quite different factors. In this chapter 3 broad factors are identified as being influential to settlements in Nyeri District. These are topography, the Kikuyu residential customs, the Mau Mau revolt and emergency villagization. This chapter restricts itself to describing these factors but how they influence settlements today will be discussed in detail in chapters 4 and 5.

### 3.1 TOPOGRAPHY

It is important to know something about the topography of Nyeri District for settlements are influenced by it to some extent. A number of topographical factors are described below but the influence that each of them has on settlements will be discussed in chapter 5.

#### 3.1.1 Physiography

Nyeri District lies between the dissected slopes of the Aberdare mountains to the West and Mt. Kenya to the East (See Figure 3). Mt. Kenya has a maximum altitude of 5199 m on the Batian peak whereas the Aberdares rise to a maximum height of 3980 m above sea level on Oldoinyo Lesatima.





The area in between is relatively rolling land averaging 2,000 m and commonly referred to as the 'Nyeri col' (Odingo, 1971). Only a small portion on the extreme south-east corner of the District has an altitude of 1220 m above sea level. Human habitation extends on the mountains up to about 2100 m above sea level.

The District is drained by several tributaries of Rivers Tana and Ewaso Nyiro. The River Ewaso Nyiro and its tributaries originate from the western slopes of Mt. Kenya and the north-eastern slopes of the Aberdares. The eastern slopes of the Aberdares are drained by the tributaries Amboni, Chania, Muringato, and Gura which converge with others in the south-eastern part of the District to form the Sagana River. The south-western side of Mt. Kenya is drained by Rivers Nairobi, Thego and Sagana which also drain to the south-eastern part of the District to form the Sagana River (which forms the Tana River).

These tributaries form a dense dendritic pattern flowing through steep sided valleys that make the landscape particularly irregular. Odingo pointed out that at higher altitudes the ridges and valleys alternate every few hundred meters, but lower down the valleys open out, and they are separated by ridges by distances varying from 2-3 km. This pattern of alternating ridges and valleys has had an important influence on the Kikuyu settlement pattern as will be discussed in chapter 5.

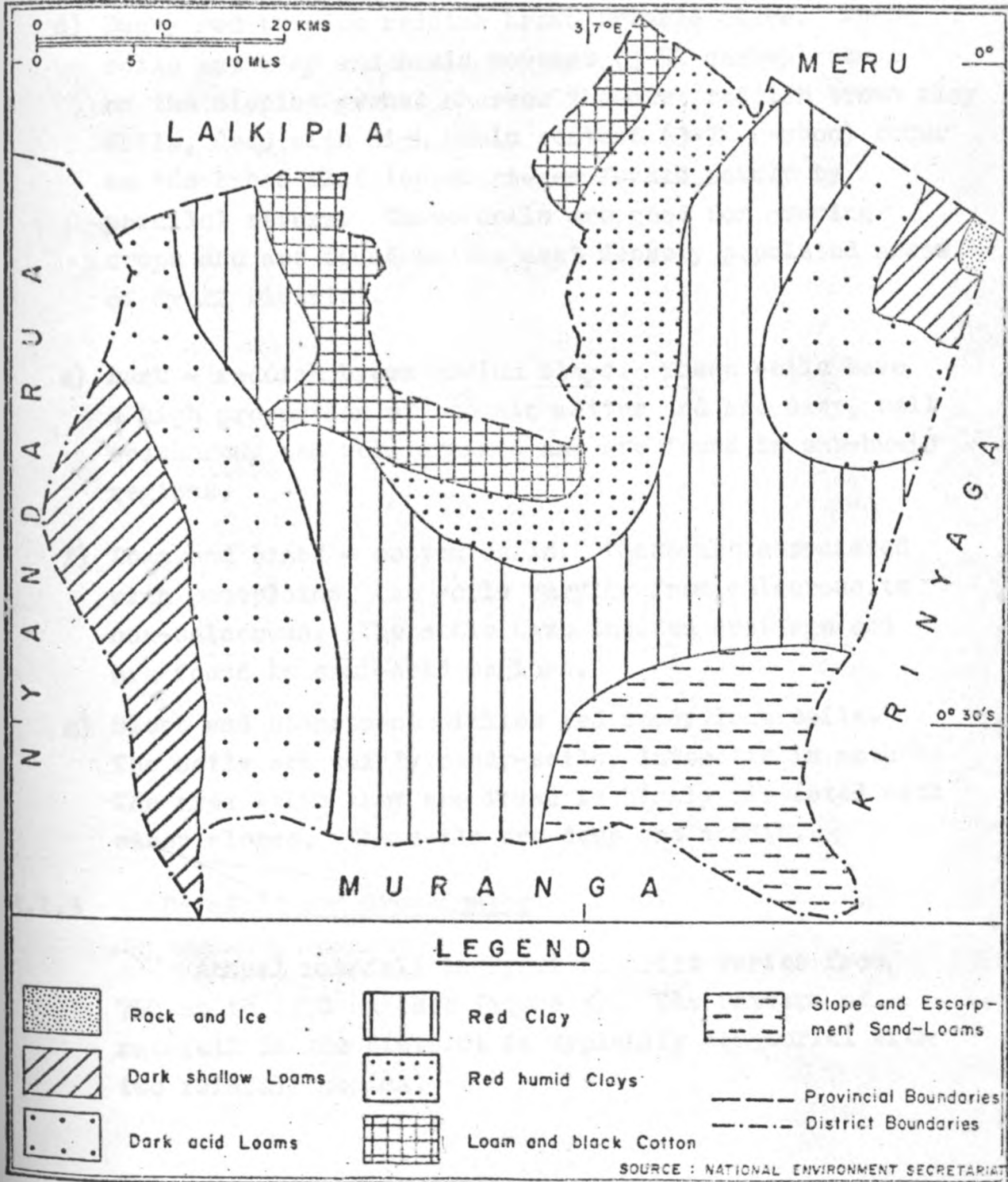
### 3.1.2 Soils

The soils of Nyeri District are generally well drained except in the high areas of Mt. Kenya and the Aberdares which have a few areas of impeded drainage. Most soils in the District have been developed from volcanic rocks. For most part the soils are exceedingly fertile being composed of deep, red earths derived from volcanic tuffs, and the humus from the heavy forests which once clothed the country. In most areas soils are deep because of the heavy rainfall coupled with the high rate of physical and chemical weathering except in the high altitude areas where rock outcrops are commonly found.

There are 7 groups of soil in the District (refer to Figure 4) and these have had an important influence on settlement patterns in Nyeri District. This will be discussed, fully in chapter 5.

- a) Rock and ice - This area is found on top of Mt. Kenya and it is uninhabited.
- b) Dark - reddish brown to black shallow acid peaty loams with rock outcrops. These are found within Alpine Meadow, where they are poorly drained in high swampy - like ponds. They are found on top of Aberdares and Mt. Kenya and are derived from volcanic rocks. No settlement is possible here.
- c) Dark - brown to Dark greyish brown, very acid loam-found in or overlaid by thick tuffs of volcanic ash they are found in humid regions and are well drained.

FIGURE 4 NYERI DISTRICT SOILS



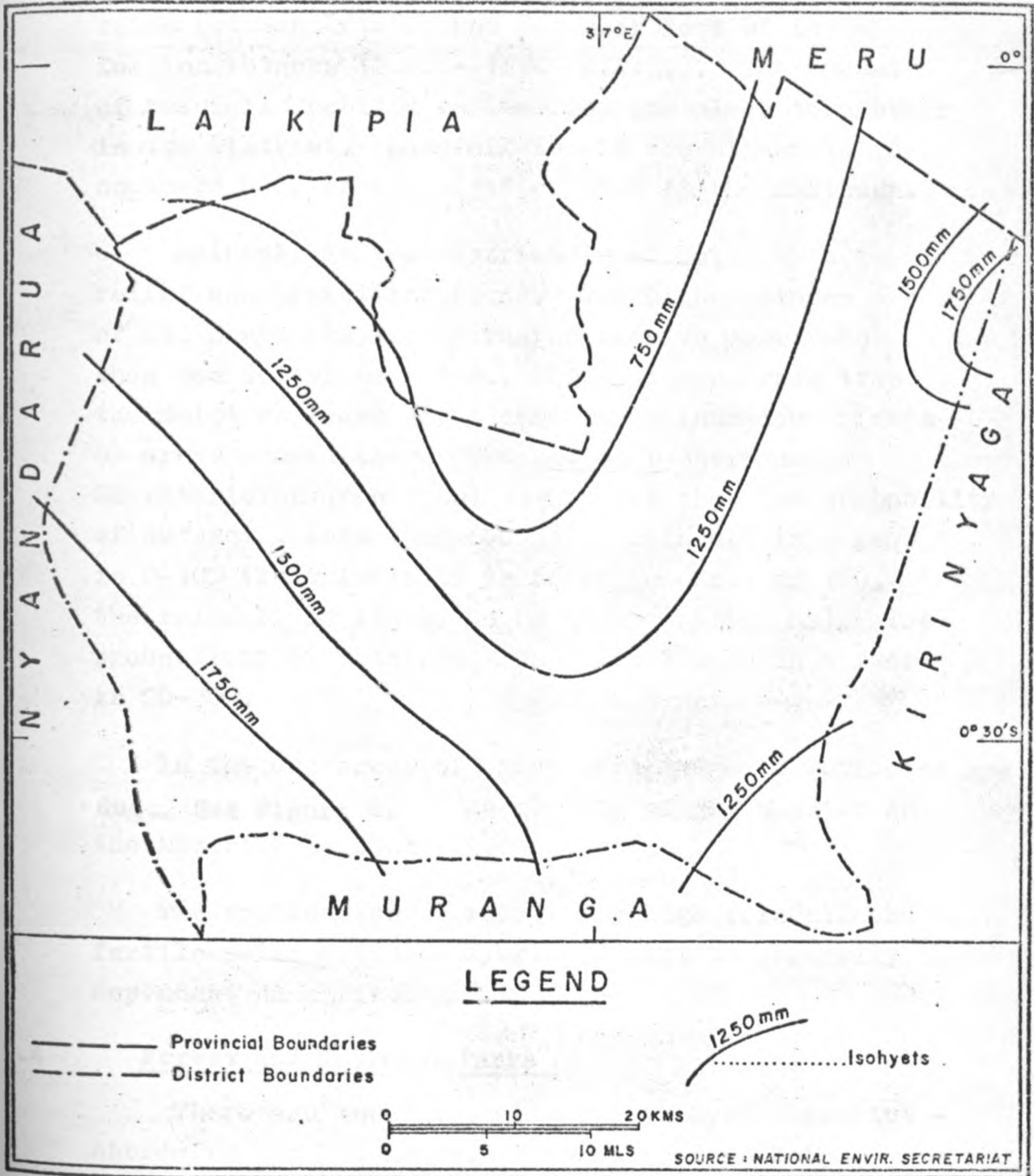
These soils are good for cultivation but their usefulness is limited by the steepness of both Mt. Kenya and Aberdare mountain slopes.

- d) Dusky red to dark reddish brown friable clays. These soils are deep and humic content (3-5% carbon) occur on the sloping ground whereas the dark reddish brown clay soils, deep with high humic content (3-7% carbon) occur on the broad flat topped ridges formed mainly by parallel rivers. These soils are good for growing crops and are found in the most densely populated areas of Nyeri District.
- e) Dark - reddish brown medium clays. These soils have a high proportion of organic matter and are deep, well weathered, and well drained and are found in sub-humid regions.
- f) Loam and black - cotton soils. These are associated with penopains, the soils varying from calcereous to non-calcereous. The soils have impeded drainage and are found in semi-arid regions.
- g) Slope and escarpment pinkish red sandy loam soils. The soils are mainly sandy-soils, latosolic in nature. The area where they are found is highly dissected with steep slopes. The soils are deep and acidic.

### 3.1.3 Rainfall and Groundwater

Annual rainfall in Nyeri District varies from 750 mm to 1750 mm (see figure 5). The pattern of rainfall in the District is typically equatorial with two rainfall maxima.

FIGURE 5 NYERI DISTRICT MEAN ANNUAL RAINFALL



The long rains between March and May and the short rains between October and December most of it falling between 12.00 - 18.00 .A.S.T. The amount of rainfall received varies from one place to another in the District. Rainfall totals are higher in the southern half of the District than in the northern.

Rainfall in the District is affected by both relief and prevailing winds. The higher slopes of Mt. Kenya and the Aberdares receive more rain than the footslope zones. These higher areas trap the moisture laden winds creating rainshadow effects on areas around them. The National Environment Secretariat (March 1988) points out that the probability of obtaining less than 500 mm of rainfall in a year is 0-10% (that is in 10 years or less out of 100, the rainfall is likely to be less than 500 mm). The probability of obtaining less than 750 mm in a year is 20-30%.

In the dry areas of Nieni West and East borholes are dug. See Figure 6. The quality of groundwater in the District is classified as good.

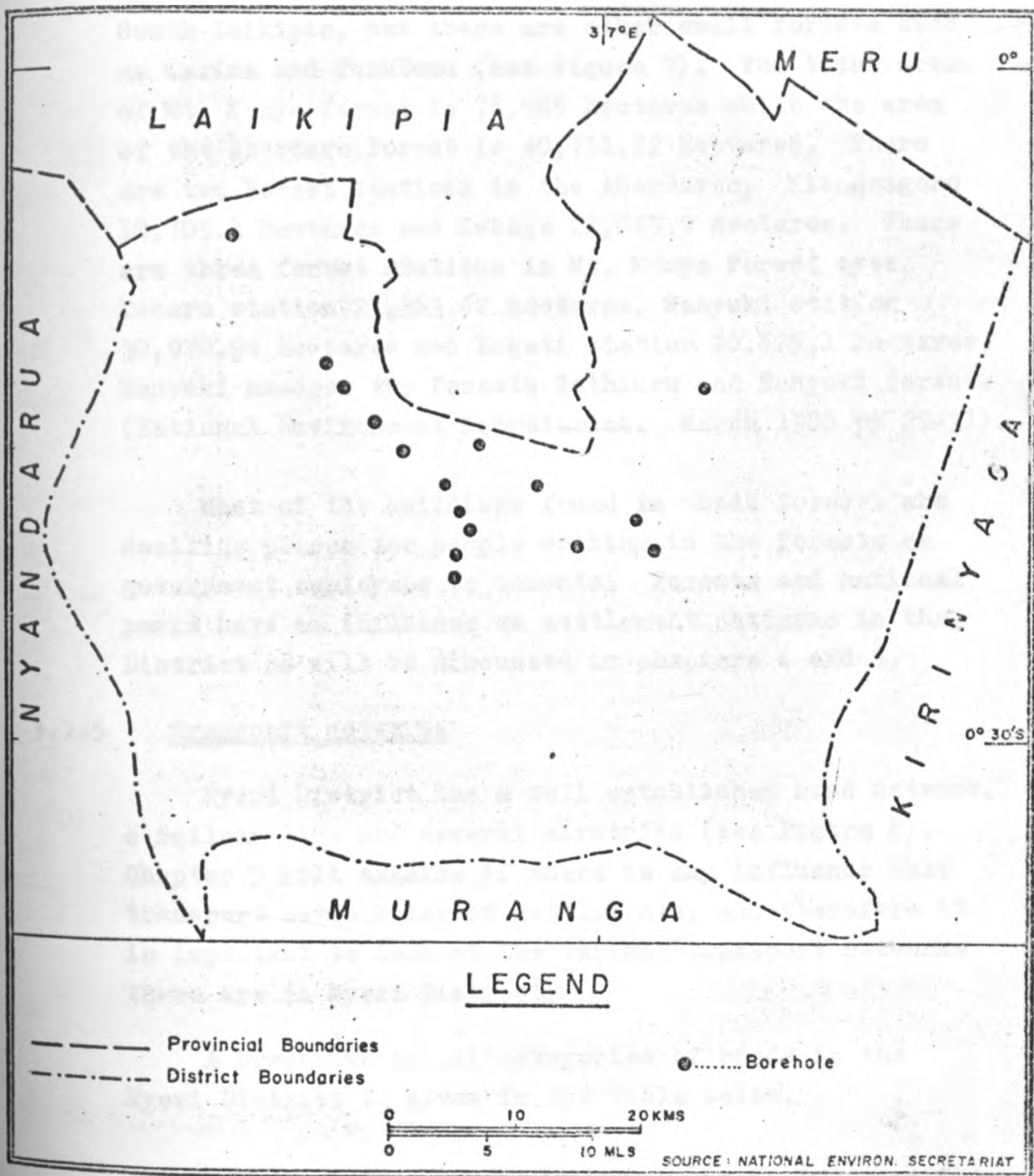
The combination of relatively high rainfall and fertile soils has made Nyeri District be primarily dependent on agriculture.

#### 3.1.4 Forest and National Parks

There are two national parks in Nyeri District - Aberdares and Mt. Kenya. These are areas not inhabited by people, and the only buildings found there are hotels and lodges for the tourist industry. There are a few settlements on the forested areas, although the population living here is very negligible in comparison to those living in the administrative locations.



FIGURE 6 NYERI DISTRICT BOREHOLES





There are 119174 hectares of forest plantations in Nyeri District. The forested areas of the District are mainly the Aberdares, Mt. Kenya, Nyeri, Kiganjo and South Laikipia, but there are other small forests such as Karima and Tumutumu (see Figure 7). The total area of Mt. Kenya forest is 78,985 hectares while the area of the Aberdare Forest is 40,751.22 hectares. There are two Forest stations in the Aberdares, Kianjongoro 18,705.3 hectares and Kabage 22,045.9 hectares. There are three forest stations in Mt. Kenya Forest area, Zabarau station 21,363.62 hectares, Nanyuki station 30,970.94 hectares and Ragati station 20,625.1 hectares. Nanyuki manages two forests Gathiuru and Nanyuki forests (National Environment Secretariat, March 1980 pp 29-31).

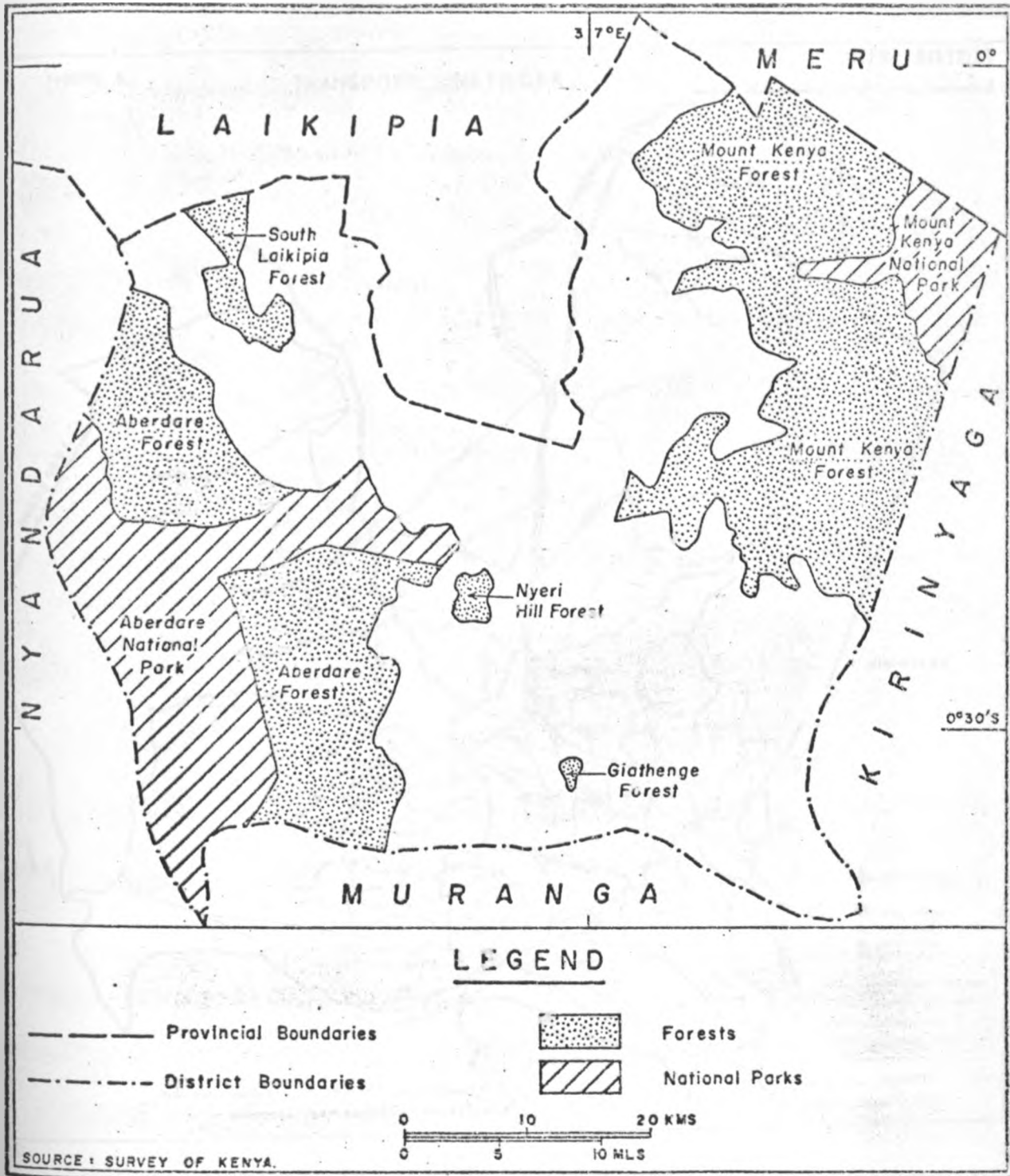
Most of the buildings found in these forests are dwelling places for people working in the forests as government employees or tenants. Forests and national parks have an influence on settlement patterns in the District as will be discussed in chapters 4 and 5.

### 3.1.5 Transport networks

Nyeri District has a well established road network, a railway line and several airstrips (see Figure 8). Chapter 5 will examine if there is any influence that transport network has on settlements, and therefore it is important to look at the various transport networks there are in Nyeri District.

A breakdown of all categories of roads in the Nyeri District is given in the table below.

FIGURE 7 NYERI DISTRICT FOREST AREAS AND NATIONAL PARKS



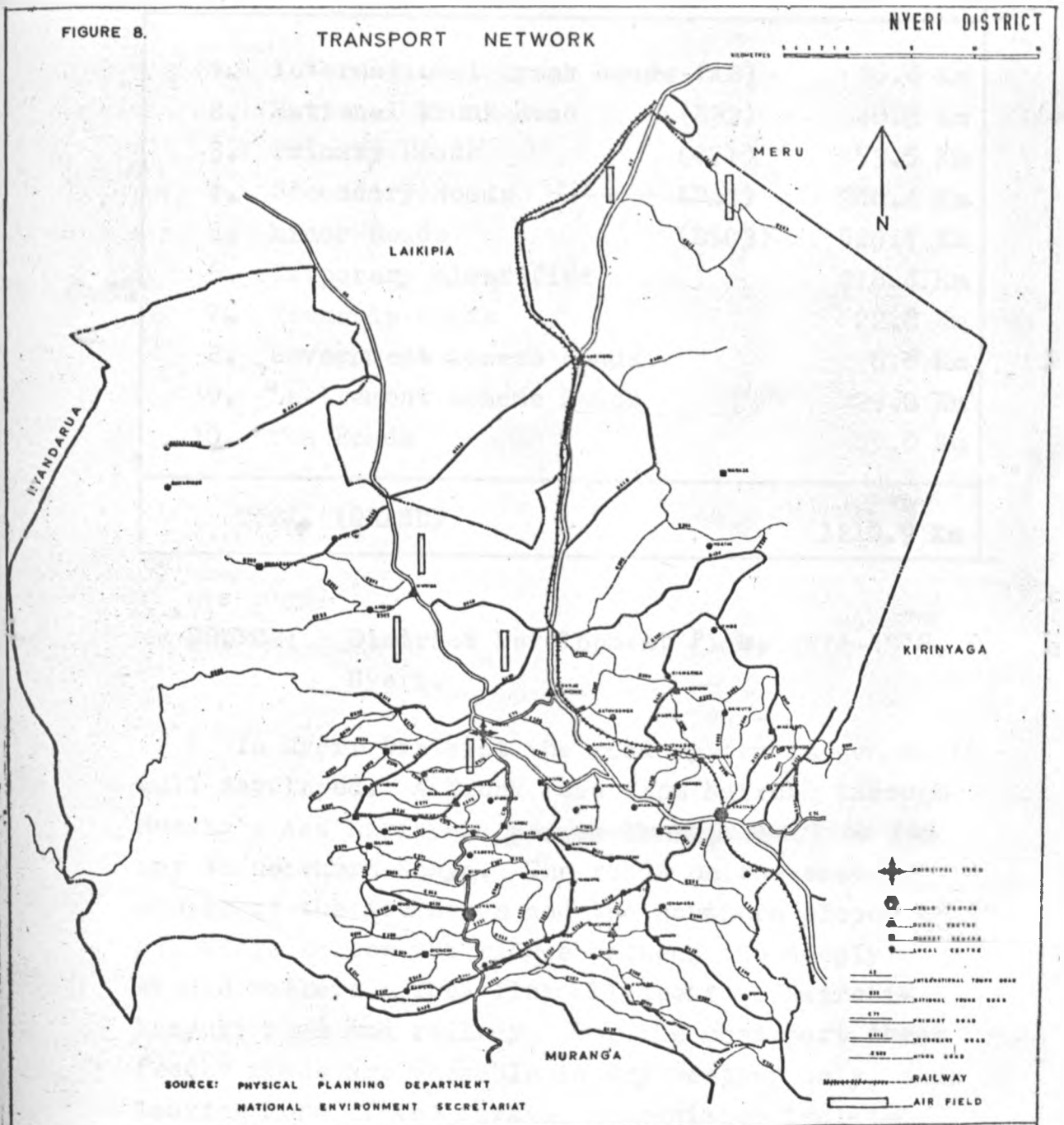


TABLE (IV) ROAD NETWORK IN NYERI DISTRICT

1.	International Trunk Roads (A2)	36.4 Km
2.	National Trunk Road (B32)	40.3 Km
3.	Primary Roads (C71)	53.5 Km
4.	Secondary Roads (D41)	246.4 Km
5.	Minor Roads (E503)	529.7 Km
6.	Temporary classified	218.4 Km
7.	Township Roads	22.8 Km
8.	Government Access Roads	8.6 Km
9.	Settlement scheme Roads	29.8 Km
10.	Tea Roads	25.0 Km
TOTAL (GRAND)		1210.9 Km

SOURCE: District Development Plan, 1974-1978, Nyeri.

In Nyeri District the road system is generally well developed. A Trunk road from Nairobi through Murang'a and Kirinyaga **passes through Nyeri on its** way to northern Kenya. The roads on the eastern slopes of the Aberdares and the southern slopes of Mt. Kenya follow the ridges between the deeply eroded valleys. They link all areas to Nairobi-Nanyuki road and railway. For the most part **these** feeder roads are passable in dry weather only, thus leaving most of the farming communities isolated during rain periods.

The road network is more dense in the south, in the more developed parts of the District. The higher category roads A2, B32 and C71 consisting of

130.2 Kms emphasize the link of the District with others and Nairobi; connecting major centres, Nyeri town, Karatina, Othaya, Kiganjo and Naromoru. The rest of the road categories while connecting to higher roads categories provide intra-district linkages, serving the high potential agricultural areas and commercial centres. However the lower category roads are not well serviced.

The District is served by a railway line linking it with Nairobi, connecting Karatina, through Ruthagati, Kiganjo to Naromoru as it extends to Nanyuki in Laikipia District. The line was established to serve mainly the former White Highland farms and little effort has been made to serve the African small scale agricultural areas.

There are several airstrips in the district. These are however, rarely used, except for special purposes such as tourism, administrative and medical purposes.

Of the three types of transport agencies, road has the greatest effect on settlements patterns in Nyeri District as will be discussed in chapter 5.

3.2

#### THE KIKUYU RESIDENTIAL CUSTOMS

The settlement patterns observed today in any country may be greatly influenced by the traditional residential customs of the people in the area.

It is important, therefore, to understand the traditional residential customs of the Kikuyu people in order to see whether they have an influence on the present settlement patterns. It is also necessary to look at the recent history of the Kikuyus in Nyeri District in order to identify any factors that may be influential in the present settlement patterns there.

### 3.2.1 General

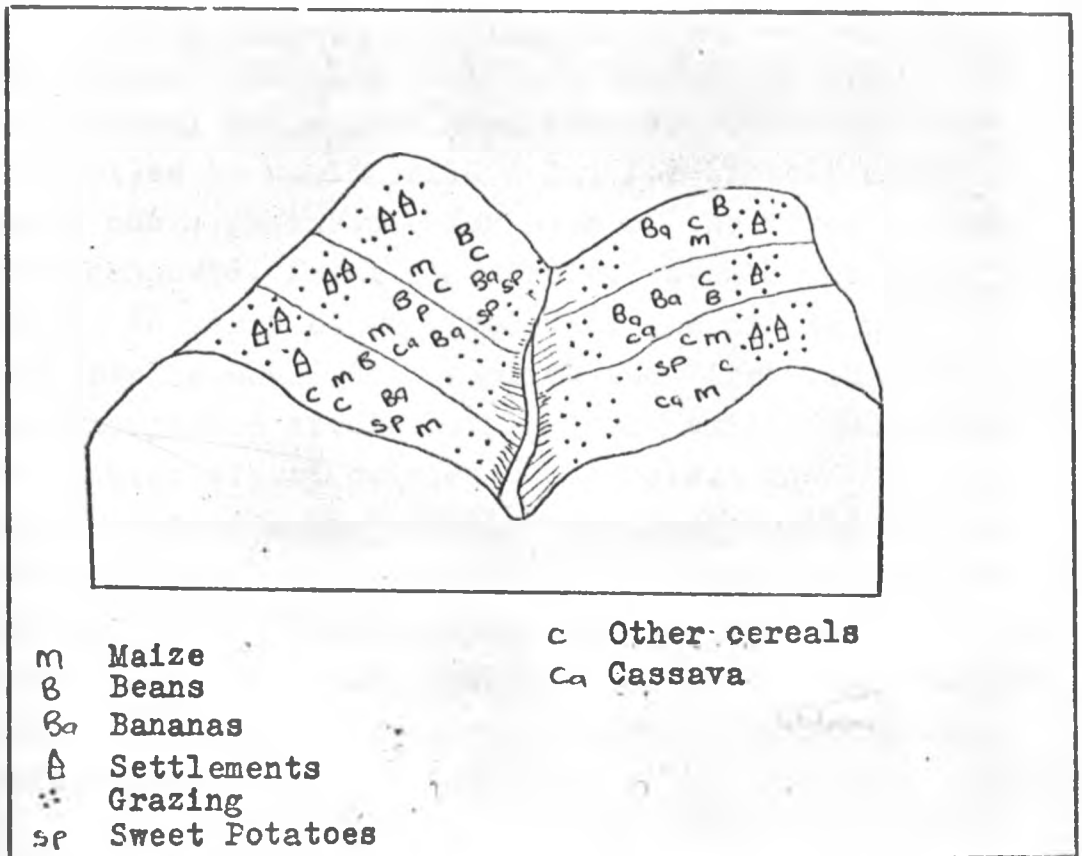
Sorrenson (1967) points out that the Kikuyu did not live in villages but in dispersed households. Each household consisted of a man's hut (thingira) the wife's house (nyumba) and her grainstore (ikumbi). If a man had many wives as was the case usually, each of them had her own house and a grainstore or grainstores.

As mentioned earlier Nyeri District is a region of dissected physiography. Its pattern of alternating ridges separated by deep valleys has had an important influence in the Kikuyu settlement pattern. Homesteads were usually located on the edges of ridges where gently sloping, or on a flat part of a hill or high ground. They preferred such sites because those were the most open areas, since down the valley it was usually too bushy and hence unsafe for settlements due to wild animals. Fear of floods prevented them from building houses near rivers. In the earlier parts of this century population pressure was not acute and large tracts of land lay unoccupied.

In those days the Kikuyus usually selected the most convenient sites for building.

Each family occupied a segment of a ridge with its landholding extending down one or both sides of the ridge. However, this pattern was not usually so clear - cut because each wife cultivated several distinct fragments rather than one long strip. Since it was essential for each wife to grow a whole range of crops needing differing conditions she required several patches of land, some on the ridge tops and some in the valleys.

Diagram a LAND-USE IN A KIKUYU COUNTRY LANDSCAPE.





The individual family was the basic social unit and was economically self-sufficient. When the sons in the nuclear family married they were given portions of their mother's (mothers') plots for their wives to cultivate. At this stage sons were supposed to build their houses behind those of their parents. One of the interviewees in this study said that sons were supposed to build that way as a symbol of that they are still carried on their mothers' back. This shows that they are still under their parents care to some extent. The sons were, however, supposed to build some distance from their parents compound and could extend their farming plots as far as they could manage.

Another person interviewed in this study gave an illustration that would explain the Kikuyu residential customs in more detail. If a man had four wives he would build a hut for himself and a house and a grainstore for each of the wives on the same compound, forming a circle. Should the man decide to marry other wives when the circle was complete he would not demolish the first houses so as to enlarge the circle but he would build houses for the latter wives' outside the circle. The settlement of a man and his immediate family was fenced leaving one entrance. When sons got married and set up their own compounds, they were supposed to fence them. If a man had 15 sons, by the time all of them got married the compounds would form a large settlement.



This was so where sons built their houses close to each other and **close to their parents' compound.** No matter how large such a settlement may look it was referred to as a "Mucii", (the dwelling place of an extended family). Due to the growth of extended families the boundary lines between households became blurred.

Security was an important factor considered in the Kikuyu residential customs. In earlier days there was less population density and people could afford to live in dispersed settlements. However, those were the days when there was thick bush and forest and these were habitats of wild animals such as lions, elephants and hyenas. Hyenas were notorious for stealing goats and even children from poorly constructed houses. The Kikuyus were also afraid of the Masai warriors who occasionally came to raid cattle on the claim that all cattle belong to them. As a result, therefore, they preferred to live relatively close together for security purposes rather than build in an area far removed from the other people, although land availability could allow for such an arrangement. On occasions when a father had fragmented plots of land he would tell his sons to build on them instead of clustering in the plot where he has built.

The technology of the time also had some effects on settlements. Cultivation was done with primitive tools "Miro" (sharpened sticks) such that to get a sizeable piece of ground cultivated took a lot of time and energy.

The Kikuyus did not see the use of having very large plots of cultivated land. But they required large plots for grazing. If they had better instruments for cultivation and given the low population density the Kikuyus would have lived in more dispersed settlements than they did.

The 'Mbari' was another important social grouping. This is a lineage grouping of all Kikuyus who trace their descent through the male line from a known ancestor. The Mbari was concerned with the occupation of a ridge. Originally the founder of a Mbari acquired land on a particular ridge as his property and had ownership and authority over it. When his sons got married he gave them plots of land from what he owned. On the death of the founder a communal form of tenure was created. Land passed to his sons with all having equal shares and hence what was originally an individual's property became the property of a large extended family. As land passed from the original owner to the extended family it becomes fragmented. Some members of the Mbari would leave the place to found new plots where land was still available and hence found new Mbari.

Whereas all the sons got equal ownership of equal plots of land from their father's "jithaka" (farm) the authority over the whole "jithaka" passed to one heir, usually the first born son.

That heir acquired the name "muramati". He was responsible for reallocating land within the "githaka" and had a final veto on admission of tenants and alienation of land to strangers. It was in these respects that something less than a full individual title emerged after the death of the founder, even though land continued to be utilized on the basis of the individual households. If the founder had many different plots of land (ithaka) on his death, each "githaka" would have its own "muramati" and ownership would be divided equally among his sons.

Sorrenson says that,

"... it should be emphasized that there was no form of tribal tenure, despite the frequent European assertions that land was communally owned by the tribe. European observers, obsessed by the Lugard theory that 'conceptions of land tenure are subject to a steady evolution side by side with the evolution of social progress' assumed that African land ownership was vested originally in the tribe, but under the influence of British rule, gradually evolved towards individual tenure. In the Kikuyu country the opposite process was the rule: .... As the Kikuyu social structure was extremely segmented and there was no centralized tribal authority there could be no tribal ownership of land" (Sorrenson 1967 p9).

In the Kikuyu traditional customs girls were not given land by their fathers because they were supposed to get married and would therefore cultivate what their husbands inherited.

Sorrenson also gives an account of the various forms of Kikuyu tenant relationships.

Firstly there were the contractual tenancies which included:-

- a) A "muguri" who was given the use of land against a loan of stock.
- b) A "muhoi" who was given temporary cultivation rights on the basis of friendship and without payment other than an annual "tribute" of beer or first fruit.
- c) A "muthami" who was similar to a "muhoi" except that he had additional rights to erect buildings. The "muthami" could be turned off the land on the removal of his hut.

These various rights of cultivation conveyed no rights of ownership as distinct from the use of land. The "muthami" tenancy had an effect on settlement. Although the Kikuyus preferred to live in family homesteads, in a case of a "muthami" he could be allowed to erect his buildings in the owner's compound or where he was shown. Among the Kikuyus a friend was regarded as a brother and they could build together.

Secondly, there was tenancy based on status ties and this included:-

- a) A "muthoni" relationship in which a father-in-law gave a landless son - in law the use of land.
- b) The status of "mwendia - ruhiu" whereby the begetter of a widow's children was permitted to occupy land belonging to her "mbari".
- c) The status of "muciarwa", whereby a stranger was adopted by a wealthy man, given a wife from the "mbari" and permitted to occupy land.

The above people were permitted to occupy land but gained no title to it. If these tenants needed to build houses on the land not belonging to them the owner directed them on the site. Tenants were usually, though not always, landless people. Sometimes right holders from one mbari became tenants in another.

Sillitoe says that,

" since this area (Nyeri District) is very hilly indeed, there are large number of holdings which are situated on steep hill sides which make it exceedingly difficult to cultivate most crops and so many small land-owners find it necessary to borrow additional land from relatives and friends. Where land is borrowed from a close relative, as from a brother, it is generally as by right, without question of payment. If it is borrowed from a non-relative then it frequently seems to lead to something of a patron - client relationship whereby a person who is given land is expected to reciprocate by assisting the landowner in various tasks as the occasion arises. .... sometimes land is borrowed for some fixed amount of money - rent" (Sillitoe, 1963 p.5).

In this latter case the relationship is impersonal but gives some security of tenure. Today renting a plot of land is more common, and generally this does not have a direct effect on settlements because tenants do not usually build on rented plots.

3.2.2 European interference

The European colonization of the Kenya Highlands in the early years of this century had a great impact on the Kikuyu settlement patterns. The Kenya - Uganda railway reached Kisumu in 1902. The Europeans felt that the Africans who inhabited the Highlands could not provide enough freight to make the railway line pay since they were either shifting agriculturalists or semi-nomadic pastoralists. As a result therefore, the Commissioner Sir Charles Eliot, began actively to encourage European settlement in the Highlands in 1903. The land between Nairobi and Limuru, and the land to the north of Nairobi attracted the settlers' attention because of its fertility and its proximity to Nairobi. But the Kikuyus were very reluctant to sell land to the Europeans. British administration was therefore introduced after Kikuyus were subdued by a series of para - military operations in the early 20th century. So when the early settlers arrived the Kikuyus had been subdued and could no longer resist the alienation of their land.

When the Europeans came much of the Kikuyu land was unoccupied and some had been left fallow under the system of shifting cultivation. This land however, belonged to various "Mbari" groups. Eliot misinterpreted such land as ownerless and was anxious to alienate it to European settlers. Thus a conflict arose between the Kikuyus and the settlers over land. The Protectorate government decided that the Africans should not be allowed to obtain land in the so-called European areas. At the same time, in order to safeguard African rights to the areas they occupied, African Reserves were gradually established in the Highlands.

It was the insecurity of African Reserves which led many District officials to support a segregation policy.

Compensation for alienated land was given to the tribe as a whole by adding land to the Kikuyu Reserve rather than to those individuals who had lost land. When the settlers came they acquired large plots of land. In the southern part of Nyeri they developed large coffee estates since the soil and climate were favourable, and cheap labour was available due to the high density of population in the region. On the northern parts of the District ranching was practised because soils were poorer, rainfall was less, and labour was less since the population density of the region was lower, than in the northern parts.

Before European interference prospects of uncultivated land offered a good escape from congestion in the already settled "Mbari" land. Also there was much prestige attached to the acquisition of a new "githaka" and the foundation of a new "Mbari". With European rule and settlement the Kikuyus were prevented from migrating and acquiring land outside their reserve. As a result there was increasing population pressure and friction within the existing "Mbari".

The Kikuyus were still living in isolated homesteads as before although the population pressure blurred the clear-cut boundaries of each unit. Before European interference the settlements were generally dispersed for land was available when need arose. But with the creation of reserves land was limited.

The population pressure plus the Kikuyu custom of gavelkind inheritance produced a clustered settlement pattern in the reserves. This situation had long-term effects on settlements in the District. Today, one finds that the old reserve areas are highly populated whereas the newly settled areas (areas formerly owned by European settlers) have low population densities. Taking the two broad areas generally, buildings in the old reserves are closer together than those in newly settled area. Further discussion on this will be done in chapters 4 and 5.

With the coming of Europeans a number of intrusive factors were introduced in the Kikuyu country, and these had both direct and indirect effects on the Kikuyu settlements. The British colonialists set up a modern administrative structure, imposed taxes and opened schools in Nyeri District. To pay the taxes the Kikuyus had to work for European settlers and missionaries for very low wages.

A clustered pattern of settlement was introduced by the Catholic missions to house converts and separate them from their "pagan" brethren. However, such settlements were limited in both time and space. Catholics took to expand and diffuse Christianity through the system of christian villages around the mission stations, after the end of World War 1. Christian villages were houses built in and around the mission stations for African converts.



As soon as an African was baptised the other Christians went to fetch him with his belongings and gave him a house which they had built on a communal basis. Boys and girls were housed in dormitories "mirango". These villages were named after Christian patron saints. For example the village in Tetu was called "Villaggio San Paulo" and the village in Karima was called "Villaggio Maria di Mondovi". But by 1954 the Africans started leaving these villages often with the opposition of missionaries. This type of settlement was unknown to the Kikuyus.

3.2.3 A brief case study: Mathari Mission coffee estates

A brief account of Mathari Mission coffee estates will throw some light on the effects the Europeans' intrusion had on Kikuyu residential patterns. There is a common saying among the old people in Nyeri District to the effect that there is no difference between a European settler and a priest for even the latter was interested in acquiring land. Mathari is north-west of Nyeri town centre just below the Nyeri Hill Forest. Mburu (1975) notes that Mathari Mission station was founded in March 1904 on the slopes of Nyeri Hill. The Catholic Missionaries obtained a 3000 acre farm around the station which became the agricultural, industrial, intellectual and religious centre for the IMC (Institutio Missionario Consolata) activities in Kenya.

Mathari Mission had 3 big coffee estates namely; Kamwenja, Hill farm and Mathari, each being under a priest. Labourers came from within the District mostly, but a few came from Murang'a District and even as far away as Kisumu. These labourers stayed in big villages ( a new type of settlement bigger than the christian villages), which were within the coffee estates. In these villages cultivation and cattle grazing were not allowed (and in fact there was no room for such activities), but one could keep a few goats. These labourers were given small plots of land elsewhere to cultivate. One could get many separate plots depending on one's ability to cultivate. People got farm plots both near the village and far off. Labour also came from people living around the estate. It was compulsory for those living in estate villages to work on the coffee farms unless one was very old or had a very sound reason.

A little removed from the village was the Mission centre which had the church, hospital and schools. There were small shops located within each estate village. The effects that these coffee estates have on settlements today will be discussed in chapter 4.

### 3.3

#### MAU MAU REVOLT AND EMERGENCY VILLAGIZATION GENERAL

After World War II there was growing Kikuyu unrest, social tension and political agitation ultimately to culminate in the Mau Mau revolt. The Kikuyus became politically and economically alert especially after the two World Wars when some young men were mobilised into military services.

Some discontented Kikuyus broke away from the missionaries and set up their own independent churches and schools.

By 1948 and 1949 the Kikuyu unrest had turned into violence. There was a division among the Kikuyus, the Mau Mau who went to hide in Mt. Kenya and Aberdare forests to fight the Europeans and their supporters, and the passive supporters of the Mau Mau still living in the reserves. Fear grew in the countryside since people were killed very frequently. The Mau Mau had taken an oath of allegiance to the land and to each other. Tension in the countryside increased and the British administrators thought it wise to cluster the Kikuyus in villages. The District Commissioner in Nyeri called a meeting and told the Kikuyus that if they failed to stop their practice of killing and supporting the Mau Mau they would have villages built for them. The concept of a village settlement was new to the majority of the people and they would leave the meeting wondering on the idea.

As a result of increased tension, the Governor, Sir Evelyn Baring, declared a state of emergency on the 20th October 1952. Sillitoe (1962) says that villages were first introduced as administrative and disciplinary measure during the emergency and this factor may well account for great dislike the Kikuyus had for them.

The British government selected the most appropriate site for each village. These villages were usually built on high grounds where it was flat or gently sloping and away from valleys.

For example, from the topographical map 1:50,000 sheet 121/3, (1963), Mungaria village, between 80-82 East and 45-47 North, was built between Kagumo (Muhoko) and Kaigonde rivers. These rivers have steep sided valleys and above them, on the fairly gentle ground, Mungaria village was located. Flat or gently sloping ground was selected for locating villages because many houses could be accommodated and people from a wide region could fit on one village, making administrative tasks easier. High ground was preferred because it acted as a 'watch tower' where a wide region could be viewed, and Mau Mau revolters could be sighted from afar and would be captured or even killed. High areas were also favourable because they removed people from the hidden valleys and so their activities could be easily watched. Other villages were located near government posts, near chiefs' camps, near roads or anywhere else the government found most convenient. With the separation between the Mau Mau and the villagers the government hoped to overcome the Kikuyu revolt easily.

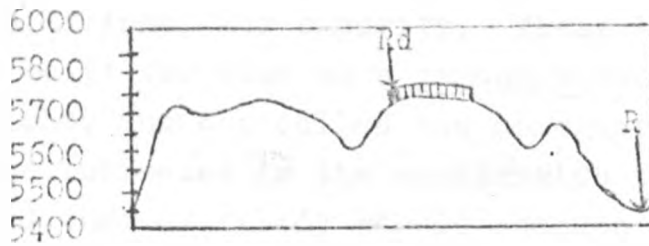
### 3.3.2

#### A brief case study: Kirichu emergency village

Kirichu village is on the north-western side of Ruguru location - refer to the topographical map, 1:50,000, sheet 121/3 (1963). This site was found to be the most appropriate for an emergency village in Gachika sublocation for the ground is flat, it is served by two roads, and there was a school and a government post (see figure 9).

FIGURE 9

A CROSS-SECTION THROUGH MIRICHO VILLAGE




A cross-section from West to East  
from **grid** point 548772 to 548814  
(Karatina map, sketch 121/3 (1963))

Horizontal scale 1:50,000

Vertical scale 1" to 500'

vertical exaggeration is 8.33

Key

R3	all weather road
R	Sagana river
	Miricho village

When Mau Mau revoltors went to fight from the forests the situation in the countryside became tense and dangerous. The Mau Mau would come at night and kill the Kikuyu loyalists. When these felt very threatened they abandoned their homesteads in their farms and went to Kirichu, for security. These loyalists had houses built for them on a communal basis in one area in Kirichu, and was called the homeguard post. When violence increased in the countryside the government declared that everybody should abandon their farmhouses and move to Kirichu village. Building of the houses in the village was done on a communal basis. Initially one house could be occupied by as many as four families as they waited for new houses to be completed. Houses were built of mud and thatch, and were in rows. Doors of two adjacent rows faced each other. In the end everybody was housed in the village. Nobody was left in his farm homestead for fear of the Mau Mau as well as for the fear that the government would suspect such people as Mau Mau supporters. Villages varied in size according to the population of different areas. In this study, respondents said that Kirichu had approximately 900 houses.

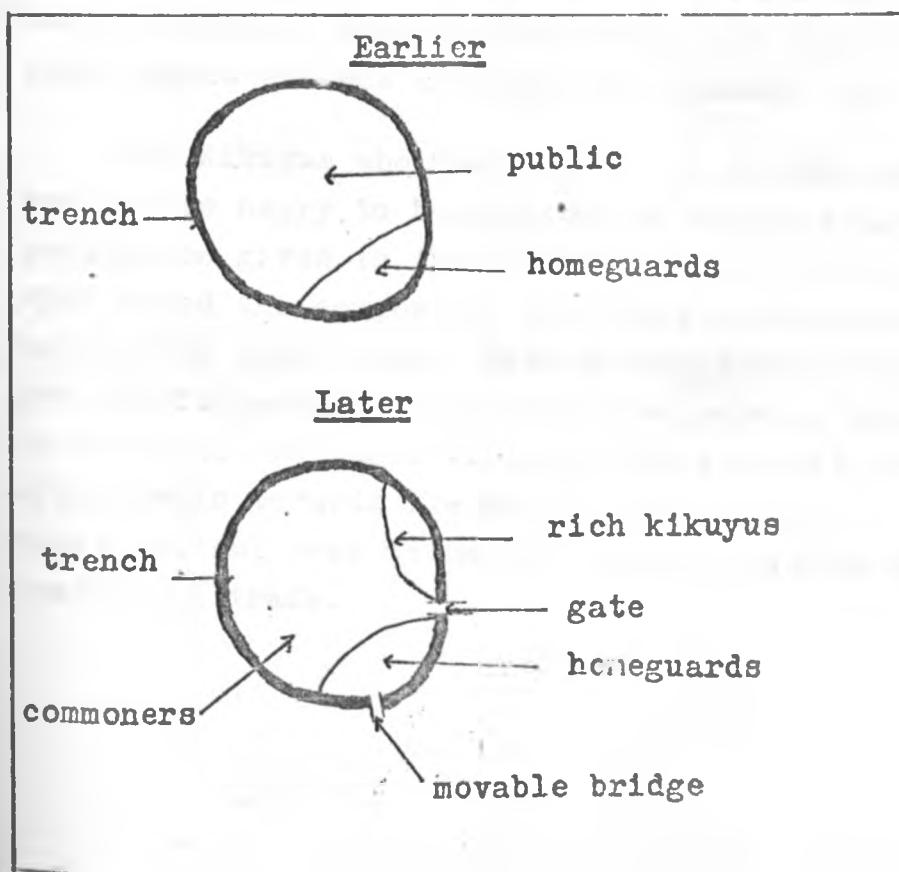
When everybody was accommodated in the village a huge trench, 3.05 m wide, 2.44 m deep, was dug all around the village, still leaving a wide area for extension if need be. In it sharpened sticks were fixed upright, and very closely together, to prevent any unwarranted communication between the Mau Mau and the villagers. Later on a section of the village was set aside for the more wealthy Kikuyus and was called "Kwa Masettler" (settlers area). Each was given a small plot on which to erect a house under the condition that it would be tin-roofed (or iron-sheet roofed) but some still used grass.

Some wealthy Kikuyus left for this section whereas others continued to live in the homeguard post. Although the homeguard post was inside the big trench it was surrounded still by another trench with a bridge to the outside (see diagram below). The bridge was movable and was therefore laid when in use and removed when not in use.

Within the home guard there was a deep hole where the loyalists could hide during Mau Mau attacks. There were also apartments built of very thick mud walls approximately 1 m wide, or bags of soil were kept also for security reasons. These apartments were installed as barricades against bullets.

Diagram b

KIRICHU EMERGENCY VILLAGE



Whenever a person wanted to go out he had to obtain permission from the gate guard. From the village people were escorted by askaris to do forced communal labour, and also to their private duties of going to the garden or to fetch water and firewood. The village was protected by guards and had a village headman and a register of people in it. The domestic animals were kept in a big shed near the village and were grazed communally by village askaris. Mburu (1975) notes that the villages turned out to be the best place for christianisation. Prayer houses were built in villages and these became the centres of church activities in the villages.

### 3.3.3 The effects of villagization

The World War Council of June 1954 decided to form enforced villagization throughout the Kikuyu, Embu, and Meru reserves. Mass villagization was carried out with great speed and was completed by October 1955.

The Kikuyus who were afraid of the Mau Mau harassments were happy to be grouped in villages because of the protection given to them by the British government but they hated the congestion and the punitive motive behind the whole idea. With villagization the government gained control over the passive supporters of Mau Mau. In those villages where people remained sympathetic towards the Mau Mau the government kept tight control over movement, imposed curfews and restricted trade.



The situation in most villages improved so rapidly that by the end of 1955 many of the restrictions had been lifted.

Stockton (1972) says that during the bloody war which occupied most of the 1950s the British pushed through a policy of rural development which had two major components. The first one was the modernisation of farming practices of which the major aspect was the introduction for the first time of cash crops, and secondly land consolidation and registration program involving an exchange of plots until a man's holding were all in one place. As mentioned earlier the Kikuyus had fragmented plots of land in various places and this situation was aggravated by their system of gavelkind inheritance. The British government thought that land consolidation in one large plot of land was more economical as it reduced time wasted when travelling to various fragments. Also that cash crops could be grown more efficiently. This change in landholding had some effects on settlement patterns in the Kikuyu country, as will be discussed in chapter 5.

Consolidation experiments in Nyeri District date back to 1945 when chief Luhoia Kagumba of North Ntatu Division began to consolidate land of his "Ubari". Since surveys were somewhat inaccurate and no provision was made for a village and other public requirements much of the area had to be re-demarcated in 1956-1957. With the encouragement of agricultural and veterinary officers consolidation movements spread to other locations in North Ntatu.

J.G.N. Pedraza arrived as the District Commissioner of Nyeri in April 1955, and in November he urged officers to adopt all possible measures to speed up consolidation. The administrators realized that villagization offered the best opportunity for land consolidation in the Kikuyu Districts since it removed people from their land which meant the government could go ahead and consolidate fragments without hindrance of the established homesteads. Except in few instances where the more wealthy Kikuyus possessed stone houses and permanent crops, consolidation could begin with a clear slate. It was essential to hurry consolidation procedures lest the returning political detainees wrecked the scheme when the emergency regulations were relaxed.

The demarcation of the whole of Nyeri District totalling some 220,000 acres, was completed in June 1959. Altogether this had involved the measurement of something like 250,000 fragments of land, subsequently consolidated into 47,107 individual holdings, about  $\frac{1}{2}$  of them 3 acres or less. Land regulation took place after land consolidation was completed with titles amounting to freehold tenure.

At first many suspicious farmers were opposed to land consolidation and even after completion not everybody was happy with it. Some old people interviewed in the study said that before land consolidation nobody was landless, as such. Since a person could own many land fragments he could give to the landless, in one form of tenure or another, the portions he could not cultivate.

But after land consolidation the owner is able to utilize the whole plot since it is within reach. Landlessness is also explained by population increase today- the owner of the plot has children who utilize the whole plot (and usually this is not enough) and so the tenants cannot be accomodated.

Land consolidation made some people lose their fertile fragments of land only to be given land on poor areas, on river valleys or other fertile areas whereas others who initially owned land on poor areas gained land on good areas. There was, however, an effort to give a farmer his consolidated plot where his largest fragment was or where he had done much improvement but this was not always possible. Occasionally each new holding ran from the ridge top to the valley floor, but generally plots occupied just a section of a ridge or a valley, all depending on the size of the consolidated plot. The effects that this had on settlement patterns in the District will be discussed in chapter 5.

Sorrenson (1967) points out that while the work of consolidation was completed, work was still required in the laying out of permanent villages. Permanent villages were to provide  $\frac{1}{2}$  acre sites - taken from all landowners as part of the common purpose - for all landless people and those owning land less than 3 acres. Such people were supposed to live permanently in the villages, and it was hoped they would obtain employment on the larger holdings.

Holdings less than 3 acres were meant to be demarcated around the villages but, due to configuration of land and other factors, it was necessary to demarcate allotments some distance from the village. In Nyeri District consolidation was definitely carried out on the assumption that all those landowners with 3 acres and above would be allowed to return to their farms.

In June 1956 a memorandum prepared by provincial officials in Nyeri District favoured village life (Sorrenson, 1967, PP 148-149). It was hoped that permanent villages could in most cases be re-planned on the site of the emergency villages, and that medical, education and social facilities be provided - the larger the village therefore, the easier it would be to provide facilities. But the Kikuyus hated villages and would leave them as soon as they got an opportunity. In Nyeri District the first group to be given permission to go back to the land were 44 landowners. But due to the high standards imposed by the administration only 14 had moved by February 1958. The conditions were:-

- 1) to have 7 or more acres
- 2) be proved to be a loyalist
- 3) had to erect a house on his holding that conformed to strict building requirements.

In March the same year, permission was granted to 100 landowners. After this the administration seemed to have dropped the restrictions gradually.

From August 1958 anybody with a small holding would be allowed to leave the village. The gradual relaxation on restrictions meant that the bulk of the villages were deserted. People who remained in the villages were the landless and those who were too poor to build on their holdings. A few of these people are still living in villages today.

There were various reasons which led to the failure of the village policy. The traditional residential customs of the Kikuyu was for each family to live in its own homestead and on their own plot of land. Hence the agglomeration of unrelated people in villages away from their land, was something new and hated by the Kikuyus. The stigma attached to the emergency villages as "concentration camps" worsened the whole situation and people wanted to move out of such settlements as soon as possible. Also many villages were demarcated without heed to the existing commercial and social facilities; shops, schools, dispensaries and chief's centre were often left outside the village which became merely a conglomeration of allotments. As these essential facilities were not moved to the villages there was no attraction in living in the villages.

Moreover there was little follow up in Nyeri District to provide the villages with essential services and there was little opportunity of employment for the landless people either in the villages or on the larger farms nearby.

3.4 CONCLUSION.

The village was a new settlement type that came with Europeans. Villages were first introduced after World War 1 by Catholic Missionaries. Such villages were clustered settlements meant to house converts and separate them from their pagan brothers. The effects of this settlement type in the general pattern of settlement in Nyeri District was limited in both time and space. In space it was restricted to areas near Catholic Missions (and these were very few). These villages were not very popular and the converts started escaping from them by 1934.

Another kind of clustered settlement came with big coffee estates and ranches of the Europeans. The Europeans owning large agricultural and ranching estates needed workers. These workers had their houses built close together and the size of the settlement depended on the number of workers employed. The kind of settlements that resulted were also restricted to the European reserves and so did not have a widespread effect on settlements in the wider part of the District. But European interference caused population pressure in the African reserves and this had an effect on settlements patterns.

The emergency villages were different from the other clustered settlements mentioned above in terms of both purpose and effect. They were punitive in nature and they affected everybody in the Kikuyu, Meru and Embu reserves.

One could not opt out and refuse to live in the village for it was compulsory - it was forced agglomeration. The effects of emergency villages were both short and long-lived; for although they changed the pattern of settlement from scattered homesteads to clustered settlements during the emergency period, even after that period its effects are still visible. This will be discussed in chapter 5. The emergency period was the turning point between what was there before European interference and what there is today in terms of settlements. Due to its purpose, extent and effects, the Kikuyus in Nyeri District are justified in saying that villages came during the emergency period. Today the term village has a general connotation of the emergency its - experiences, poverty and servitude. But the term is also used to refer to a large cluster of buildings which are however, too small to be urban centres.

CHAPTER 4

CLASSIFICATION OF SETTLEMENTS IN NYERI DISTRICT  
INTRODUCTION

4.1

This chapter attempts to classify settlement types in Nyeri District. Firstly, it attempts to identify the traditional concepts of settlements. Secondly, it tries to apply the concepts used in settlement geography but using local criteria. As pointed out in chapter 1 there are difficulties in applying the concepts hamlet and village clearly in Africa. For the function especially implied is an ecclesiastical one. Whereas in England Christian administration organisation came to be at the roots of life and language, in Africa it has been grafted upon a pre-existing African rural organization and language. Thirdly, it tries to classify settlements other than the designated centres. Another problem identified in chapter 1 is that the administrative classification used in Kenya considers only large settlements, those in the category of service centres. After considering the three points mentioned above a classification of settlements in Nyeri District will be attempted. To achieve this end it is also important to describe the various settlements existing in the District.

TRADITIONAL SETTLEMENT CONCEPTS

There are three terms used to refer to various settlement types identified in Nyeri District, these settlement types are smaller than the Kenya administrative criteria of local centres. In order to group settlements into those categories three factors are considered.



Firstly, there is an evaluation of the relationship existing between people living in the same settlement. Secondly, there is the question of who owns the land which the settlement in question is built on. Thirdly, there is a need to know what the settlement in question is referred to, firstly, by its inhabitants and secondly, by a visitor who knows nothing about the relationship of the indwellers or land ownership therein.

The three settlement terminologies used in Nyeri District are "Mucii", "Ituura" and "Gichagi", and a brief description of each is essential. It is important to point out that where population size and number of buildings are used for this description, they are just approximations and should not be taken as the rule.

4.2.1

"Mucii" ('Micii" plural).

The term Mucii has three broad meanings.

- a) It refers to buildings belonging to a man, his wife or wives and their children. The buildings are on his private land, and form a single homestead. The inhabitants of such a settlement call it a Mucii because it is a dwelling place of a nuclear family and on private land. A visitor to the area would also call it a Mucii because its size (that is number of buildings) suggest that only a nuclear family, of about 10 people, live in the settlement. Usually in such a case houses are few, consisting of the main house, kitchen, store, boys' house, latrine and a cattle shed, and in most cases surrounded by a fence.

The word Mucii here refers to what is called an isolated homestead in settlement geography referring to the smallest settlement type.

- b) The word also refers to buildings of a man and his extended family, approximately 40 people, on privately owned land. For example 10 buildings belonging to a man, his sons and grandsons, all in one compound. The occupants refer to their settlement as a Mucii meaning that it is a dwelling place of close relatives. However, there is a distinction between this type and the one discussed in 4.2.1a. When comparing the two settlements, the latter is called a big homestead ("Mucii Mmeme"). A visitor to the area would refer to the settlement as a "gatuura" meaning a small hamlet because the buildings are more than those of a single isolated homestead. There are more houses since each of the married sons has buildings proportional to his nuclear family, and this makes a visitor's concept change from a Mucii (meaning an isolated homestead) to a gatuura. Such a settlement is usually named after the oldest man there.
- c) The term Mucii also means home, that is one's dwelling place. This could be in a privately owned farmland or in a rented house, in an isolated homestead or even a town. In this context the term does not specify the size of the settlement one lives in for it does not refer to settlement types. This is the reason why the respondents qualified their answers concerning their settlements as "Mucii Mugunda-ini" (that is a home in a privately owned farmplot) and "Mucii gichagi" (a home in a village). In this same context the term mucii means an area of origin, for example a person from Nyeri District says that his Mucii is in Nyeri District.

4.2.2 "Ituura" ("Matuura" Plural)

The term ituura has four meanings.

- a) It refers to buildings of a large extended family, of about 60 people, living in one compound in their privately owned land. For example, if a man has as many as five wives their buildings and those of their children and grandchildren, about 20 buildings makes a settlement look large. There is no clear-cut distinction, however, between this settlement type and the one called mucii in 4.2.1b section. This is because a lot of subjectivity arises when people use the terms, for settlements grade into one another.

The owners of such a settlement may occasionally refer to it as an ituura, meaning a hamlet, because of its size, but usually they call it a mucii due to the relationship therein. There may be a further distinction within the ituura settlement type. Although the owners refer to the whole settlement as a hamlet they refer to their individual houses therein as mucii meaning their individual dwelling. A visitor to the region would call such a settlement an ituura meaning a hamlet; a settlement bigger in size than the isolated homestead of a nuclear family. The term "gatuura" means a small hamlet whereas ituura means a big hamlet. However, the distinction between the two is very subjective and depends on different observers.

- b) The term ituura also refers to buildings of unrelated people clustered together on land that does not belong to them. This may be as a result of work ties such as labour houses in coffee estates, housing about 100 people. Renting houses built close together on a landlord's farm may also be referred to as an ituura, especially, if such a settlement is not very big, about 30 buildings. The occupiers of such settlements refer to them as matuura. An ituura is usually named after the landlord who owns the estates or rents the houses. A visitor would refer to such settlements as matuura. The inhabitants refer to the whole settlement as an ituura but to their individual houses as a mucii meaning their private dwelling.
- c) Buildings of related people occupying a particular area, and each nuclear family building on its own plot of land. Usually such land belonged to one man originally from whom present owners trace their descent. It is an area belonging to an extended family - "mbari" (refer to chapter 3). Although each nuclear family goes to its own mucii (isolated homestead) they refer to that whole area occupied by their relatives as an ituura. A visitor to such an area would say people live in isolated homesteads. In case some people live in bigger settlements in the same area he would add that some live in hamlets. The term ituura therefore is applied to dispersed settlements as in this case, and to clustered settlements as in discussed in sections 4.2.2a and 4.2.2b.

- d) The term ituura also refers to the dwellings of unrelated people in a particular area, and each living in his own plot of land. The inhabitants as well as a visitor refers to this area as an ituura. Such a area is usually named after a significant natural feature there.

The term ituura refers, on the one hand, to a settlement type bigger than an isolated homestead and therefore means a hamlet (refer to sections 4.2.1b, 4.2.2a and 4.2.2b). On the other hand the term does not refer to settlement type but to an area, a geographical reference as in cases 4.2.2c and 4.2.2d. The term may also be used more generally. The word ituura comes from the word "gutwura" meaning that people are living in an area, or have lived there, a reference to area occupancy. In this sense the term ituura also refers to all settlements as settled places, as human settlements.

#### 4.2.3 "G'ichagi" ("Ichagi" Plural)

This term has a number of meanings too.

- a) Many houses, about 100, built together and occupied by unrelated people as in the case of labour houses in big coffee estates or ranches. Other settlements referred to as ichagi are the villages where mostly landless people are given small plots by the county council to build on. On some public land are located schools, dispensaries, shops and other public services and these make the settlements big.

Both the indwellers and a visitor refer to such a settlement as a gichagi (village) meaning that it is bigger in size than a hamlet, but still not big enough to be called a town.

In this category also belongs the local centres, market centres and rural centres of the government classification. Ichagi settlements vary in size according to the public services they offer. This category of settlement is larger than the ones discussed earlier. Different ichagi (villages) have different populations, the highest limit being 1,999 people; A settlement with more people than 1,999 is called an urban centre in the government classification.

- b) An area where people own land privately (may they be related or unrelated) but having very small plots of land such that their buildings look clustered. This would be where families are large and farm plots are small, and also where a certain factor influences the owners to build their houses on a particular site. For example, if people in a certain area decide to build their houses on a high ground near a road, with their small plots and large families the area would look clustered and visitor may refer to it as a gichagi. In some cases a visitor may call it an ituura either referring to it as a smaller settlement than a village, or just referring to it as settled area. The owners of such settlements say that they live in isolated homesteads because each has built on his own privately owned plot of land.

c) Some public land that is owned by the County Council in Nyeri District is called *ichagi* especially the areas that formerly were the emergency villages. Whether such an area has many and clustered buildings or whether there is only one building the area is called a *gichagi* (village). In the latter case the term does not refer to the clustering of buildings but to a social aspect. The people who live in such settlements, whether clustered or not refer to them as villages. Some respondents called their settlements "*mucii gichagi*" meaning home in the village, because they do not own the land they have built on. A visitor seeing a dispersed settlement in the "village" would say that people live in isolated homesteads, or would call this area an *ituura* (meaning a settled area) but not a *gichagi* meaning a village as in settlement geography classification. But where settlements on public land are big and clustered a visitor would refer to them as villages.

In cases of settlements described in sections 4.2.3a and 4.2.3b, the term *gichagi* has a clustering connotation and would be right to refer to such settlements as villages from their physical appearance. But in the case of settlements described in section 4.2.3c the term *gichagi* (village) is misleading because the settlements may appear as isolated homesteads.

When considering the settlement hierarchy in Nyeri District, there seems to be no clear-cut division between a *mucii*, an *ituura* and a *gichagi* according to size.

Other factors such as relationship and land ownership play a more important role. This makes it extremely difficult to classify settlement types in Kikuyuland on a purely physical appearance basis. Hence the terms mucii, ituura and gichagi are not exclusively spatial but are also social.

These three broad terminologies are used to describe settlements in Nyeri District. It is necessary at this point to describe the existing settlements in the District.

#### 4.3 EXISTING SETTLEMENTS IN NYERI DISTRICT

Nyeri District is divided into six administrative divisions (see Figure 10) — Mathira, Mukurweini, Tetu, Othaya, Kieni East and Kieni West, each administered by a Division Officer. The divisions are further subdivided into 20 administrative locations plus the Nyeri Municipality. Each location is headed by a chief. Each location is further subdivided into sublocations each being headed by an assistant chief. Nyeri District has 3 local authorities, Nyeri County Council, Nyeri Municipal Council and Karatina Town Council. Nearly all the settlements in the District are within these divisions except a few in forests and national parks reserves.

The largest contrasts among settlements in Nyeri District are between those which have an 'Urban' character and those which have a 'rural - agricultural' character. The former are settlements whose majority of residents depend on secondary and tertiary production for their livelihood.



FIGURE 10 NYERI DISTRICT ADMINISTRATIVE DIVISIONS.



The latter are settlements whose population derives its livelihood from primary sources such as agriculture, fishing and forestry. Urban settlements support greater densities of resident population than agricultural settlements.

Two categories of settlements will be discussed below, namely Urban settlements and rural agricultural settlements.

#### 4.3.1 Urban Settlements (See figure 11a)

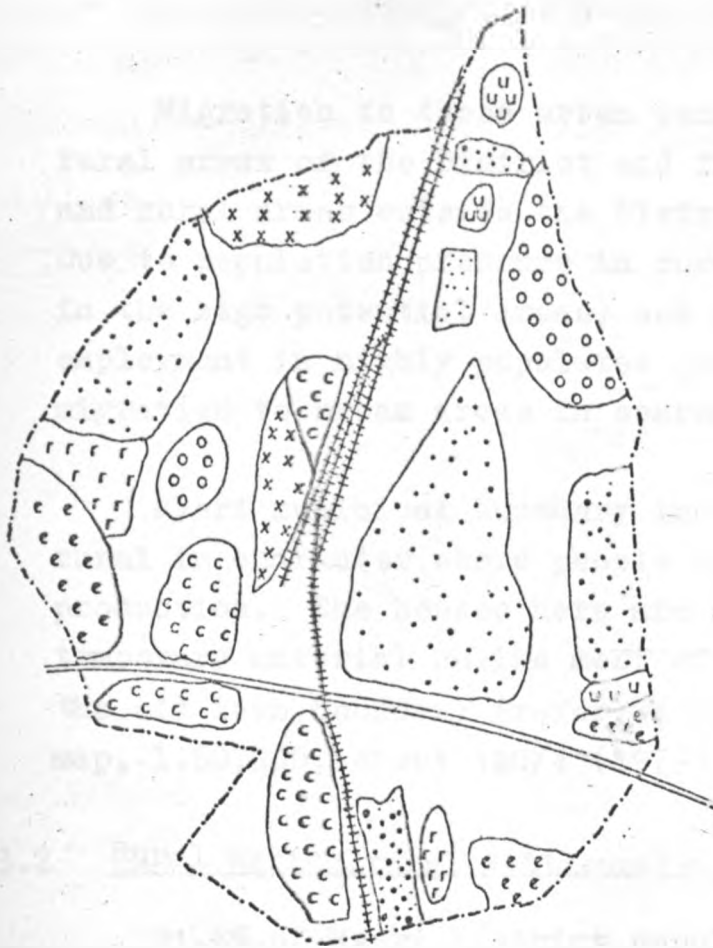
In Kenya urban areas are defined as those settlements having a population of 2,000 people or more. In Nyeri District there are only three urban settlements namely Nyeri, Karatina and Othaya.

Nyeri is a municipality with a population of 35,758 people, Karatina town has 2,929 people and Othaya has 2,157 people (provisional population census, 1979). Nyeri municipality is the provincial headquarters of Central Province, the district headquarters of Nyeri and the divisional headquarters of Tetu. Karatina is the divisional headquarters of Mathira, whereas Othaya is the divisional headquarters of Othaya. The infrastructural facilities of these towns can be seen in table 1 under principal towns and municipalities for Nyeri, and under other urban centres for Karatina and Othaya.

Commerce and industry is conducted in these centres. Commercial activities consist of both wholesale and retail trades and there are several light industries in Nyeri District, mainly for processing local products such as coffee, tea, and wood.

( SKETH MAP — NOT TO SCALE )

FIGURE 11 a URBAN CENTRE



	BOUNDARY
	RESIDENTIAL
	INDUSTRIAL
	RECREATIONAL
	EDUCATIONAL
	PUBLIC PURPOSE
	COMMERCIAL
	PUBLIC UTILITIES
	RAILWAY
	MAIN ROAD

Migration to these urban centres is from the rural areas of the District and from both towns and rural areas outside the Districts.

Due to population pressure in rural areas (especially in the high potential areas) and also due to limited employment in highly populated areas, there is migration to urban areas in search for jobs

Nyeri municipal boundary includes large areas that are rural in character where people engage in primary production. The houses here are mostly made of temporary material unlike most of the houses inside the old town boundary (refer to the Nyeri topographical map, 1:50,000, sheet 120/4 (1975)).

#### 4.3.2 Rural agricultural settlements

91.6% of Nyeri District population live in rural communities, and most rural families earn their livelihood from agricultural produce. Of Nyeri total land area of 3,284 Km<sup>2</sup> only about 871 Km<sup>2</sup> (27%) is purely arable, fit for sustained agricultural cultivation (National Environment Secretariat, March 1980).

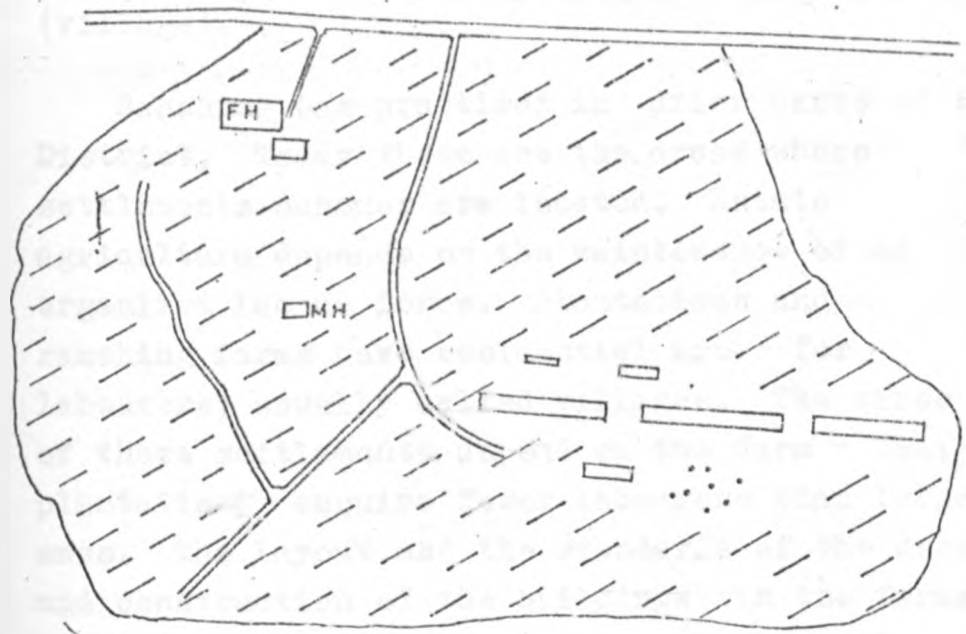
In those areas where the majority of the people engage in primary production settlements can be divided into clustered and dispersed. In Nyeri District rural agricultural settlements fall under 4 types each of which can be subdivided into clustered and dispersed patterns.

a) Commercial agricultural settlements (see figure 11b)

In Nyeri District large scale mechanized farms are dominated by coffee, ranching, with wheat becoming important in higher altitudes. Other crops grown for industrial purposes are tea, pyrethrum and barley. Mixed farming is also practised in large scale farms. Most of the coffee estates were planted by European settlers and missionaries but today those settlers have been replaced by Kenyan large scale farmers who bought the plantations. An exception is the catholic mission coffee estates in Mathari which is still under the mission. These estates are now within Nyeri Municipality and a lot of changes can be observed on the labour settlements today. For example, in place of what was an old clustered Raini village occupied by labourers, there is a more dispersed settlement pattern. The labourers were given each .8 acre, and after paying a certain amount of money, they will be given freehold title deeds. This new settlement extends to the higher slopes of Nyeri hill. Most houses in this new settlement are built of iron-sheets and timber, giving the impression that the inhabitants are richer than before. However, since the individual farm plots are quite small the settlement looks more clustered than in areas where people own large plots of land. Labourers from Hill farm and Kanwenja coffee estates are also being moved from their clustered settlements to be given individual

(SKETCH MAP - NOT TO SCALE)

FIGURE 11 b COMMERCIAL AGRICULTURE SETTLEMENTS



	FARM HOUSE
	MANAGER'S HOUSE
	LABOUR HOUSING
	COFFEE PLANTATION
	MAJOR ROAD
	ESTATE BOUNDARY

farm plots in Mathari area. The inhabitants of this new settlement still call it a Gichagi (village).

Ranching was practised in drier parts of the District. Today these are the areas where settlements schemes are located. Estate agriculture depends on the maintenance of an organized labour force. Plantations and ranching farms have residential areas for labourers, usually called villages. The sizes of these settlements depend on the farm - small plantations require fewer labourers than large ones. The layout and the standards of the design and construction of the buildings in the farms are determined by the estate owners themselves. In some cases such buildings are inferior in construction and health standards to the commonly found traditional buildings of indigenous people. Before the recent changes in Raini village mentioned above, this village was made of small, thatch and mud houses built very close together. One would have imagined that this was a settlement of poor people from various areas brought together under the care of the missionaries in Mathari.

In 1973, 62,229 families were engaged in farming and of these, 6,669 families were large scale farmers (National Environment Secretariat March 1980 P.54). Commercial agriculture is practised also in small scale farms (see figure 3). Cash crops such as coffee, tea and pyrethrum are grown together with subsistence crops and also livestock rearing.

Where labour is needed in these small scale farms, usually labourers get houses in the employer's land. The settlement would still appear to be an isolated homestead except in cases where buildings are many and the settlement would be called an *ituura*, a hamlet. There is a considerable cash crop development in Nyeri District, most of it being on small scale farms. Commercial agriculture gives rise to two settlement patterns. Clustered, usually found in large scale farms and in few small scale farms. Each of these settlements has a high population, however, such settlements are few in the District. Then, there is the more frequent dispersed settlement pattern usually found in small scale commercial farms. Each of these settlements is occupied by fewer people than in the clustered settlement pattern.

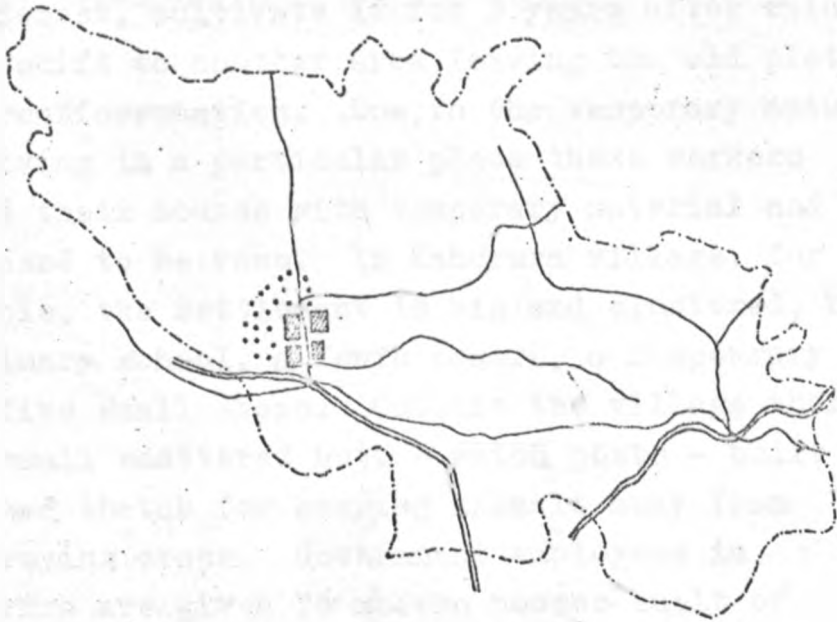
b) Government employees. (see figure 11c)







Of the total area of the District, 5871 hectares is under forest (National Environment Secretariat, March 1980). The government has employed forest workers and game workers at various places in the Aberdares and Mt. Kenya forests. Two methods of forest management are used in the District. One system involves selecting few mature trees, then cutting and replacing them by newly planted trees (after reseeding). The other system of forest cropping involves selecting areas in the forest, leaving 200 feet **strips** on either side of river to avoid soil erosion, cutting down trees for timber and cultivating these areas for a given time then planting them up with trees.



(SKETCH MAP - NOT TO SCALE)

FIGURE 11 c      GOVERNMENT EMPLOYEES SETTLEMENTS



- |   |                              |
|---|------------------------------|
|  | OFFICES AND OFFICERS' HOUSES |
|  | LABOUR HOUSES                |
|  | MAIN ROAD                    |
|  | FOOTPATH                     |
|  | FOREST                       |
|  | FOREST BOUNDARY              |

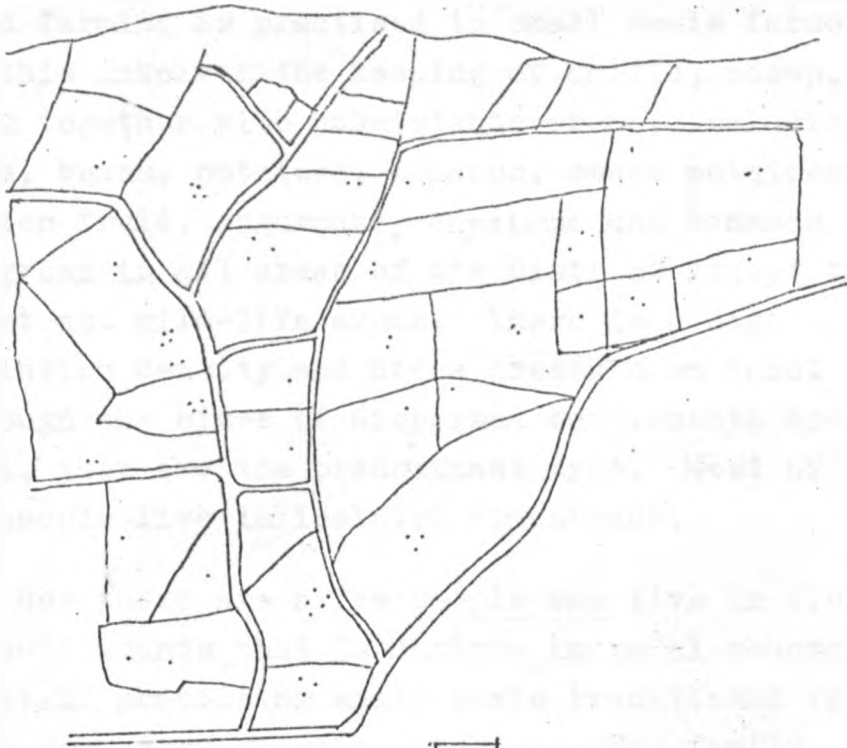
There are squatters doing some of this work and they live in large clustered settlements, for example Kahurura village in Mt. Kenya forest map, 1:50,000, sheet 121/1 (1970). They rent plots at sh 7.50 per acre for 3 years. They clear the forest, cultivate it for 3 years after which they shift to another area leaving the old plots for reafforestation. Due to the temporary nature of living in a particular place these workers build their houses with temporary material and are supposed to be rows. In Kahurura village, for example, the settlement is big and clustered, has a primary school, a Youth centre, a dispensary and five small shops. Outside the village there are small scattered huts - watch posts - built of mud and thatch for keeping animals away from destroying crops. Government employees in Kahurura are given 76 modern houses built of timber and iron-sheets, in a separate village.

c) Traditional peasant settlements (figure 11d)

The majority of the people in Nyeri District live in rural areas, in small scale farms in their traditional ways. The traditional settlement pattern among the Kikuyu is dispersed with a few cases of clustered settlements.

Scattered traditional rural settlements, that is, Micii are small in size, usually of less than 15 people each in the nuclear family. The settlements themselves are located in the owner's farmland.

FIGURE 11 d TRADITIONAL PEASANT SETTLEMENTS (SKETCH MAP - NOT TO SCALE)



- |  |            |
|--|------------|
|  | MAIN ROAD  |
|  | FARM ROADS |
|  | FARM PLOTS |
|  | HOUSES     |

Mixed farming is practised in small scale farms and this involves the keeping of cattle, sheep, goats together with subsistence crops, including maize, beans, potatoes, tobacco, sweet potatoes, passion fruit, sugarcane, capsicum and bananas. Crops are grown in all areas of the District except the forest and wild-life areas. There is a high population density and hence pressure on land. Although the sizes of dispersed settlements are small, they are the predominant type. Most of the people live in isolated homesteads.

But there are a few people who live in clustered settlements, that is Matuura, in rural countryside and still practising small scale traditional farming. There are cases where a large extended family builds on one compound or where tenants are given plots to build on near landowner's homesteads. Clustered settlements are big in size and are residential places for a large population but they are few in number in the District.

d) Recent peasant settlements (see figure 11e)

There are thousands of landless people living in villages especially in the Kieni East and Kieni West divisions waiting to be settled (Nyeri District Development Plan, 1974 - 1978), refer to Figure 11e (1). There are also people living in clustered settlement that is Ichagi, in the former emergency villages most of these are landless. Others like those in Itinga Saw mill Naromoru map sheet 121/1 (1970) are squatters who are formerly the employees of Timsales Company but were left behind when the Company moved away.

# RECENT PEASANT SETTLEMENTS

(SKETCH MAP—  
NOT TO SCALE)

FIGURE 11 e (i) REMNANTS OF THE EMERGENCY VILLAGES

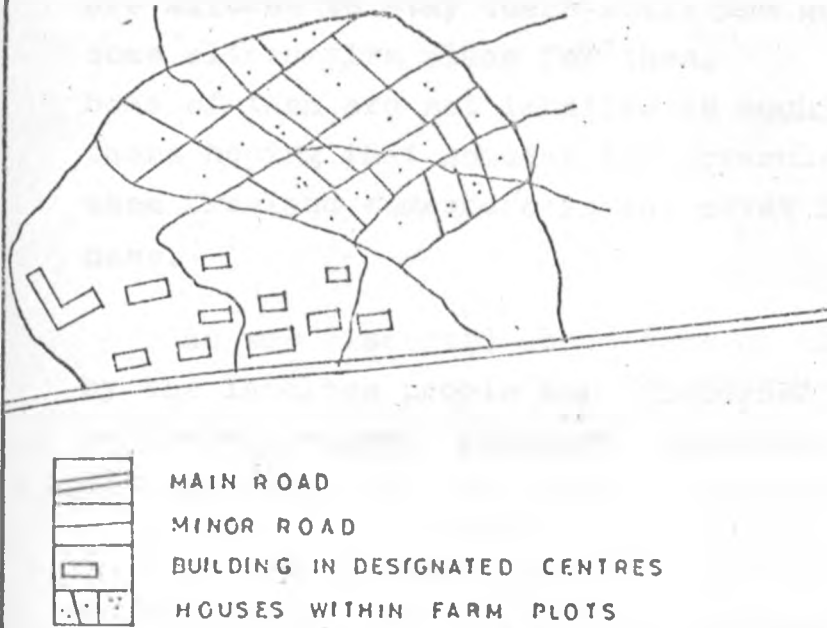
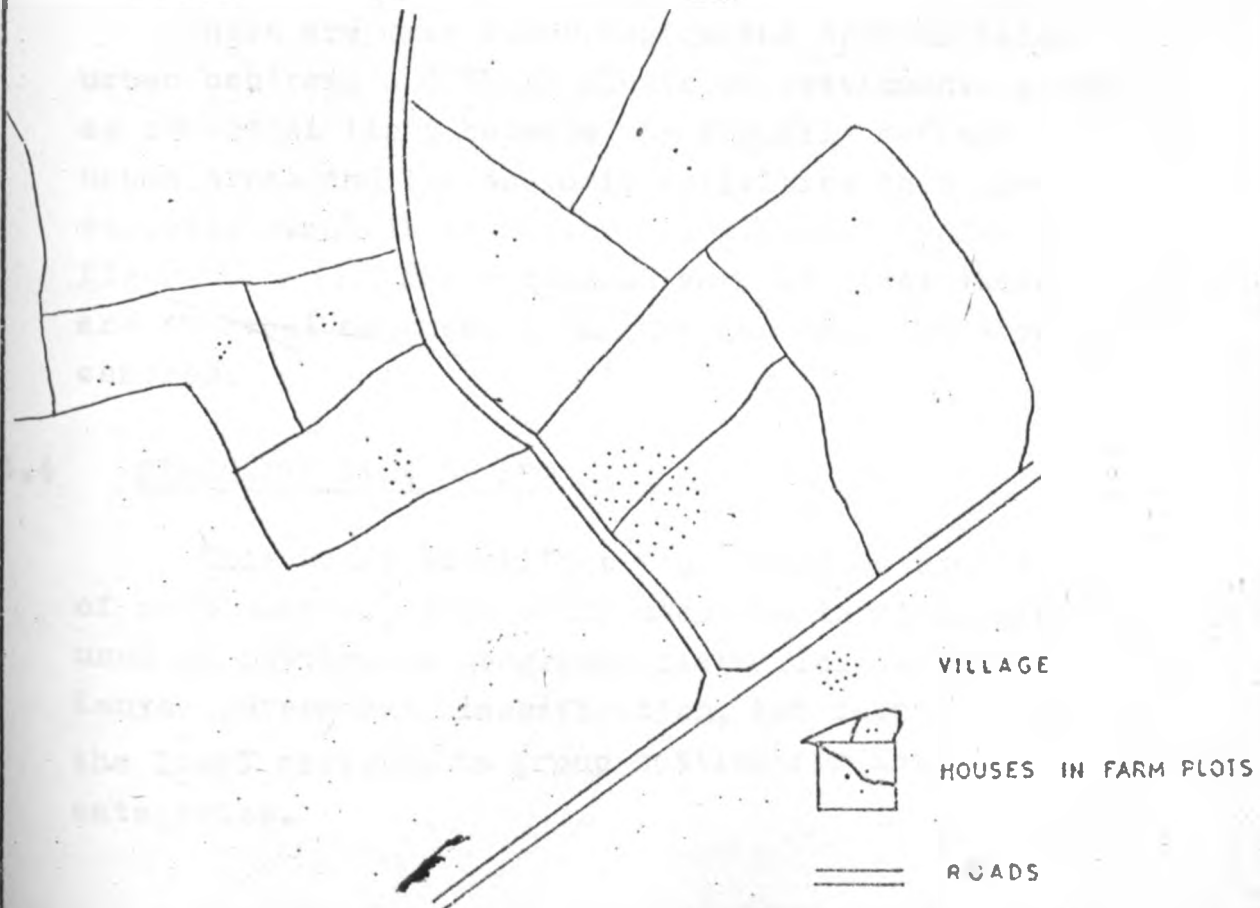


FIGURE 11 e (ii) NEWLY SETTLED AREAS



This is a big village of about 1500 people and they are allowed to stay there until the government finds some alternative place for them.

Some of them are not landless as such but they stay there hoping that someday the government will give them freeland somewhere in the cover up of landlessness.

As was discussed above some of the land occupied by the landless people has dispersed settlements. So there are some 'villages' that have dispersed settlements.

In newly settled areas of Kieni East and Kieni West division there are people living in clustered settlements as they await land to be subdivided, and others are tenants. But in these areas there are still people living each in his own plot of land and hence there is a dispersed settlement pattern.

There are many other designated centres below urban centres, and these clustered settlements serve as essential links between the formally defined urban areas and the economic activities that are strictly rural in character and setting (refer to figure 11 e (ii)) These centres vary in size; there are 40 local centres, 17 market centres, and 5 rural centres.

#### 4.4 CLASSIFICATION OF SETTLEMENTS

This study identifies four broad categories of settlements. This study uses the terminologies used in settlement geography classification and Kenya government classification, but makes use of the local criteria to group settlements into categories.

Therefore when a term, for example village is used it does not have an ecclesiastical connotation for it is based on a local situation. The classification in this study also considers those settlements not included in the designated centres. Each of the categories will be described below in a descending order of size.

Much of Kenya's current thinking on rural development came out of the Kericho conference in 1966. In September 1966 various government bodies met to discuss important issues and came up with an overall recommendation that the Government of Kenya should develop a comprehensive approach to rural transformation (Kimani, 1973). The physical planning department **initiated** the policy of designating service centres in the late 1960s. In Kenya there is an increase of population, in large towns especially Nairobi and Mombasa. The concept of designated centres in the rural areas attempts to slow down the movement from countryside to town. Rural areas must be closely linked to urban centres. The designated service centre policy is Kenya's major programme to ensure the orderly development of urban sites throughout the country that will be able to establish the necessary links with surrounding rural areas.

#### 4.4.1 Urban centres (Towns)

The Kenya administrative definition of urban centres will be adopted in this study. These are settlements having a population of 2,000 people or more. Urbanization in Kenya is a new phenomena in comparison to western countries.

Probably there were no towns in the country apart from the ones founded on the coast by Arab traders. As a result a settlement with 2,000 people and above is found to be large enough to be called a town. If a higher population is adopted fewer settlements would be classified as urban centres. But there is a necessity to bring about rural development by concentrating services in various designated centres in the countryside. Taking 2,000 people enables more urban centres to be spread in the countryside.

In Nyeri District there are 3 urban centres. Nyeri Municipality, Karatina and Othaya. These centres also serve a large hinterland population. Table 1 shows the services that urban centres offer to both resident and hinterland populations.

#### 4.4.2

##### Villages (Ichagi)

This term includes what the Kenya administrative classification refers to as rural centres, market centres and local centres. (See table 1) By concentrating rural infrastructure and services in these smaller designated centres, the needs of the rural communities are met more directly and at lower cost. These centres serve as essential links between the formally defined urban areas and the economic activities that are strictly rural in character and setting. These are nucleated settlements that serve less than 2,000 resident population.



A crucial aspect of the effort to concentrate services and infrastructure in service centres is the actual level of utilization of the facilities already constructed.

Apart from the above usage, the term village is used in this study to refer to a large cluster of buildings which are not designated centres, for example, a big cluster of buildings for workers in commercial agricultural farms and ranches, and also settlements as Kahurura village referred to in section 4.3.2b.

The term village, therefore, will be restricted to large clustered settlements described in section 4.2.2c, but which are smaller in size and function than urban centres.

#### 4.4.3 Hamlets (Matura)

This term will refer to settlements that are smaller in size than villages. It will refer to settlements described in section 4.2.2a and 4.2.2b. In both cases the settlements are clustered but are small in size.

#### 4.4.4 Isolated homesteads (Micii)

This term will refer to the small settlements. This will include the settlements called micii and ichagi described in section 4.2.1a, 4.2.1b, and 4.2.3c. It will refer to all dispersed settlements that are scattered throughout the countryside.

Occasionally there arises a problem of grouping settlements in specific categories because settlements grade into one another with no clear-cut boundaries. This problem is intensified if one criterion groups a settlement in a particular category but when another criterion is used the category changes. Another serious limitation is that each of the three terminologies Mucii, Ituura and Gichagi has a number of meanings depending on the context in which the word is used. For example, although the word mucii means an isolated homestead in most cases it also refers to a clustered settlement. This is made more difficult by the subjectivity involved in applying these terms to various settlements.

The term gichagi entered into the Kikuyu vocabulary during the emergency period. Since then this word is applied to different settlements, for example a visitor to a region may call buildings of an extended family a gichagi. This inconsistency in terminologies shows the subjectivity involved in reference to settlements in everyday life. As a result of these problems the classification arrived at in this study cannot claim to be totally comprehensive and clear-cut.

CHAPTER 5

5 STATISTICAL DESCRIPTION AND EXPLANATION OF SETTLEMENT PATTERNS IN NYERI DISTRICT

This chapter discusses the results obtained from applying the rank-size rule formula and nearest neighbour analysis to settlements in Nyeri District.

5.1 PATTERN OF URBAN CENTRES.

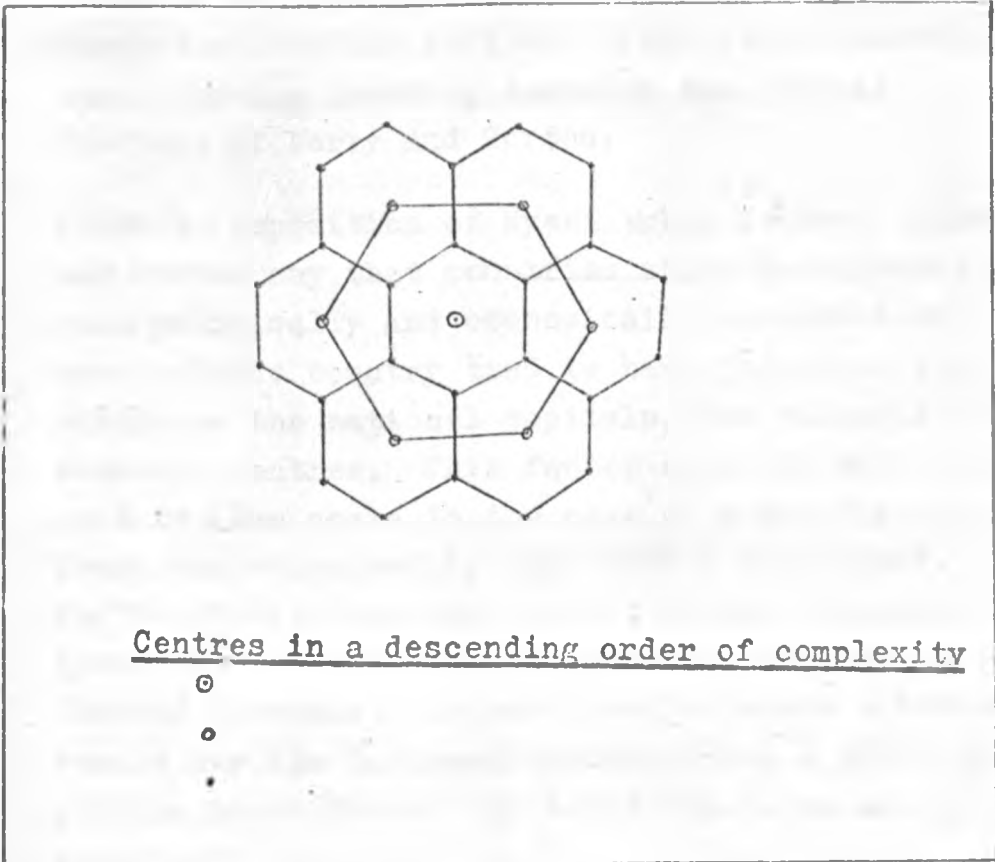
Rank-size rule formula was applied to Nyeri Municipality, Karatina and Othaya, the urban centres in Nyeri District. These urban centres are found not to be lognormally distributed, for Nyeri has 12 times and 17 times the population of Karatina and Othaya respectively. Zipf put forward the idea that proper urban growth is that in accordance with rank-size rule (refer to chapter 2). Because rank-size distribution shows that the larger the cities the fewer, when cities in a country are plotted on a logarithmic graph paper a straight line should result if rank-size rule holds.

Nyeri urban centre is therefore a primate town because it overshadows the other urban centres. It would be expected that there be other intermediate urban centres between Nyeri, Karatina and Othaya if proper urban growth in the District is to be achieved. These should follow Zipf's formula of having the second town having half the population of the first and third town a third the population of the first and so on.

Also urban centres which are small in size should be more in number than the large ones.

The fact that the only urban centres in Nyeri District are of the first, ~~twelfth~~ and seventeenth rank suggest that the intermediate towns necessary to follow Zipf's rule or Christaller's Central Place Theory are missing. Central Place Theory was formulated by Walter Christaller in 1933 (Berry and Horton, 1970). He says that a town is a centre of regional community and the mediator of that community's commerce, it functions then as a central place of the community. Central places vary in importance. Those of higher order dominate larger regions than those of lesser order, they exercise more central functions and therefore have greater centrality. Christaller's scheme proposed that towns with the lowest level of specialisation would be equally spaced and surrounded by hexagonally shaped hinterlands. For example, for every six of these towns, (although there are other possibilities for this pattern) there would be a larger, more specialised city, which in turn would be situated on equal distance from other cities with the same level of specialisation as itself. Such a city would also have a larger hexagonal service area for its specialised services (Johnson, 1967) see Figure 12.

FIGURE 12. URBAN HIERARCHY BASED ON CENTRAL PLACE THEORY



Central Place theory is basically concerned with producing a theoretical model of reality, given certain basic assumptions. Rank-size rule on the other hand, is simply an empirical observation based on the study of actual population statistics without theoretical pretensions. Although the two ideas are different in conception, there is clearly a large measure of convergence. They both imply a situation in which there are many small cities, a lesser number of medium sized cities and fewer large cities.

5.2

ANALYSIS OF THE EXISTING PATTERNS

Berry and Horton (1970) give a number of reasons why primacy occurs and some of these are found to be true for Nyeri District. **The primate** distribution in Nyeri District is caused by the following factors, based on the general findings of Berry and Horton.

- a) Colonial imposition of Nyeri urban centre. Berry and Horton say that countries which have recently been politically and economically dependent on some outside country tend to have primate cities which are the national capitals, the cultural and economic centres. This factor seems to hold true at a smaller scale in the case of Nyeri District. Kenya was colonized by the British until 1963. In 1902 Nyeri town was founded by the colonial government as the administrative centre for what became Central Province. It was also to become a recreational centre for the European community and a place for getting cheap labour for their big farms and homesteads (National Environment Secretariat, March 1980). The European settlers engaged in an export economy, characterized by production and export of raw materials for industrial processes in foreign countries. These exports and functional facilities were **focussed** in Nyeri and this explains why Nyeri town grew so big far overshadowing the growth of other towns. Today Nyeri urban centre is still the Headquarters of Central Province and the Headquarter of Nyeri District and Tetu Division. This factor explains why Nyeri is a primate town.
- b) The lack of widespread industrialisation in Kenya. Although high industrialisation does not totally explain the presence of a lognormal city distribution to some degree it plays a part.

Kenya is a developing country and like many countries in this category urban centres are primate in character. It could be that with high industrialization in the country and so in Nyeri District, lognormal urban centres distribution would be achieved.

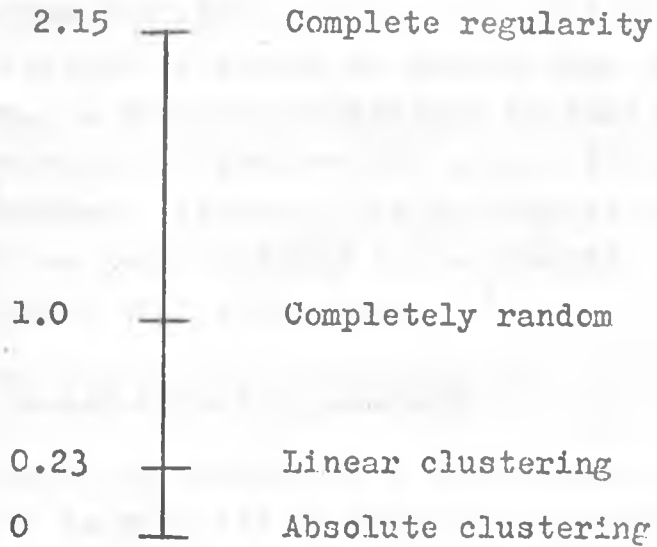
- c) The recent nature of urban phenomenon in Kenya. Berry and Horton's (1970) work also found out that the 15 countries that demonstrated the primate city distribution had urbanisation as a comparatively new phenomena. The history of urbanisation of countries such as Israel and U.S.A. show that city size distribution changes gradually from primacy to lognormal. In Kenya, urbanisation is a new phenomenon as in most African countries, hence primate city distribution (refer to appendix ?). If city size distribution changes in time then Nyeri District is in its initial stages and the time will come when urban centres will be lognormally distributed and this would be possible for the whole country.

### 5.3

#### PATTERNS OF OTHER DESIGNATED CENTRES

Nearest neighbour analysis was applied on 3 scales for rural centres, market centres and local centres. Below is the  $R_n$  scale against which the data was measured.

Table (V) Rn scale



Source Tidswell, P 204

Rn values for the three types of centres are shown in table VI.

Table (VI) Rn values for Centres.

Category of centres	Rn value	Significant level at 95% cl.
Rural centres	. 95	accept
Market centres	. 83	accept
Local centres	. 75	reject

Appendix 8 shows the tests for significance done for the Rn values for these centres.



Table (VI) shows that the pattern portrayed by each category of centres is nearer to random than to any other pattern. A further observation is that the higher the category of centres the closer its pattern towards randomness. Although the pattern is nearest to random it has some tendency to be towards clustering rather than regularity.

#### 5.4 ANALYSIS OF THE EXISTING PATTERNS

As discussed in chapter 3, a large portion of Nyeri District is occupied by Forests and National Parks and so there is little human habitation there (refer to Figure 7). Human settlements are concentrated in the 20 administrative locations. But nearest neighbour analysis for the centres was applied in relation to the whole District hence a wide area was used and this explains why the  $R_n$  values are towards complete random. Probably the pattern would be towards regularity if a smaller area, the area of the 20 locations was used in the analysis. However, this study sought to delimit the pattern of centres in relation to the whole District.

The tests of significance on  $R_n$  values of local centres show that these were not distributed by chance, but those of rural and market centres show a pattern similar to a random location of points (refer to appendix 8). However, even the patterns of rural and market centres are outcomes of various interplay of factors and hence not caused by chance alone.

The Physical Planning Department initiated the policy of designating service centres in the late 1960's in consultation with the Provincial administration.

Centres are divided into four categories depending on the services they provide, the economic potential of the area served, the population served, and the spatial distribution required to promote development throughout the nation. These designated centres serve populations much larger than their own. The strategy of concentrating private and public sector investments in particular centres is designated to benefit not just the inhabitants of the centres but the surrounding rural populations and those living in nearby centres which are lower in hierarchy. The list compiled in the late sixties is now being reviewed. Some centres may be deleted and others added so that the undated list will identify all centres which meet the criteria established for designation (Kenya Development Plan, part 1, 1979-1983).

5.5

PATTERNS OF SETTLEMENTS OTHER THAN THE DESIGNATED CENTRES

Nearest neighbour analysis was undertaken for settlements other than the designated centres in sampled locations from the District. The results are shown in table (VII). The results of significance tests done are shown in appendix 9. Table (VIII) on page 126 is also important for clarifying the discussion below.

Table (VII) Rn values for settlements other than the designated centres

Locations	Rn values.	Significant level at 95% cl
Tetu	1.1	reject
Muhito	.93	reject
Gikondi	.9	reject
Othaya	.8	reject
Chinga	.73	reject
Mweiga	.57	reject
Naromoru	.34	reject

From the above table, 3 broad settlement patterns can be identified.

1. Naromoru and Mweiga locations in the northern part of the District have Rn values showing that the settlement patterns tend to be clustered. In Naromoru location especially, settlements are very near to linear clustering, whereas settlements in Mweiga location are somewhere between random and clustered patterns.
2. The Southern part of the District has Rn values closer to random pattern than to either clustered or regular settlement patterns.
3. Tetu location, in the central region of the District is the only one where settlements show a pattern that tends towards dispersion although the Rn value 1.1 still shows that the pattern is very close to being completely random.

Table (VIII)

DOMINANCE OF SETTLEMENT TYPES IN THE SAMPLED LOCATIONS

SETTLEMENT TYPES	L O C A T I O N S																					
	OTHAYA		CHINGA		GIKONDI		MUHITO		TEFU		RUGURU		MUKURWE INI		AGUTHI		MWEIGA		NARO MORU		ALL LOCATIONS	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
Isolated homesteads	53	72	32	91	20	53	48	79	30	51	43	55	40	62	68	76	26	36	223	64	383	64
Hamlets	18	24	1	3	17	45	10	16	16	27	8	12	18	28	11	12	13	18	2	5	114	19
Villages	3	4	2	6	1	3	3	5	13	22	17	25	7	11	11	12	34	47	11	31	102	17
Total Settlement	74	100	35	100	38	100	61	100	59	100	68	100	65	100	90	100	73	100	36	100	599	100

The readings show that these settlements cannot be classified simply as having a clustered pattern, or linear clustered pattern, or random or complete regularity. Even where  $R_n$  values are very close to 1 the settlements are not distributed by chance. Therefore there remains the task of identifying the factors involved and an attempt to see how strongly they influence the settlement patterns in the District. This task will be done in the rest of the chapter.

#### 5.6 ANALYSIS OF THE EXISTING PATTERNS

Explanation of the existing settlement patterns in the District was obtained from questionnaires given in 10 sampled locations (refer to chapter 2), from general interviews in the District, from topographical maps (refer to table (11)), and from other written references.

Various factors are responsible for the settlement patterns obtained in the sampled locations. As mentioned in chapter 1 the study of settlement patterns was to be done at two geographical scales. On the small scale the study tried to identify settlement patterns whether they are clustered or random or dispersed. Nearest neighbour analysis was applied to 7 sampled locations for this identification. The results are shown in table (VI1). On the large scale the study tries to identify the settlement types in each of the 10 sampled locations. Questionnaires were distributed for this purpose (refer to chapter 2) and the results are recorded in appendices 10-13 and table VI11.

Settlement patterns and settlement types are aspects of settlements when looked in the two geographical scales, the latter being a subset of the former.

Table VIII shows how many questionnaires were answered by inhabitants of isolated homesteads hamlets and villages in each of the sampled locations (using my criteria to define these terms - reference appendix (4)). The grouping of settlements into these three types throws light into the type that is most dominant in each of the locations and also in the whole District. One limitation of nearest neighbour analysis is that it averages out sub-patterns to give one  $R_n$  value. From the one value one cannot get the true picture of the sub-patterns constituting that value. From the topographical maps and from the questionnaires it is clear that the settlements within the locations are of different types, and this in turn affects the pattern to some extent. In Gikondi location, for example, of the 38 questionnaires distributed 20 were answered by inhabitants of isolated homesteads, 17 by those living in hamlets and by 1 person living in a village (refer to table VIII). Due to the method used for selecting the sample, the results are representative of the whole location. It means that the majority of the settlements in Gikondi are isolated homesteads whereas villages are very few.

It is necessary at this stage to relate the  $R_n$  values to the settlement types found in each of the sampled locations. The  $R_n$  value of Mweiga location (.57) shows that the settlement pattern tend towards clustered. Table VIII gives the highest percentage of the respondents in the location as living in villages, followed by those living in isolated homesteads and lastly those living in hamlets.

The total percentage living in village and hamlet settlement types is shown to be 64%, and hence a high percentage of people living in clustered settlement pattern. It is possible that this fact has an influence on the pattern. This has a lesser effect on Naromoru location (Mweiga and Naromoru were the 2 locations having the highest percentages living in villages) although 31% of the respondents were in villages. Naromoru must be under an influence of another stronger factor than this one.

The rest of the sampled locations have  $R_n$  values nearest to random than to any other pattern. In all these locations except Chinga, the highest percentage of respondents were living in isolated homesteads, followed by those in hamlets and lastly those in villages. Chinga and Naromoru locations had the highest percentage living in isolated homesteads, followed by those in villages and then hamlets.

From this observation the following points have been drawn:-

- (i) In the location where the highest percentage of respondents was living in villages the pattern was towards clustering.
- (ii) In the locations where the highest percentage was living in isolated homesteads followed by those in hamlets and lastly those in villages the pattern was nearest to random.

(iii) But in the locations where the highest percentage was living in isolated homesteads, followed by those in villages and then hamlets the pattern seemed to vary. For example Naromoru location showed a clustered pattern where as Chinga was between complete random and clustered.

The boundary of the study area also had an effect on the  $R_n$  values obtained. The administrative locational boundaries were used for the application of nearest neighbour analysis. Naromoru and Mweiga locations are newly settled areas because they fall outside what was African reserve during the colonial period. It was only after independence that the locations in Kieni East and Kieni West Divisions were opened for African occupation. As a result therefore, there are still some uninhabited areas especially in Naromoru location. But since nearest neighbour analysis was applied to the whole location this explains why clustering is visible in these two northern locations. On the other hand  $R_n$  values for the rest of the locations show a generally random pattern. These locations are in what was called African reserves and so settlement has taken place in all areas. This may explain why settlements pattern here are not clustered as in the northern locations. But by the fact that patterns in the southern locations are nearest to random still requires explanation for they are not that way by chance.



Also there are other factors responsible for the patterns in Naromoru and Mweiga locations.

When analysing the questionnaires certain factors help to explain the settlement types and these may be grouped under three broad headings namely natural, economic and social conditions. Tables were prepared showing the effect of these factors on different settlement types in each of the sampled location (refer to appendices 10-12 and their effect on settlements in all sampled locations appendix 13). Since the identified factors are divided into how strongly they effect the different settlement types, it would be possible to get a combination of factors causing a particular settlement type. Only the most important factors are discussed in details below, but full details are shown in the appendices 10-13.

5.6.1 :

NATURAL CONDITIONS

Among the natural conditions, soil, water availability and surface relief were found to be most influential on settlements. Economic conditions have greater effect on settlements than natural conditions. Among these land ownership and farm size are most influential. Social factors that influence settlements in Nyeri District are mainly population pressure and social organisation. These will be discussed in greater depth below. Also there are a few intrusive factors which have an effect on settlements and these too will be discussed below.

Some natural factors have an effect on settlement patterns in Nyeri District. However, these factors do not dictate the settlement type. All they do is to influence where a settlement is to be located, whether it is an isolated homestead, a hamlet or a village. Soil conditions have the greatest influence on settlements in all the sampled locations, followed by water availability and then surface relief (refer to appendices 10-13).

a) Soil Conditions

The Rn values of Naromoru location and to a lesser extent Mweiga location show that settlements tends towards a clustered pattern. These locations are in the low medium potential areas (refer to appendix 12) with two major soil groups. There are those parts with loam black cotton soil, which have impeded drainage and are in a dry region (refer to figures 4 and 5). The topographical maps show that there are few houses in these areas. The other broad region has Dark-reddish brown humic clay soils which are well drained. The topographical maps show that there are more houses in these areas. Another area in Mweiga location has dark brown to dark greyish brown loam soils which are good for cultivation but their usefulness is limited by the steep slopes. The topographical map show that this area too has many houses. Many houses in Mweiga location are also recorded in areas having red clay soils which are well drained and are good for growing crops.

Since there was 64% and 44% of the respondents in Naromoru and Mweiga locations respectively who said that their soils are good this suggests that there is clustering of people in good soil areas and especially in Naromoru location. This is supported by what is recorded in the topographical maps covering the areas; Therefore soil conditions have an effect on settlement pattern in Naromoru location. In Mweiga location the  $R_n$  value shows that the pattern is not as clustered as in Naromoru but is somewhere between clustered and random. This could be explained by the fact that good soils are found in larger areas here than in Naromoru location. The topographical maps of the area show a more dispersed distribution of settlements in the better soil areas than in the case of Naromoru. Only 44% of respondents in Mweiga said they live in good soil areas. But there are many people living in areas with good soils but limited by steep slopes. Therefore the effect of soil on settlement pattern is more evident in Naromoru location.

$R_n$  values for the other locations show that settlement patterns are more random. In Chinga, Othaya, Tetu, parts of Ruguru and Kirimukuyu locations the soils range from dusty red to dark-reddish brown friable clays. The dusty red clay soils occur on the steep ground whereas the dark reddish brown clay soils occur on the broad flat topped ridges formed mainly by parallel rivers. These soils are very good for growing crops. 77% of the respondents in Chinga location, 66% in Ruguru location and 54% in Othaya location said that their farms have good soil.

Gikondi and Muhito, parts of Aguthi and Kirimukuyu locations have pinkish red sandy loam soils. Although these soils are deep their usefulness is limited by the steepness of the slopes. 66% of respondents in Aguthi location, 83% in Kirimukuyu and 79% in Gikondi locations said that they have good soil. Since soils are generally good in the southern locations, this may explain why settlements are not clustered in certain areas as in the case of Naromoru location.

61% of respondents in Nyeri District said that their land has good soil (refer to appendix 13). The 61% live in the 3 settlement types, isolated homesteads, hamlets and villages. 50% and more of the respondents living in isolated homesteads in all the sampled locations except Mweiga, and living in hamlets in all the sampled locations except Othaya said that they live in good soil farms. In four locations Ruguru, Aguthi, Kirimukuyu and Naromoru there were 50% and more of respondents living in villages who said that they live where soil is good. Therefore soil condition alone does not determine the type of settlement in Nyeri District. However, soil conditions have an effect on the settlement patterns.

b) Water availability

Demangeon (1962) remarks that many describe the influence of water resources on settlements in very simple terms. Thus in regions of permeable rocks, there is a necessity for the concentration of settlements as water is reached only by rare springs and deep wells. In land of impermeable rocks, the ubiquity of water promotes the ubiquity of settlements.

However, there are exceptions to this and it may be concluded that the question of water does not affect settlements so directly and clearly.

The rainfall map (Figure 5) shows that Mweiga and Naromoru locations are drier than the other sampled locations. It would be expected that settlements in Naromoru and Mweiga locations be clustered around water points. The topographical maps show a concentration of houses in the wet part of the locations:- between 1250 mm and 1500 mm in Mweiga and between 750 mm and 1250 mm in Naromoru. This area is larger in Mweiga location than in Naromoru location. This may have influenced Naromoru's clustered settlement pattern whereas Mweiga is between clustered and random. However, there are settlements in other regions apart from these wet ones and this also has an effect on the pattern, making them not absolute clustered or complete random. In the rather dry areas of Kieni East and West Divisions boreholes are dug to provide water (see Figure 6).

In the southern locations there is more rainfall and so water availability is unlikely to be a limiting factor to settlements. Apart from rainfall there are many rivers traversing the District.

However, water availability has no influence on settlement types. For example in Naromoru and Mweiga locations, 50% and 41% respectively of the respondents said that water is readily available.

Of these 38%, 46% and 41% in Mweiga, and 43%, 66% and 64% in Naromoru are the percentages of respondents living in isolated homesteads, hamlets and villages respectively.

c) Surface Terrain

Demangeon (1962) among other settlement geographers argues that a smooth relief favours concentrated settlement, whereas rugged or broken relief tends to favour dispersed settlement. This is because in rugged areas favourable locations for settlements are small and scattered. Since a large part of Nyeri District has a dissected physiography (refer to chapter 3 and Figure 3). One would expect settlements to be dispersed generally. But the  $R_n$  values show that settlements are not, dispersed except in the case of Tetu location with  $R_n$  value of 1.1, which in any case is nearer to random than to dispersed settlement pattern. On the other hand settlements are not clustered in the smooth areas and valleys in the District. Rather, dispersed and clustered settlements are found irrespective of the surface terrain. As discussed in Chapter 3, the emergency villages were often built on high ground and in some places they left trace of clustered settlements. These are the only instances that clustered settlements occur repeatedly over a particular surface terrain. Surface terrain seems to have no direct effect on the  $R_n$  values.

However, surface terrain has an effect on the site of settlements. Most respondents who were faced with this problem of surface ruggedness said that they prefer to build on high areas in order to be far from river floods, to preserve the more fertile valley areas for cultivation and that high grounds offers a beautiful scenery of a wide area. Due to the system of severality and the ring-fenced layout of landholding among the Kikuyus a family builds where their land is. After land consolidation some people got land on flat areas others on steep slope areas and others had land stretching from the flat zone to the steep zone. The owner decides where to build on his own plot of land. Refer to diagram C.

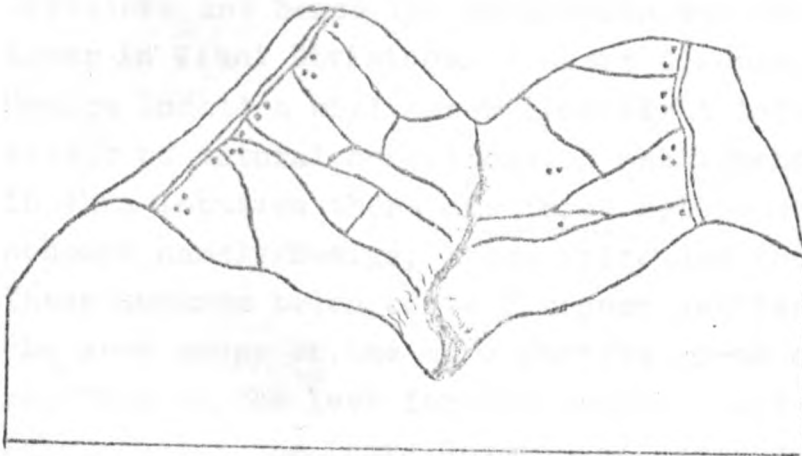
But surface terrain does not dictate the settlement types. The questionnaires show that different settlement types occur on similar surface terrain. For example, 44% of the respondents in Naromoru location said that their farms were located on rugged ground. Of these 52% and 36% were the respondents living in isolated homesteads and villages respectively. In Tetu location 47% of the respondents said their farms were on rugged grounds. Of these 57%, 50% and 38% were the respondents living in isolated homesteads, hamlets and villages respectively.

d) Summary

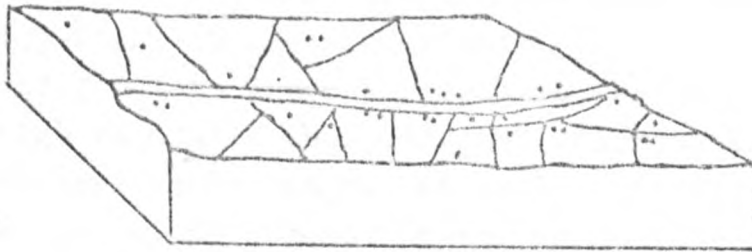
Settlement pattern is affected to some extent by settlement planning. In high potential areas where rainfall is relatively high and soils are fertile, the population density is high since a small plot of land can accommodate many people.

Diagram 2 SITES OF SETTLEMENTS

(i) Slopy land



(ii) Flat land



Key



river

road

Land plots owned by different people

houses



In Kieni East and Kieni West Divisions soils are poorer and rainfall less than in other Divisions and hence the population density is lower in Kieni Divisions. A short discussion of Mweiga location will throw some light into the effect of natural conditions on settlements. In this location there are three settlement schemes namely Mweiga, Ewaso Nyiro and Endarasha. These schemes belonged to European settlers who grew crops on the more fertile areas and did ranching on the less fertile areas. After independence the Kenya Government decided to distribute such farms especially to the landless Kenyans. The government would take for instance 5 former European farms to form one settlement scheme. Those who acquired plots in the settlement schemes were given loans to develop their farm plots. The farms were divided into sizes depending on the productivity of the area. Those who got land where the soil is fertile and has high rainfall, acquired only 7 acres per person, whereas those who got it in less fertile and dry areas got 50 acres. In the former area, cultivation of crops is possible whereas in the latter area ranching is the best activity. Due to natural conditions settlements in these drier areas are more scattered than in the wetter areas. The effects of farm size will be discussed latter under the economic and social factors.

#### 5.6.2 ECONOMIC CONDITIONS

Economic factors play an important role in the settlement patterns in Nyeri District.

Land ownership and farm size are important aspects influencing settlement pattern. Land tenure and farm layout have little if any, effect on the  $R_n$  values obtained.

a) Land Ownership

The Kikuyus hold land very dearly and so long as a person owns a plot of land he feels secure and he can decide where to build on the plot and whether the settlement should be big or small. 75% of the respondents in Nyeri District said that they build on a private land (appendix 13). 87%, 80% and 27% were the respondents living in isolated homesteads, hamlets and villages respectively (appendices 10-12). If this factor alone explains settlement patterns in Nyeri District, it would appear that land ownership favours dispersed settlement as each immediate family builds on its own plot of land. On the other hand landlessness would appear to favour **a clustered** settlement pattern with such people being given plots to build on by either friends or relatives or County Council resulting in cluster of houses **which** many such people build.

Naromoru location has clustered settlement ( $R_n$  .34). This location had 31% of respondents living in villages and none of these were living in their own land. This same case applied to the 5% respondents in the same location living in hamlets. Only the respondents living in isolated homesteads said that they live on private land.

In Mweiga location 47% of the respondents were living in villages, and 18% in hamlets. 85% of the respondents in villages and the same percentage in hamlets said that they live on their own land. But these people have built together while they await a piece of land which they own together to be subdivided among them. Others like those living in Mburu village (Gichagi kia Mburu) were the employees of the European who formerly owned the farm. They live together as they await land subdivision after which each person will build in his own plot of land.

The high percentage of people not owning land in Naromoru and Mweiga locations may explain why the patterns here either tend towards clustering or between random and clustered.

In the other sampled locations there is a similar trend with a high proportion of people living on privately owned land. A high percentage lives in isolated homesteads and a very low percentage or none lives in villages (appendices 10-13). This may explain why the  $R_n$  values in these locations tends towards random more closely than Mweiga and Naromoru locations. For example in Othaya location 94% and 83% of the respondents living in isolated homesteads and hamlets respectively, and in Gikondi 100% and 94% of respondents in isolated homesteads and hamlets respectively, said that they live on privately owned land.

There are a few people who live in isolated homesteads but whose land is not theirs, usually they are employees or relatives of absentee landlords. Others are the landless people who are given plots to build on and to cultivate by friends or relatives.

b) Farm size

The size of farm plots has a great effect on settlement patterns. When houses are built in a large farm plot the settlements look scattered whereas if the same number of houses were built on a smaller plot the settlement would look more clustered. In Kieni East and Kieni West Divisions farm sizes are bigger than in the rest of the Divisions. According to the Nyeri District Development Plan (1974-1978) the average farm sizes in small holdings is below 3.8 acres (1.5 hectares). In Naromoru location 50% and 91% of the people living in hamlets and villages respectively have farm plots ranging from 0.1 - 1 acres (refer to appendices 10-12 ). This means that there is a high percentage of people living in clustered settlements. In the same location 13% and 26% of those living in isolated homesteads have 1.1-4 acres and 4.1-10 acres respectively. But 61% of the respondents living in isolated homesteads have farms larger than 10.1 acres. This means that there are also many people scattered in the location. These factors therefore explain why the Rn values tends towards clustered settlement, for there is a high percentage in the location living in small plots of land while large tracts remain empty.

Mweiga location, a newly settled area like Naromoru, has a number of people living on plots ranging from 0.1 - 1 acres, 4%, 8% and 21% living in isolated homesteads, hamlets and villages respectively. There seems to be a fair distribution of plots from 0.1 - 10 acres and settlements seem to be fairly evenly distributed among the 3 settlement types. This may explain why the settlements in Mweiga location are not as clustered ( $R_n .57$ ) as those in Naromoru location.

In Muhito location with an  $R_n$  value .93, 10% and 20% of the respondents living in isolated homesteads and hamlets respectively have 0.1 - 1 acre. The majority of the respondents have plots ranging from 1.1 - 4 acres that is 46%, 40% and 33% of the respondents respectively. Only 2%, and those living in isolated homesteads said that their farm plots were 10.1 acres or more. The fact that there are few people owning very large plots of land, and also due to the fact that Muhito location, like other former African reserve areas, is settled in all areas, may explain the approximately random pattern.

Farm size and its effect on settlement pattern is complicated by the fact that differing farm sizes are adjacent to one another. This may explain why settlements in the sampled locations except Naromoru and Mweiga tend towards randomness. In Naromoru and Mweiga locations, as discussed about Mweiga above (under natural conditions) farms in a particular area are divided equally, mostly in settlement schemes.

c) Other economic conditions

It will be necessary to discuss land tenure, and farm layout, although these factors are found to have no major effect on the Rn values.

Common land tenure is associated with clustered settlement in most cases. The Kikuyus prefer to own land individually, in severality, and hence there is general tendency towards dispersed settlement. In case of an extended family they may decide to build close together in order to preserve the rest of the land for agriculture. Where the County Council give landless people plots to build on in a village, they give them large enough plots for their kitchen gardening. In case of employees in agricultural estates or in forest they live in villages but go out to cultivate on leased plots of land. The largest percentage of Kikuyus in Nyeri District practise severality land tenure where each person owns his own land individually and has control over it.

There is a very small percentage of respondents in Nyeri District who said that they own land communally. In Mweiga location the percentage was as low as 22% (and of these 4%, 38% and 29% respectively).

In Naromoru location only the 3% living in hamlets said they owned land communally. In Tetu location only 14% owned land communally 38% and 15% of those living in hamlets and villages respectively.

From the above data it seems that a very small percentage of respondents in Nyeri District own land communally. Those living in isolated homesteads and hamlets in most cases occupied land that was owned by their fathers or grandfathers. They were looking at the familial land ownership, whether the settlement is big or small, occupied by nuclear or extended family. Although some of the large settlements are dwelling places of extended families most of them are for the landless people on County Council land or workers in agricultural estates. In the newly settled areas there are those people who live in clustered settlement as they await the subdivision of a communally owned land.

Since land tenure is common in all the locations, apart from the exceptions noted above, it does not seem to influence the Rn values in the sampled locations. However in Mweiga and Naromoru location the Rn values could have been affected by the presence of people living in clustered settlements as they await the land they own communally to be divided among them. Table 1X shows the amount of land under three categories of land tenure in Nyeri District. Figure 13 shows the areal extent of the forms of land tenure in the District.

Farm layout is an important aspect when studying settlement patterns. The ring fenced layout is convenient for dispersed settlement for the dwelling of the owner is located within his own land which is usually fenced.

Table IX LAND TENURE IN NYERI DISTRICT

<u>LAND TENURE CATEGORY</u>	<u>AMOUNT (KM<sup>2</sup>)</u>
<u>1. GOVERNMENT LAND</u>	
a) Forest Reserve	972
b) Other government reserve	5
c) Townships	55
d) Alienated	435
e) Un-alienated	-
f) National parks	555
g) Open water	-
<hr/>	
TOTAL	2021
<hr/>	
<u>2. FREEHOLD</u>	
a) Small holder schemes	398
b) Other	18
<hr/>	
TOTAL	416
<hr/>	
<u>3. TRUSTLAND</u>	
(A) Not available for small holder registration.	
a) Forest	-
b) Government reserve	2
c) Townships	5
d) Alienated	-
e) Game reserves	-
f) National parks	-
<hr/>	
TOTAL	7
<hr/>	



-contd-

(B) Available for small holder  
registration.

Already registered	840
Not registered	-

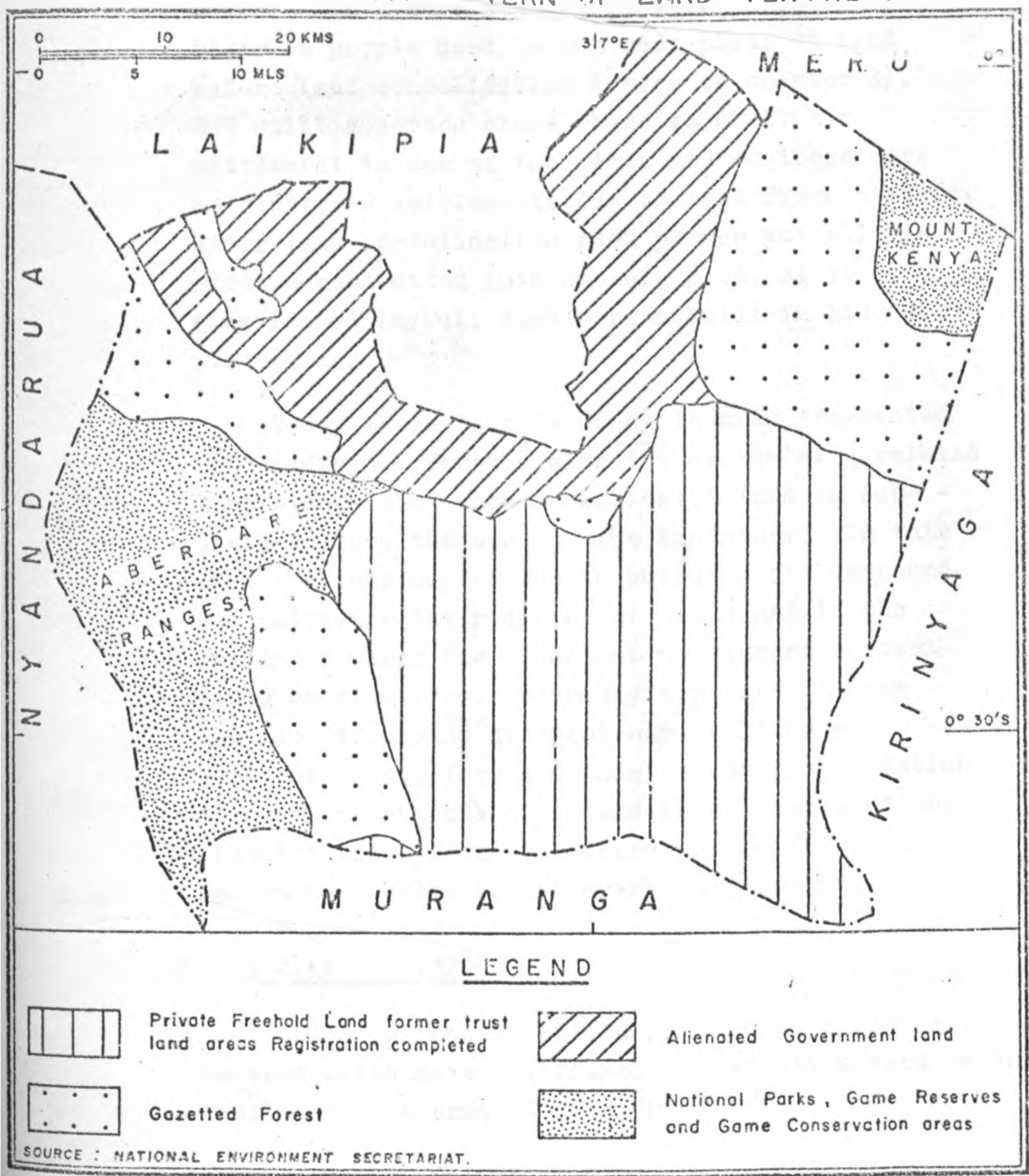
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TOTAL TRUSTLAND	847
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SOURCE: Ministry of Economic  
Planning and Community Affairs  
C.B.S. (1978)

FIGURE 13 NYERI DISTRICT PATTERN OF LAND TENURE SYSTEM



On the other hand a fragmented layout results in a clustered settlement because people prefer to build in a more central position. In Nyeri District people used to own many plots of land before land consolidation (refer to chapter 3). But still a person chose where to erect his settlement in one of the plots and so there were no clustered settlements due to land fragmentation. After land consolidation each person got all his plots consolidated into one big plot, hence a ring-fenced layout. Each person built in his own plot of land.

Today there is a tendency towards fragmented landholdings. Firstly with the system of gavelkind inheritance the once consolidated land is subdivided among the sons of the landowner. In this case the sons may decide to build on one compound but cultivate their different plots and if the family is large the resultant settlement pattern would be clustered. Secondly a person looking for land to expand his plot may not find one adjacent to his farm and this causes fragmentation. Since these aspects are found in all parts of the District the differences found in the Rn values cannot be results of differing farm layout.

### 5.6.3 SOCIAL CONDITIONS

Social organisation and population pressure are factors which have a differential direct effect on the settlement patterns of Nyeri District.

On the other hand conditions of security and the Kikuyu residential customs affect the whole District uniformly and therefore have no direct effect on the Rn values.

a) Original tendencies of the Kikuyus

Demangeon (1962) points out that August Meitzen was the first to describe the domains of concentrated villages and isolated farmsteads well marked in western and central Europe. He attributed the village to Germanic peoples and isolated farms to Celts. This theory, however, does not stand up to criticism. For example concentrated settlements is not exclusive to the Germanic peoples. Wagner and Mikesell conclude that it is not ethnic traditions that impose their law, but rather economic necessities.

However, a particular ethnic group may have a way of settling, as was found out in this study. The Kikuyus preferred to live in isolated homesteads occupied by nuclear families. They also preferred to build their houses on high grounds if their land was not flat. These settlement customs are present even today and they affect the way the Kikuyus settle to a large degree.

Nyeri District is populated predominantly by the Kenyan Africans of Kikuyu community, this District being one of their traditional homelands. The Kikuyu community comprises 97.8% of the total District population (National Environment Secretariat, 1980).

Nyeri District has attracted other Kenyan Africans of other ethnic groups, such as the Kamba (1052), Meru (865), Luhya (820), Luo (825). There are also Asians businessmen (1,129), Europeans (765) and a small number of non - Kenyan Africans (340). These other ethnic groups have come to Nyeri where they live in the growing towns and are engaged in government services, church service, while others are traders and labourers. As a result, therefore, they have a negligible influence (if any) on the settlement patterns in the District, firstly because their number is small and secondly because most of them live in towns.

The original tendencies of the Kikuyus concerning settlements cannot explain the Rn values obtained in the different locations because all locations are occupied by the Kikuyus. As a result therefore other factors should be responsible for the differing settlement patterns.

b) Conditions of security

Necessities of common defence in terms of insecurity compelled peasants to cluster together in villages. Correspondingly, with a return to security, they deserted villages and established themselves freely on the land of their choice. History provides numerous proofs of this relationship (Wagner and Mikesell, 1962).

It is clear from the recent emergency villages in Nyeri District that insecurity brings about clustered settlements. In cases of insecurity, need for security is predominant and other factors that otherwise would influence settlements in normal circumstances are not considered. After the emergency people started going back to their farms (this time to their consolidated plots) and factors other than insecurity, were considered in the establishment of settlements in the countrysides. Since there is security in Nyeri District the identified settlement patterns are therefore not influenced by insecurity.

The only aspects of insecurity today come from wild animals and only for those living near forest zones. The animals are a menace to crops, livestock and sometimes to human life, however, the Kenya Government takes care of this. Other threats come from occasional thieves and robbers however, this is minimised due to the police force. Such insecurities affect the site of a settlement rather than type of settlement. This is the reason why some respondents said that they did not erect their buildings very near roads or near any other public place in order not to tempt thieves into their houses.

c) Population Pressure

This is strongly linked to farm size in two ways. Firstly population pressure forces landless people out into areas where land is available - in Naromoru and Mweiga locations. These form clustered settlements as they await land sub-division. Secondly pressure in reserves causes land fragmentation into small farms. Since in the same area there are small and large farms, the pattern that usually results is random.

Since people live in houses it follows that where there is high population density there are more buildings than where the population is sparse. In the 1969 population census, Nyeri District had a population of 360,845, a growth rate of 3.4% per annum and overall density of 150 people per Km<sup>2</sup>. But according to the 1979 provisional population census, the District has 486,632 people and a density of 148 people per Km<sup>2</sup>. But Nyeri District is characterized by high concentrations of population in high potential land areas (refer to Figure 14 and table X). According to the National Environment Secretariat (March 1980) high densities on arable land have led to extensive land fragmentation. More than  $\frac{1}{2}$  of the holdings among the small scale farm population, which constitute nearly  $\frac{3}{4}$  of arable land are less than 1 hectare in size,  $\frac{1}{4}$  are more than 2 hectares.

FIGURE 14 NYERI DISTRICT LAND USE

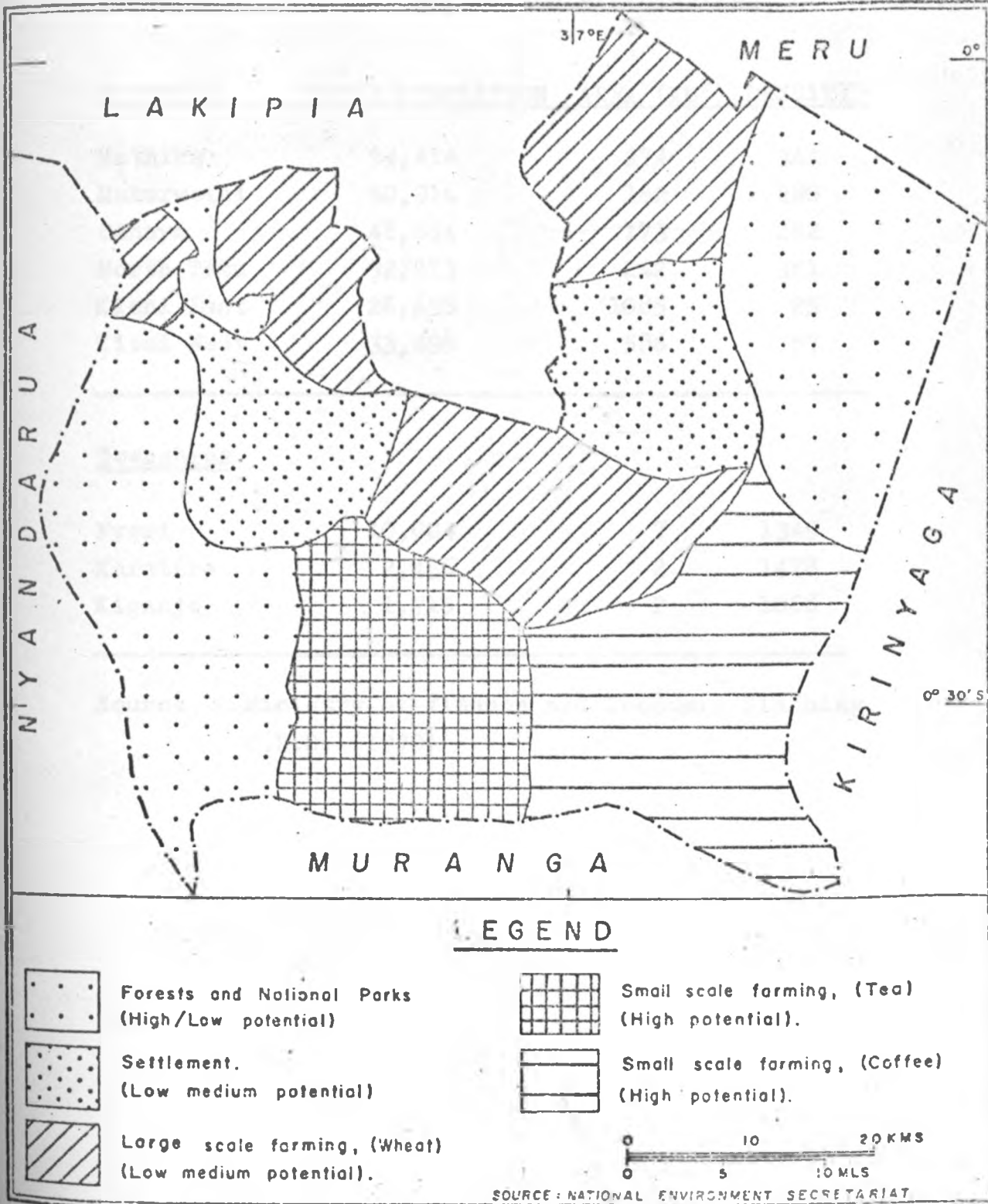




Table X

POPULATION DISTRIBUTION

<u>DIVISION</u>	<u>TOTAL POPULATION</u>	<u>AREA (KM<sup>2</sup>)</u>	<u>DENSITY</u>
Mathira	94,414	274	344
Mukurweini	50,916	182	280
Othaya	48,954	173	282
North Tetu	92,213	242	381
Kieni East	26,698	1085	25
Kieni West	33,495	586	57

Townships

Nyeri	10,004	7	1349
Karatina	2,436	2	1478
Kiganjo	1,715	2	1088

Source Ministry of Finance and Economic Planning  
C.B.S. (1970)

36% of the people interviewed in the 10 sampled locations said that high population pressure was a factor affecting their settlements. These were 32% of those living in isolated homesteads, 35% of those in hamlets and 53% of those living in villages (refer to appendices 10-13) A higher percentage of those living in villages are affected by this factor than those in the other settlement types. Since Narouoru and Mweiga locations have high percentages of respondents living in villages in comparison to the other locations (refer to table VIII) it would be assumed that this factor has caused settlements to have a pattern tending towards clustering. Those who live in villages in these locations say that they own land communally and they prefer to build together as they await land subdivision. Most of them said they left their former houses in the former African reserve areas due to high population pressure there, for due to that factor they were either landless or owned very small plots of land. As a result they preferred to go to the newly settled areas to live in villages before they acquired individual plots of land.

Those who live in villages in the other locations also said that population pressure has affected their settlements. Most of them reason that they live in villages because they are landless and if land was available they would build each in his own plot.

But as the situation is they have to build wherever a plot is available. The County Council gives such people small plots in the village where they can build.

A few people living in isolated homesteads and villages feel that high population pressure affects their settlement pattern, because it causes them to own small plots of land. If on the other hand there was no population pressure each person would be owning a larger plot than he does today and as a result settlements would be more scattered than today. The R<sub>0</sub> values in the locations that were formerly African reserves show a near random settlement pattern. This could be explained by the fact that there is high population density in these areas, some people living in small plots of land. As discussed under the section of economic conditions - farm size - this affects the pattern.

d) Social Organisation

In Nyeri District people can own as many acres of land as they are able to acquire. Appendix 13 shows that there are 10% of the respondents who said that they have 10.1 and over acres of land. The same appendix shows that 25% of the respondents were living on land that is not theirs. Those living on their own plots of land, may the plots be big or small plots, have the control of deciding where to erect their buildings and also the size of settlement.

The settlement that results is affected by various factors as discussed above. But the 25% of the respondents who do not live on privately owned land do not have the control of the settlement type that results. In areas of large holdings proprietors give their own rules for the placement of rural houses. Landlords usually like to concentrate their workers in villages such as in Mathari coffee estates and in Mburu village. In Mweiga and Naromoru locations, as in other newly settled areas there are people who own large plots of acres, and sometimes have clustered settlements for their workers. Also there are those who own land communally but live in villages while they await land subdivision. These factors help to explain why the settlements tend towards clustered pattern in these locations.

In the other sampled locations private land is taken up mainly by small scale farms. Much of the private land has become very fragmented due to population pressure and the system of gavelkind inheritance. When each son gets a plot from his father he builds on it on the site where he desires or where his father directs him. In the long run what was once one large plot of land with one homestead becomes many smaller plots with many homesteads which may still look scattered if the farm plots are large or clustered if farms are small. Since one can build anywhere on his plot of land, clustered settlement may occur if farm neighbours decide to build their homesteads on adjacent areas of their plots.

Where each of them builds in the centre of his plot the settlements may look scattered especially if farm sizes are big. The  $R_n$  values for these southern locations show that settlements tend towards random. This could be explained by the fact that a few people have big farm plots whereas many have small ones and within each plot the owner decides on the type of the settlement and its site. The general social set up in the District has an effect on the  $R_n$  values.

e) Other social factors

There are other general social factors which influence people's ways of settling in the District, but which are not responsible for the varied  $R_n$  values in the sampled locations. Most of the people interviewed said that they preferred to live in isolated homesteads occupied by nuclear families for privacy. In such a settlement one's belongings will not interfere with those of his neighbours. For example, a person can bring up her children in the way she desires without them getting bad examples from outside children. One can keep livestock away from the neighbours' farms. In general people prefer to live in isolated homesteads in order to uphold a general friendliness with neighbours. However, a few people said that they did not want to build very far from neighbours in case of danger such as robbers, fire and disease. Since this is the general attitude for respondents in all the sampled locations it means that the variation in  $R_n$  values cannot be as a result of these social factors.

5.6.4 INTRUSIVE FACTORS

These are factors which did not fall under the above discussed headings, but which have some effects on the settlement patterns in Nyeri District. These factors can be viewed from two angles. Firstly, as factors influencing the establishment of settlements and secondly as factors being advantageous or disadvantageous to already existing settlements. These factors are roads, railways, markets, missions and administrative centres, factors which are new to the residential customs of the Kikuyus. However, these are places of clustered settlement within the rural areas, where people live together on activities that are not primary. These settlements are not big enough to be called towns but are clustered settlements within predominantly dispersed settlement pattern. Since these intrusive factors are present in all the sampled locations it would be concluded, therefore, that though they affect settlements pattern they are not responsible for the varied  $R_n$  values.

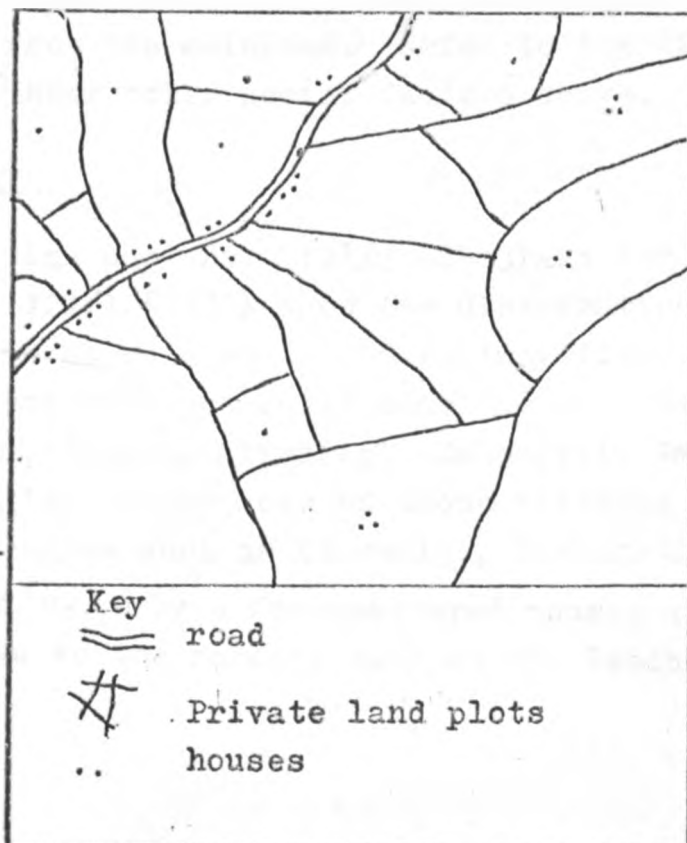
a) Roads

Roads are found in all locations. The topographical maps of Nyeri District show that houses are built mostly close to the roads. Since roads follow the ridges between deeply dissected valleys, buildings are mostly found away from rivers. The emergency villages were built near roads and since these areas carry a high population density in most areas it follows that many houses are built close to roads.

After the emergency, people were allowed to go back to their farms. They were not supposed to build their homes in the hidden valleys but near roads (roads here refer to all motorable roads even farm roads). As a result there seems to be some form of linear clustering on the ridges, but due to other factors the  $R_n$  values do not depict this except in case of Naromoru location. Most people in all locations prefer to erect their houses near roads, hence roads cannot explain the variation of  $R_n$  values in the sampled locations. Linear clustering occurs where people build on a particular site e.g near road, although each person has built on his own plot of land (refer to diagram below)

Diagram d

EFFECT OF ROADS ON SETTLEMENTS



66% of the respondents in 10 sampled locations (refer to appendix 13) said that roads are an advantage to their settlements since they connect them to outside areas. They are also advantageous because transportation of bulky goods or even sick people is accelerated. Settlements built down the valley experience great hardships especially during the wet seasons. 12% of the respondents in the 10 locations said that roads are a disadvantage. Most of them meant that their settlements are far from roads. However, there are **disadvantages** because of dust, noise and sometimes thieves. Another disadvantage is where a road cuts through a person's land or cuts a portion of it, or where a culvert directs rainwash to a person's land and thus cause heavy erosion. Where main roads are too near settlements there is danger on children and livestock and so landowners prefer to erect their buildings on the end of their farms farthest from the mainroad. Refer to the discussion on roads under other social factors above.

b) Railway

Karatina map sheet 121/3 (1963) and Naromoru map sheet 121/1 (1970) show the distribution of settlements as related to the railway line. There were various villages built near the line such as Karindundu, Ragati, Kiawarigi, Ruthagati, Gathima, Gatung'ang'a. Today some of those villages are service centres such as Kiawarigi, Ruthagati and Gatung'ang'a. Only a few scattered houses are built close to the railway such as the landhies.



From north of Kiganjo to Naromoru rural centre, the railway does not seem to attract many settlements close to it. This could be because trains stop only in the stations which are far a part, unlike in the case of vehicles, and also because of the great noise and tremor the trains produce as they pass. The railway line, therefore, can not explain variations observed Rn values in different locations.

c) Other intrusive factors

Markets, no matter what their sizes, are an advantage to settlements around because they offer some essential services. Mission stations are known for public services such as hospitals, dispensaries, schools, colleges, here the study recalls Tumutumu and Mathari mission stations. In cases where missions have agricultural enterprises like Mathari coffee estate there are large settlements for labourers. Markets and mission stations are places of clustered settlements distributed in various parts of the District. Like markets and mission stations the administrative centres are clustered settlements, varying in size, offering the general public essential services.

Although these are clustered settlements they do not have an effect on the general settling in the countryside. People are prepared to travel to some distances to these places.

These intrusive factors have an effect on settlement patterns in the District but cannot explain the variation observed in the different sampled locations. Therefore, other factors **identified** earlier are found to be more responsible for the variation, whereas these intrusive factors have a similar effect in all locations.

## CHAPTER 6

### SUMMARY AND CONCLUSION

The study of human settlements in East Africa is in its initial stages, and as yet there is relatively little published geographical material on this subject in Kenya. Nyeri District therefore is no exception. That is why this study undertook the task of identifying, describing, classifying and explaining the settlement patterns in the District. Settlement geography is concerned with the character of the settled places, their relationship with the physical environment, with the society and with each other. Accordingly, this study found it necessary to discuss the natural, economic and social conditions of Nyeri District for these provide an important background to settlements. This work is covered in chapters 3, 4 and 5.

It was found necessary to describe and explain the settlement patterns found in Nyeri District on two geographical scales. On a small scale the study tried to identify whether the settlements are dispersed, or random or clustered. On a large scale it tried to identify whether the settlement types could be classified as in general settlement geography, that is, towns, villages, hamlets and isolated homesteads.

Chapter 4 discusses the classification of settlement types adopted for the study. To arrive at this classification this study used the general settlement geography classification and the Kenya administrative classification.

A comparison of these two accepted classifications threw light into an area that needed further attention - an area that caused this study to arrive at a new classification. Urban centres in the Kenyan classification are the same as towns in the general classification. But whereas the general classification has villages, hamlets and isolated homesteads below towns, the Kenya administrative classification has Rural, Market and Local centres below urban centres. All these centres, however, are clusters of buildings with some degree of concentration of activities and people for economic and technical efficiency. These centres are what are referred to as villages in the general classification. The Kenya administrative classification appears to be more efficient in that it differentiates between different categories of villages. But its major disadvantage is that it does not consider the multitude of settlements that are smaller than the local centres which are dispersed throughout the countryside. In order to arrive at a more complete classification this study made use of the general settlement geography classification terminologies and the Kenyan classification and used local criteria. Four settlement categories were identified in a descending order of complexity, namely urban centres, Ichagi (villages), Matuura (hamlets) and Mucii (isolated homesteads). Refer to chapter 4 for a more complete discussion.

For identifying settlement patterns in the District two techniques were applied. The rank-size rule formula was applied to the 3 urban centres, namely, Nyeri Municipality, Karatina and Othaya (refer to chapter 5).

The result of this technique show that Nyeri is a primate town having 12 and 17 times the population of Karatina and Othaya respectively.

Three reasons explain why urban centres in Nyeri District are not lognormally distributed.

Nyeri was selected as the administrative centre for Central Province by the Colonial Government. It was then the recreational centre for the European Community. Even after independence Nyeri continued being the administrative headquarters of Central Province and today it is the headquarter of Nyeri District and Tetu location. Nyeri was therefore preferentially created, maintained and encouraged to grow and hence its primacy.

Secondly, Kenya is a developing country with low levels of industrialisation, countries in such a state usually have primate cities and Nyeri District and Kenya as a whole are no exceptions. Thirdly, urbanism is a recent phenomenon in Kenya and this also explains why Nyeri is a primate town in Nyeri District.

This study examined the hypothesis that there is no significant difference between patterns of rural, market and local centres in Nyeri District and a random point pattern. Nearest neighbour analysis was undertaken for each category of these centres within the District's boundary. The results showed that the patterns of each category of centres is somewhere between random and clustered but nearer to random.

The test for the significance on 0.05 rejection level of the statistic for local centres showed that these are not distributed by chance. But rural and market centres show a pattern similar to one generated by random processes. One reason for the observed patterns is due to a boundary effect on the  $R_n$  statistic because the whole District boundary was used in the calculations including areas that had insignificant populations. Further research in this area should modify the analysis by controlling for the boundary effect, for example, by using the boundary of the sampled areas only. Chapter 1 and appendix 1 show some of the factors considered in classifying and locating the designated centres. Further research should also be directed towards identifying a spatial order in the distribution of centres in the District and for the whole country. For example, central place theory would be used to check for such order.

Nearest neighbour analysis was also applied to settlements other than the designated centres in the 7 sampled locations. The study intended to use the 10 locations sampled for the distribution of the questionnaires but 3 locations, were contained in an outdated topographical map.

It is therefore recommended that the Karatina topographical map, sheet 121/3 (1963) be updated. It would be very helpful, for a study similar to this to use topographical maps covering a District revised in one particular year, and if possible after every 2 or 3 years. This would make comparative studies easier.

The locations were taken to represent the whole District and the  $R_n$  values divided the locations into the following groups:-

- a) Naromoru and Mweiga locations with patterns between clustered and random but with a higher tendency towards clustering especially in Naromoru.
- b) Tetu location, with a pattern nearest to complete random but with a tendency towards dispersed pattern.
- c) Othaya, Chinga, Muhito and Gikondi locations with patterns nearest to completely random but with some tendency towards clustering.

Whatever pattern exists is a result of an interplay between various factors - natural, economic, social and intrusive.

Among the natural factors, soil conditions have the greatest influence on settlements followed by water availability, and then surface relief. The  $R_n$  values for Naromoru location and to a lesser extent Mweiga location show that settlement tend towards clustering. These locations are in the low/medium potential areas. These two locations have settlements concentrated in areas having good soils.

Areas with poor soils are larger than areas with good soils, but they, however, have fewer and more dispersed settlements. But in the other locations where soils are more fertile, settlements are not therefore restricted by the soil factor. In these locations settlement patterns tend towards random and not clustered, as in Naromoru and Mweiga, because soil fertility is evenly distributed and so are the settlements.

Rainfall distribution also explains the differing settlement patterns. Mweiga and Naromoru locations are drier than the rest of the sampled locations. The topographical maps show that settlements are concentrated in the wetter areas and this must be one of the reasons why settlements tend towards clustering in those two locations. The wetter area is larger in Mweiga than in Naromoru and this may be part of the reason why the Naromoru's pattern tends to be more clustered than that of Mweiga location. But rainfall is not a limiting factor in the other sampled locations and that partly explains why settlements are not clustered in certain areas.

Nyeri District's landscape has a very important influence on the siting of settlements, but does not dictate the type of settlements built. The District's physiography is rugged lying between Mt. Kenya and the Aberdare ranges. It is drained by several tributaries of the rivers Tana and Ewaso Nyiro which form a dendritic pattern, and flow through steep-sided valleys. Most buildings are on high ground which is less fertile while the more fertile valleys are preserved for cultivation.



But where there is a high population density steep valley slopes, valley bottoms and mountain slopes are also inhabited. However, different settlement types are found in various topographical areas. For example, isolated homesteads are found in high grounds, valley sides and flat areas, and this is the same with other settlement types. This does not, therefore, tally with the generalised observations of settlement geographers such as Demangeon (1962) and Suggate (1966) that isolated homesteads tend to be found in highlands and forest areas, for example on parts of Brittany and the Himalayan zone of India. Clustered settlements also are generally expected in areas with smooth relief but this too does not find support in Nyeri District. Emergency villages were usually built on high grounds and not lowlands. In Nyeri District, however, steep slopes reduce possible human activities such as erecting houses and cultivating. All factors being equal, the high gradients on steep sided valleys suggest a correspondingly high potential for soil erosion. This problem is aggravated by the exploitation of such areas for settlements and agriculture. Cultivation on steep sided valleys should be discouraged unless terraces are dug. On such slopy grounds plants that hold the soil together, for example, grass, should be grown. People should be encouraged to grow trees on river sides instead of cultivating such areas.

This study found out that soil, rainfall, and surface terrain have an effect on the settlement patterns but not so much on settlement types.

Social conditions are found to be more responsible for dictating the various settlement types.

Land ownership and farm size are the economic factors most influential on settlement patterns in Nyeri District. The Kikuyus prefer to own land individually so as to have total control over its use. They also prefer to build their settlements in their privately owned land on the section they find most convenient. If this factor alone explains settlement patterns in Nyeri District, it would appear that land ownership favours dispersed settlement as each immediate family builds on its own plot of land. Landless people were mostly found in County Council land where they lived in clustered settlements. In Naromoru and Mweiga locations there was a higher percentage of people not living in their own privately owned land than in the other locations. Also in these two locations there are higher percentages of people living in villages as they await land subdivision. This may explain why settlements in these two locations tended towards clustering. In the other sampled locations there were higher percentages of people who said they were living in their own private land.

**Plot** size also has an important effect on settlements. Where farm plots are large settlements may appear dispersed in comparison to another area of small farm plots, with the same number of buildings. In Kieni East and Kieni West Divisions farm plots are generally larger than in the former African reserve areas.

However, in these newly settled areas patterns of settlement tend towards clustering and this could be due to the fact that there are large villages. Where small and large plots occur together in one area the settlements look random. This may explain why settlements in the former reserve areas tend toward random.

The major goal of rural development is to improve the standard of living of the people although resources are limited. A critical factor in agricultural development is production per acre rather than expansion per acreage. Though most of the farms are small scale, the people of Nyoni District should be encouraged to use improved crop varieties, improved animal husbandry, fertilizers and tractors for cultivation to a larger extent than they do today. It would be very helpful if farmers had the facilities to irrigate their farm plots. These improvements may not have a direct effect on settlement patterns but they may greatly affect the types of houses built. If farmers earn a lot of money from their small farms they can build better houses than they do today, and improve on the rural areas with such commodities as water, electricity and good communications. Also small plots of land would have a higher carrying capacity than they have today thus offering some solution to land pressure especially in the former African reserves.

Reference to Bullock's (1979) work in Kiambu District supports this point. He says that there were two house types in Kikuyuland before the turn of the century, both of the cone-on-cylinder type. One had substantial walls made of vertically placed adzed planks whereas the other type was the "wattle-and daub" structure. The former was hardly known by the middle of the twentieth century probably due to the clearing of the forest. But the 'wattle-and-daub' structure had become the norm over most of Kikuyuland by the midtwentieth century. However, during the last fifteen years it has given to a considerable variety of new forms so that it now accounts for only a minority of houses in Kiambu District. The variety of these new forms and the rapidity of their adoption clearly demonstrates the multiplicity of materials available and willingly used when social and economic conditions permit. Since the majority of people in Nyeri earn their livelihood from their farms it would follow that farm improvement through modern agricultural practices would increase their income. High income would enable many rural people to build better houses than today. With greater access to the modern economy there may be greater potential for investing in improved housing.

As discussed in chapter 5, social organisation and population pressure have a direct effect on settlement patterns in Nyeri District.

Nevertheless social factors such as security and residential customs are uniform throughout the District and are therefore not responsible for the varied  $R_n$  values.

In Nyeri District people can own as many acres of land as they can acquire. Those owning land, despite its size, have total control over where to erect their buildings. In large farm estates proprietors give their own rules for the placement of rural houses. The landless people usually move from the reserves to look for land in the newly settled locations, where they usually live in villages as they await land-subdivision. This social organization where the land owner decides on the type of settlement to build and its site has partly caused the  $R_n$  values identified. It is a result of various considerations - natural, economic and social - that a person decides on the type of settlement to erect and also its site. The outcome of these factors in a large areal extent has an effect on settlement patterns as identified in this study.

Population pressure is another social factor which effects settlement patterns in Nyeri District. Population pressure forces the landless people out of the old reserve areas to the newly settled areas in Kieni East and Kieni West Divisions.

These areas provide a solution to such people's problems of land shortage because there are large plots of land not yet inhabited. In some cases people live in villages waiting for land to be subdivided before each can get and move to his own private plot. This as discussed above, has an effect on the settlement patterns of Mweiga and Naromoru locations making them tend towards clustering. Another factor explaining these patterns is the boundary effect on the  $R_n$  statistic. Since these locations are being occupied now, there are still areas not yet settled. But since nearest neighbour analysis was applied using the administrative locational boundary, it included the unsettled areas and hence the emergence of a pattern tending towards clustering. This aspect is stronger in the case of Naromoru location than of Mweiga location. On the other hand the old African reserve areas have been open to occupation by Africans for a long time. As a result of this, plus population pressure, there are no habitable areas that **are** not settled and so the  $R_n$  values have not been affected by the administrative boundary used as in the case of Naromoru and Mweiga locations.

Population pressure in the reserves causes land fragmentation. But since there are large and small plots juxtaposed the  $R_n$  value that usually results is random. In the former African reserves there is high population with people owning smaller plots of land whereas in the newly settled areas farm plots are larger and population is lower.

It follows therefore, that the period in which an area has been occupied has an effect on settlements.

Mugo (1975) says that while the endowments of Nyandarua District do not vary considerably from those of the other Districts within Central Province it may be assumed that its low population density may be due to the short period over which it has been settled by the African population as compared to the other Districts. The District is occupied predominantly by the Kikuyus as in other Districts in the Province and it is expected to have as high a population density as the other Districts in due course.

Mugo's argument would apply also to the newly settled locations of Nyeri District. Therefore in due course Naromoru and Mweiga locations are expected to change their settlement patterns towards complete randomness like the other sampled locations and the change would affect the whole of Kieni East and Kieni West Divisions. Resettlement programmes should be increased to move the landless people and those with less than 1 acre from the overpopulated areas to the uninhabited areas in Kieni East and Kieni West Divisions. As many farmers in the schemes keep dairy cattle, growing of fodder crops should be encouraged. The residential customs of a people affect their settlement patterns.

In the traditional residential customs the Kikuyus preferred to live in families nuclear or extended, on land belonging to their ancestor. Today each family builds where their farm plot is located, which sometimes is purchased from somebody else. Extended families usually do not build in one compound as before, and as a result a homestead of a nuclear family is more common today than a large settlement of an extended family. In Nyeri District there are traces of emergency villages found in the countryside and this is a new phenomenon to the Kikuyu residential customs.

From the discussion in chapter 5 it is evident that settlement patterns are affected by a multiplicity of factors - the whole social economic and natural conditions of a people. In Kenya generally the dominant settlement type among the pastoralists is villages such as Masai, Rendille, Samburu and Somalia. Due to the harsh environments of their areas and the need to herd their livestock communally the village settlement is found to be most effective. The Rendille, for example, with their camels and small stock, live in large settlements containing quite often 80-100 families (huts). The Rendille prefer to live in large settlements because they are less vulnerable to attack, camels are more docile and easier to handle in large numbers and they prefer to live in their clans (Spencer, 1973). The Masai also prefer to live in clustered settlements. The Masai village or enkang is usually made up of 2-5 families.



The huts are built in a large circle and are surrounded by a thorn bush stockade for the protection of the stock from wild animals. The stock occupy the centre of the circle and are protected by the circle of huts and the outer thorn bush stockade. The occupants of these villages move in search for better grazing and water, only to come back later after some months. But in case disaster had occurred during their occupancy they set fire to it when they leave and not return to the same spot again. Another type of village is called a Manyatta, which is occupied by members of one age group. These Manyattas in which several people live in 50-100 huts are not fenced in. (Morgan, 1957).

In whole of North Kavirondo among the Bantu of Western Kenya, (Gunter 1970) the individual family (husband, wife and unmarried children) constitutes the basic social group. As a rule each individual family lives in an isolated homestead, erected in the middle of the family gardens. In those parts of Kavirondo where there is still danger from leopards or where the owner wishes to protect himself against theft or sorcery, the homestead is surrounded by a hedge of thorn bushes or euphorbia interplanted with various protective plants. Therefore among the agricultural groups of Kenya such as the Kikuyus, Meru, Embu and the above mentioned Bantus of Western Kenya scattered settlements are more dominant.

Among these people clustered settlements are rare, though not completely absent. The emergency villages (which have rapidly disintegrated since independence) have left some marks of loose knit villages in Central Province. Villages are also found in large plantations such as in Kericho tea plantations and Nyeri coffee estates. Villages are also found where landless people are given plots to build in by the county council, or where government employees live, for example forest workers. Other cases of clustered settlement are found where extended families prefer to build in one compound, forming hamlets or even villages.

In Kenya, the agricultural societies are more dominant than the pastoralists. Here people prefer to build each in his own plot of land unlike in villages and go out from there to their respective duties (Orni and Efrat, 1966). Therefore settlement patterns result from a whole set up of a people involved, and at a particular time in history.

There is need for research work in other related aspects of settlements in Nyeri District. As pointed out in chapter 1 various geographers say that each settlement type has a form, that is a layout or a physical appearance. Therefore, for each of the settlement types **identified** in chapter 4, there is a form or even forms.

In order to have a more complete picture of settlements in Nyeri District it is therefore necessary to have a knowledge of the settlement forms. A research similar to Bullock's (1979) work in Kiambu should be done for Nyeri District. This includes such things as the layout, the constructional techniques, building materials and uses of the various buildings. A study of settlement patterns and forms should be done for each District in the country to see how these are affected of by different ethnic groups and physical environment.

Effective planning and management of human settlements entail deep insights into the dynamics behind the changing nature, character and pattern of the different types and scales of settlement. No doubt therefore that a study attempting to isolate, identify and analyse those factors which are influencing the pattern of settlement in Nyeri District is necessary because it would contribute to the much needed information base on which the current policies and strategies for guiding the development of our settlements would eventually be evaluated and improved. However, it is felt that the government has adopted the 'service centre' strategy as a policy framework for guiding implementation of locational decisions it would be necessary for future researchers to survey the various types of physical facilities and services that are found in the designated centres and other human settlements.

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A P P E N D I C E S

APPENDIX 1

GUIDELINES FOR THE LOCATION OF INFRASTRUCTURAL FACILITIES  
AT THE VARIOUS LEVELS OF CENTRES

Level of Centres	Administrative Services	Civil services	Communication services
URBAN CENTRES	Principal Town National Capital	Government Ministries  High Court  National Police Headquarters	International Airport  International Bus Services
	Principal Towns Municipalities	Provincial Administration Resident Magistrate's Court	Fire Station  Served by International/ National Trunk Road Head Post Office Facilities, Telephone (automatic exchange) Regional Bus Service Airfield
	Other Urban Centres	District Administration District Court Divisional Police Head quarter	Served by National Trunk/Primary Road  Airstrip
RURAL CENTRES	Divisional Administration Police Station	Sewage Disposal system Grid Water Supply Electricity	Served by Primary/ Secondary Road  Departmental Post Office
MARKET AND LOCAL CENTRES	Locational and Sub- Locational administration Police Post	Public Water Supply	Served by Secondary/ Minor road Telephone (Manual exchange) Sub- Post Office



APPENDIX 1 (Contd)

GUIDELINES FOR THE LOCATION OF INFRASTRUCTURAL FACILITIES  
AT THE VARIOUS LEVELS OF CENTRES

Level of Centres		Educational Services	Health Services	Recreational and Social Services
URBAN CENTRES	Principal Town National Capital	University Teacher Training College (secondary level) Technical College	Hospital (national standard)	
	Principal Towns Municipalities	Teacher training college (primary level) Technical school (Seco- ndary level)	Hospital (provincial standard)	Museum/art centre
	Other Urban Centres	Senior Secondary School (to form VI) Technical School (primary level)	Hospital (district standard)	Stadium Public Library Recreational Park Cinema Showground
RURAL CENTRES		Secondary School (at least to form IV) Village polytechnic	Health centre (+ maternity unit)	Mobile Library Service Sports field Social hall Mobile cinema
MARKET CENTRES		Secondary School	Dispensary Family Planning Service	
LOCAL CENTRES		Full primary school (2- 3 streams) Nursery school		

- NOTES. - 1. Private sector facilities, e.g. commercial and industrial undertakings, will be located in service centres according to the economic development potential.
2. To the services listed against each level of centre should be added those services listed against the centres at lower levels, e.g. in most cases a rural centre will also have all the services existing in market and local centres.

APPENDIX 2

SCHEDULE OF SERVICE CENTRES IN  
NYERI DISTRICT

URBAN CENTRES	RURAL CENTRES	MARKET CENTRES		LOCAL CENTRES		
NYERI (40,200)	Kweiga	Ihurira	Tumutumu	Ndathi	Kangaita	Kaheti
Karatina (7,000)	Wanagana	Kinunga	Giakaibai	Muthuaini	Kiawarigi	Kaharo
Othaya (2,500)	Mukurweini	Gatitu	Gichichi	Muruguru	Gikororo	Thageini
	Naro moro	Enderasha	Mahiga	Gichira	Ndimaini	Tambaya
	(Kiganjo -	Kabiruini	Gathinga	Gachika	Kianjogu	Ichamara
	from 1980	Ruthagati	Mihuti	Kiamariga	Ngandu	Gumba
	part of	Giakanja	Gakindu	Gatunganga	Gaikuyu	Gikondi
	Nyeri)	Ihitho	Waraza	Ngorano	Gatondo	Kanunga
		Kiandu		Gachatha	Ihuririo	Gararekwa
				Mukarara	Karema	Hombe
				Gatumbiri	Birithia	Amboni
				Gathuthi	Kagicha	Embaringo
				Kigwandi	Chinga	Muyogo
					Kagere	



- |            |     |    |
|------------|-----|----|
| b) hamlets | Yes | No |
| c) village | Yes | No |
| d) town    | Yes | No |

8. (A) Why do you live in this settlement type?

8. (B) a) Is the land you are living in your own? Yes No

b) If yes, how big is it?

(i) 1 acre or less

(ii) 2 - 4 acres

(iii) 5 - 10 acres

(iv) 10 + acres

c) Do you practise common tenure? Yes No

d) Is your farm-holding ring-fenced? Yes No

e) Other economic conditions.

9. What are the advantages of living here?

10. What are the disadvantages of living here?

11. In general what type of settlement do people live in here?

Why?

12. In what pattern of settlement did your people (or yourself) live in

(a) (i) Around world war I?

(ii) Why?

(iii) Was it mainly on plains? Yes No

(iv) Why?

b) (i) Around world war II? \_\_\_\_\_

(ii) Why?

(iii) was it mainly on plains?                      Yes              No

(iv) Why?

c) (i) During emergency period? \_\_\_\_\_

(ii) Why?

(iii) Was it mainly on plains?                      Yes              No

(iv) Why?

CRITERIA USED IN THIS STUDY TO CLASSIFY SETTLEMENTS

- A. INTERVIEWER: based on
- 1) relationship
  - 2) public services

I. ISOLATED HOMESTEAD.

1. Buildings of a man and his immediate family
2. No public services.

II. HAMLET

1.
  - (i) Buildings of an extended family in one compound or a nuclear family with a man having many wives.
  - (ii) Workers' quarters built on employer's land and such buildings having a clustered appearance.
  - (iii) Many houses built together for renting.
2. There is clustering of buildings but none or minimum public services, for example a canteen.

III. VILLAGE

1. Houses close together but of unrelated people, for example, buildings of two or more families on 1 acre plot.
2. There are public services such as shops, schools, and butcheries.

IV. TOWN

1. People are unrelated
2. There are more and complex public services such as post office, administrative offices, big shops.

B. ADMINISTRATIVE CRITERIA

1. Land ownership - where people live in county council land their settlement is called a village, despite its size.

According the provincial physical planner in Nyeri District, all settlements below the designated centres are referred to as farm holdings.

LOCAL CENTRES IN NYERI DISTRICT



Appendix 6

A section of Gikondi location showing settlements.





APPENDIX 7

APPLICATION OF RANK-SIZE RULE FORMULA TO

URBAN CENTRES IN KENYA 1969

No	Urban Centres	Population in Descending Order	Rank of Urban Centres If they are Lognormally Distributed
1	Nairobi	934549	1
2	Mombasa	341501	2
3	Kisumu	150373	6
4	Nakuru	92643	9
5	Machakos	84322	10
6	Meru	72552	12
7	Eldoret	50219	17
8	Thika	41253	20
9	Nyeri	35758	23
10	Kakamega	31751	26
11	Kisii	30661	27
12	Kericho	29613	28
13	Kitale	28399	29
14	Bungoma	25070	33
15	Busia	24980	33
16	Malindi	23306	35
17	Nanyuki	19085	44
18	Webuye	17631	47
19	Embu	16276	52
20	Murang'a	15343	54
21	Garissa	14072	59
22	Narok	13474	62
23	Isiolo	11350	74
24	Nyahururu	11243	74
25	Naivasha	11231	74
26	Maralal	10226	82
27	Athi River	10012	83
28	Narangi Enkara	9966	84
29	Gilgil	8953	95
30	Mandera	8703	96

APPENDIX 7 (Contd)

APPLICATION OF RANK-SIZE RULE FORMULA TO

URBAN CENTRES IN KENYA

No	Urban Centres	Population in Descending Order	Rank of Urban Centres If they are Lognormally Distributed
31	Bute	8598	97
32	Elburgon	8592	97
33	Marsabit	8591	97
34	Lamu	8552	98
35	Elwak	8047	104
36	Moyale	7525	111
37	Homa Bay	7387	113
38	Voi	7329	114
39	Wajir	6328	132
40	Lodwar	6316	132
41	Migori	6135	136
42	Msambeni	6119	136
43	Mudo Gashe	6015	138
44	Kilifi	5861	142
45	Njoro	5785	144
46	Kangundo	5637	148
47	Muhoroni	5468	153
48	Galole	5343	156
49	Molo	5340	156
50	Kitilu	4826	173
51	Wabari	4815	173
52	Londiani	4434	188
53	Kitui	4396	190
54	Kikuyu	4042	206
55	Siaya	4005	208
56	Ngong	3997	209
57	Maji Mazuri	3895	214
58	Eldama Ravine	3879	215
59	Kipkelion	3711	225
60	Kabarnet	3669	227

APPENDIX 7 (Contd)

APPLICATION OF RANK-SIZE RULE FORMULA TO

URBAN CENTRES IN KENYA

No	Urban Centres	Population in Descending Order	Rank of Urban Centres If they are Lognormally Distributed
61	Kiambu	3632	230
62	Luanda	3593	232
63	Kerugoya	3521	237
64	Kajiado	3510	238
65	Salolo	3502	238
66	Kitilia	3105	269
67	Kapsabet	2975	280
68	Kalokoj	2944	283
69	Karatina	2929	285
70	Mariakani	2853	293
71	Kapenguria	2732	305
72	Githunguri	2525	331
73	Magadi	2515	332
74	Nkubu	2491	335
75	Kutus	2369	352
76	Musingi	2328	358
77	Wamba	2262	369
78	Kendu Bay	2239	373
79	Mogotio	2235	373
80	Kwale	2193	381
81	Watamu	2192	381
82	Othaya	2157	387
83	Loiya	2157	387
84	Makutalio	2140	390
85	Makuyu	2134	391
86	Makutalio	2123	393
87	Sagana	2110	396
88	Witu	2055	406
89	Oloitoktok	2054	406

NEAREST NEIGHBOUR ANALYSIS FOR  
RURAL, MARKET AND LOCAL CENTRES.

- (i) The procedure followed to determine the  $R_n$  values for rural, market and local centres is outlined in chapter 2 section 2.4.2C. But calculations for each category of centres are shown in this appendix.
- (ii) Procedure followed for tests of significance for each of these categories of centres is as below:-

$H_0$  There is no significant difference between the patterns of rural, market and local centres in Nyeri District and a random point pattern.

$H_1$  There is a significant difference between the patterns of rural, market and local centres and a random point pattern.

Rejection level 0.05

The calculations for each category of centres is shown in this appendix.

RURAL CENTRES

(i) Calculating the Rn value

Points	NN	NND (km)
1	4	13.2
2	4	11.5
3	2	16
4	2	11.5
5	1	22.1

Ed = 74.3

(a)  $\bar{D}_{obs} = 73.4 / 5 = 14.86$

(b)  $\bar{D}_{ran} = C \sqrt{\frac{a}{n}}$

$C = 0.497 + 0.127 \sqrt{\frac{4}{5}}$

$C = 0.61$

$\bar{D}_{ran} = 0.61 \sqrt{\frac{3351}{5}}$

$\bar{D}_{ran} = 15.63$

(c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$= \frac{14.86}{15.63}$

$= 0.95$

$= 0.95$

(ii) Calculations for the Significance test

(d) (i)  $\sigma_{ran} = V \cdot \bar{D}_{ran}$

$V = 0.0098 + .4701 (C \sqrt{\frac{4}{5}})$

$V = 0.266$

$\sigma_{ran} = 0.266 \times 15.63$

$= 4.25$

(ii)  $Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$

$= \frac{14.86 - 15.63}{4.15}$

$= -0.18$

There is no significant difference between the pattern of rural centres and a random point pattern.

Market Centres,

(i) Calculating the Rn value

Points	NN	NND (km)
1	2	15.4
2	3	3.3
3	2	3.3
4	5	2.5
5	4	2.5
6	7	4.2
7	6	4.2
8	7	4.3
9	7	5.2
10	9	7.3
11	10	9.6
12	13	8.4
13	14	6.2
14	15	4.7
15	14	4.7
16	15	7
17	15	17.3

$$(a) \bar{D}_{obs} = 110.1 / 17$$

$$= 6.476$$

$$(b) \bar{D}_{ran} = C \sqrt{\frac{a}{n}}$$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{17}}$$

$$= .5586$$

$$\bar{D}_{ran} = .5586 \sqrt{\frac{3351}{17}}$$

$$= 7.84$$

$$(c) R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$$

$$= \frac{6.476}{7.8}$$

$$= 0.83$$

(ii) Calculations for the significance test.

$$(d) (i) \sigma_{ran} = V \cdot \bar{d}_{ran}$$

$$V = 0.0098 + .4701 \left( C \sqrt{\frac{4}{17}} \right)$$

$$= 0.137$$

$$\sigma_{ran} = 0.137 \times 7.84$$

$$= 1.06$$

$$(ii) Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$$

$$= \frac{6.476 - 7.8}{1.06}$$

$$= \frac{-1.324}{1.06}$$

$$= -1.249$$

Ed=110.1

There is no significant difference between the pattern of market centres and a random point pattern.

Local centres

Points	NN	NND (km)
1	2	3
2	1	3
3	4	6
4	3	6
5	7	3.6
6	8	3.5
7	8	2.5
8	7	2.5
9	14	6.5
10	11	2.9
11	12	1.9
12	13	1.7
13	12	1.7
14	15	6.4
15	14	6.4
16	17	3.2
17	16	3.2
18	19	2.4
19	18	2.4
20	21	3
21	20	3.0
22	21	3.2
23	19	3
24	29	2.8
25	26	2.0
26	25	2.0
27	28	3.4
28	27	3.4
29	24	2.8
30	29	3.1
31	28	9
32	30	7
33	34	2.7
34	33	2.7
35	34	4.1
36	37	3.1
37	36	3.1
38	22	3.3
39	38	5.2
40	39	6.6

(i) Calculating the Rn value

a)  $\bar{D}_{obs} = 147.3 / 40 = 3.6825 \text{ Km.}$

b)  $\bar{D}_{ran} = c \sqrt{\frac{a}{\pi}}$

$$C = .497 + .127 \sqrt{\frac{4}{40}}$$

$$C = 0.537$$

$$\bar{D}_{ran} = 0.537 \sqrt{\frac{3351}{40}}$$

$$\bar{D}_{ran} = 4.9$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}} = \frac{3.6825}{4.9}$

$$R_n = 0.75$$

(ii) Significance testing

(i)  $\bar{\sigma}_{ran} = V \cdot \bar{D}_{ran}$

$$V = 0.0098 + .4701 \left( c \sqrt{\frac{4}{40}} \right)$$

$$V = 0.0896$$

$$\bar{\sigma}_{ran} = 0.0896 \times 4.9$$

$$= 0.439$$

(ii)  $Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{\bar{\sigma}_{ran}}$

$$\bar{\sigma}_{ran}$$

$$= \frac{3.6825 - 4.9}{0.439}$$

$$0.439$$

$$= 2.7$$

There is a significant difference between the pattern of local centres and a random point pattern.

NEAREST NEIGHBOUR ANALYSIS FOR SETTLEMENTS  
OTHER THAN THE DESIGNATED CENTRES IN THE  
7 SAMPLED LOCATION

- (i) The procedure followed to determine the  $R_n$  values for settlements other than the designated centres in the 7 sampled locations is outlined in chapter 2 section 2.4.2c. But calculations for each location are included in this appendix.
- (ii) Procedure followed when applying tests of significance to the settlements in these locations is as outlined below.

$H_0$  There is no significant difference between the settlements other than the designated centres of the 7 sampled administrative locations in Nyeri District and a random point pattern.

$H_1$  There is a significant difference between settlements other than the designated centres of the 7 sampled administrative locations and a random point pattern.

Rejection level 0.05

Calculations for significant tests for each of the sampled locations are included in this appendix.



	<u>T E T U</u>				
	<u>Random</u> <u>Points</u>	<u>Nearest</u> <u>Neighbour</u>	<u>N.N.D.</u> <u>mm</u>	<u>N.N.D.</u> <u>km</u>	
1	213	214	5	0.125	26
2	723	722	4	0.1	27
3	444	443	4.5	0.1125	28
4	532	531	8	0.2	29
5	597	596	8	0.2	30
6	370	369	4	0.1	31
7	433	428	6.5	0.1625	32
8	349	350	5	0.125	33
9	829	828	5.5	0.1375	34
10	056	055	5	0.125	35
11	429	435	9	0.225	36
12	055	053	2.5	0.0625	37
13	126	125	2.5	0.0625	38
14	802	803	7	0.175	39
15	368	369	3	0.075	40
16	346	395	12	0.3	41
17	027	029	5.5	0.1375	42
18	428	433	6.5	0.1625	43
19	169	170	3	0.075	44
20	098	093	5.5	0.1375	45
21	486	485	4	0.1	46
22	592	593	3	0.075	47
23	615	616	6	0.15	48
24	743	834	4.5	0.1125	49
25	827	828	5.5	0.1375	50

Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
161	165	2	0.225
144	143	4.5	0.1125
241	239	7	0.175
500	499	2.5	0.0625
354	353	10	0.25
662	661	5	0.125
133	134	4	0.1
016	014	5	0.125
448	447	3	0.075
816	815	4.5	0.1125
204	205	3	0.075
153	157	5	0.125
154	133	4	0.1
090	091	9	0.225
721	717	4	0.1
430	431	5	0.125
037	835	1.5	0.0375
202	201	4	0.1
774	772	6	0.15
695	694	2	0.05
253	254	6	0.15
607	608	5.5	0.1375
124	114	9	0.225
706	707	2	0.05
225	226	9	0.225

TETU

i) Calculating the Rn value

a) Nearest neighbour mean distance ( $\bar{D}_{obs}$ )

$$= \frac{6.6125}{50}$$

$$\bar{D}_{obs} = 0.132$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{n}}$$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{837}}$$

$$C = .5057$$

$$\bar{D}_{ran} = 0.5057 \sqrt{\frac{46.66}{837}}$$

$$\bar{D}_{ran} = 0.119$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$$= \frac{0.132}{0.119}$$

$$= 1.109$$

(ii) Test for significance

$$V_{ran} = V \cdot \bar{d}_{ran}$$

$$V = 0.0098 + .4701 \left( C \sqrt{\frac{4}{n}} \right)$$

$$V = 0.0098 + 0.1701 (.5057 \sqrt{\frac{4}{837}})$$

$$V = 0.026$$

$$V_{ran} = 0.026 \times 0.119$$

$$= 0.003$$

$$2. Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{V_{ran}}$$

$$= \frac{.132 - .119}{0.003}$$

$$= 4.33$$

There is a significant difference between settlements other than the designated centres in Tetu location and a random point pattern.

	Random Points	Nearest Neighbour	N.N.D. mm
1	0567	0566	4
2	0551	0549	5.5
3	1261	1260	2
4	1267	1268	2.5
5	0275	0274	2
6	1694	1693	2
7	1617	1618	2
8	1446	1447	3
9	1339	1338	3
10	0161	0160	3
11	1586	1585	5.5
12	0291	0292	3.5
13	0758	0756	2
14	0640	0641	1.5
15	1838	1840	2
16	1301	1304	2
17	1770	1769	3
18	0172	0173	5.5
19	0405	0406	3
20	0774	0773	3
21	0831	0832	3.5
22	0341	0342	3
23	1094	1070	2
24	0671	0670	2
25	1015	1149	1.5

U H I T O

<u>N.N.D.</u> <u>km</u>		<u>Random</u> <u>Points</u>	<u>Nearest</u> <u>Neighbour</u>	<u>N.N.D.</u> <u>mm</u>	<u>N.N.D.</u> <u>km</u>
0.01	26	1938	1934	2.5	0.0625
0.1375	27	1376	1377	2	0.05
0.05	28	0182	0183	3	0.075
0.0625	29	0506	0505	2.5	0.0625
0.05	30	0435	0436	3	0.075
0.05	31	1849	1848	5	0.125
0.05	32	1606	1607	1.5	0.0375
0.075	33	1380	1379	3	0.075
0.075	34	0881	0882	2.5	0.0625
0.075	35	1419	1418	4	0.1
0.1375	36	0783	0784	3	0.075
0.0875	37	0443	0444	4.5	0.1125
0.05	38	0837	3.5	0.0875	
0.0375	39	0806	0807	2	0.05
0.05	40	1402	1401	3.5	0.0875
0.05	41	0206	0203	5	0.125
0.075	42	0234	0233	2	0.05
0.1375	43	1567	1565	2.5	0.0625
0.075	44	1783	1782	2.5	0.0625
0.075	45	1415	1406	3.5	0.0875
0.0875	46	0648	0649	3	0.075
0.075	47	1059	1058	2	0.05
0.05	48	1897	1898	3.5	0.0875
0.05	49	1478	1469	3	0.075
0.0375	50	1102	1104	4	0.1

MUHITO

(i) Calculating the Rn value

a)  $\bar{D}_{obs} = \frac{3.75}{50}$   
 $\bar{D}_{obs} = 0.075$

b) Expected Mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{1928}}$$

$$a = 50 \text{ Km}^2$$

$$n = 1928$$

$$C = .5027$$

$$\bar{D}_{ran} = .503 \sqrt{\frac{50}{1928}}$$

$$= .081$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$   
 $= \frac{.075}{.081}$

$$R_n = .926$$

(ii) Test for significance

i)  $\bar{\sigma}_{ran} = V \cdot \bar{d}_{ran}$

$$V = 0.0098 + 0.4701 \left( C \sqrt{\frac{4}{n}} \right)$$

$$V = 0.0098 + 0.4701 \left( .503 \sqrt{\frac{4}{1928}} \right)$$

$$V = 0.021$$

$$\sigma_{ran} = 0.021 \times 0.081$$

$$= 0.0017$$

2) Z - score =  $\frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$

$$= \frac{0.075 - .081}{0.0017}$$

$$= -3.5$$

There is a significant difference between settlements other than the designated centres in Muhito location and a random point pattern.

G I K O N D I

	Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km	
1	0567	0568	3	0.075	26
2	0551	0550	2	0.05	27
3	1261	1262	3	0.075	28
4	1267	1265	4	0.1	29
5	0275	0276	2	0.05	30
6	0981	0982	2	0.05	31
7	0161	0162	2	0.05	32
8	0291	0287	3.5	0.0875	33
9	0758	0759	1.5	0.0375	34
10	0640	0641	2	0.05	35
11	0172	0173	2.5	0.0625	36
12	0405	0404	2	0.05	37
13	0774	0758	7	0.175	38
14	0831	0830	3.5	0.0875	39
15	0341	0342	3	0.075	40
16	1094	1095	3	0.075	41
17	0671	0670	2	0.05	42
18	1015	1014	3	0.075	43
19	1222	1224	3	0.075	44
20	0920	0923	4	0.1	45
21	0182	0181	3	0.075	46
22	0506		3	0.075	47
23	0435	0434	4	0.1	48
24	0881	0882	5	0.125	49
25	0783	0784	3	0.075	50

Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
0443	0444	4	0.1
0307	0308	2.5	0.0625
0642	0840	2.5	0.0625
0462	0457	4.5	0.1125
0806	0805	3.5	0.0875
0206	0207	1	0.025
1212	1210	2	0.05
0234	0235	4	0.1
1216	1215	7	0.175
1255	1256	5	0.125
0308	0309	2	0.05
0648	0647	2	0.05
1059	1060	3	0.075
1102	1099	2	0.05
1107	1106	4	0.1
1055	1056	2	0.05
0701	0702	3.5	0.0875
0226	0227	2.5	0.0625
1165	1161	3	0.075
0124	0125	2.5	0.0625
0952	0951	2	0.05
0615	0614	5	0.125
0149	0150	3	0.075
0496	0495	4	0.1
0762	0764	2	0.05



GIKONDI

(i) Calculating the Rn value

a) Nearest neighbour mean distance ( $\bar{D}_{obs}$ )

$$\frac{3.8625}{50}$$

50

$$\bar{D}_{obs} = \underline{0.07725}$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{1299}}$$

$$C = .504$$

$$\bar{D}_{ran} = .504 \sqrt{\frac{38}{1299}}$$

$$= 0.0862$$

$$= 0.086$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$$= \frac{0.07725}{0.086}$$

$$= 0.898$$

$$R_n = .898$$

$$= .9$$

Test for significance

$$\sigma_{ran} = V \cdot \bar{D}_{ran}$$

$$V = 0.0098 + 0.4701 \left( C \sqrt{\frac{4}{n}} \right)$$

$$V = 0.0098 + 0.4701 \left( .504 \sqrt{\frac{4}{1299}} \right)$$

$$V = 0.0229$$

$$\sigma_{ran} = 0.0229 \times 0.086$$

$$= 0.0019$$

2. Z score =  $\frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$

$$= \frac{0.07725 - 0.0862}{0.0019}$$

$$= -4.71$$

$$= -4.71$$

There is a significant difference between settlements other than the designated centres in Gikondi location and a random point pattern

O T H A Y A

	Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km	
1	2134	2131	2.5	0.0625	26
2	0567	0566	2	0.05	27
3	0551	0552	2	0.05	28
4	1261	1262	3.5	0.0875	29
5	1267	1266	2	0.05	30
6	0275	0269	3.5	0.0875	31
7	1694	1695	3	0.0875	32
8	0981	0982	2	0.05	33
9	1617	1616	2.5	0.0625	34
10	1446	1447	2.5	0.0625	35
11	2415	2414	2.5	0.0625	36
12	1339	1340	5	0.125	37
13	0161	0162	3	0.0875	38
14	2047	2044	2	0.05	39
15	1586	1587	2	0.05	40
16	2121	2120	2	0.05	41
17	3030	3029	2.5	0.0625	42
18	0291	0292	2	0.05	43
19	0758	0757	4	0.1	44
20	2452	2448	1.5	0.0375	45
21	0640	0638	2.5	0.0625	46
22	2536	2535	1	0.025	47
23	2982	2981	2	0.05	48
24	2194	2193	1	0.025	49
25	1975	1974	2	0.05	50

Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
1838	1839	3	0.0875
1301	1304	1	0.025
1770	1771	1.5	0.0375
0172	0163	6	0.15
0405	0407	2	0.05
0774	0777	4.5	0.1125
0831	0832	2	0.05
2489	2488	2	0.05
3322	3323	1.5	0.0375
2713	2712	1.5	0.0375
0341	0340	3	0.0875
3075	3076	2	0.05
1094	1093	1	0.025
3036	3037	1.5	0.0375
0671	0666	4	0.1
1015	1010	3	0.0875
1983	1985	1.5	0.0375
1222	1223	1.5	0.0375
3069	3071	2	0.05
3244	3245	2.5	0.0625
2373	2376	1.5	0.0375
2926	2927	6	0.15
0920	0921	1.5	0.0375
1378	1377	2	0.05
0182	0181	5.5	0.1375

OTHAYA

(1) Calculating the Rn value

a) Nearest neighbour mean distance ( $\bar{D}_{obs}$ )

$$= \frac{3.1}{50}$$

$$50$$

$$\bar{D}_{obs} = \underline{0.062}$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{3323}}$$

$$C = .5014$$

$$\bar{D}_{ran} = .5014 \sqrt{\frac{79}{3323}}$$

$$= 0.0773$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$$= \frac{0.062}{0.0773}$$

$$= 0.802$$

(ii) Significance testing

$$\sigma_{ran} = V \cdot \bar{D}_{ran}$$

$$V = 0.0098 + 0.4701 \left( .5014 \sqrt{\frac{4}{3323}} \right)$$

$$= 0.0179$$

$$\sigma_{ran} = 0.0179 \times 0.0773$$

$$= 0.00138$$

$$Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$$

$$= \frac{0.062 - 0.0773}{0.00138}$$

$$= -11.086$$

$$= -11.09$$

There is a significant difference between settlements other than the designated centres in Othaya location and a random point pattern

	Random Points	Nearest Neighbour	N.N.D. mm
1	0567	0566	2
2	0551	0550	3.5
3	1261	1262	2
4	1267	1268	4.5
5	0275	0274	3.5
6	1694	1693	4
7	0981	0980	2
8	1617	1616	2
9	1446	1445	1.5
10	1339	1338	2
11	0161	0160	2.5
12	1586	1587	2.5
13	0291	0296	2
14	0758	0757	1.5
15	0640	0638	2.5
16	1301	1302	2
17	1770	1769	2
18	0172	0173	3.5
19	0404	0404	2.5
20	0774	0773	2
21	0831	0832	3.5
22	0341	1051	4
23	1094	1093	2
24	0671	0672	1.5
25	1015	1016	1.5

H I N G A

<u>N.N.D.</u> <u>km</u>		<u>Random</u> <u>Points</u>	<u>Nearest</u> <u>Neighbour</u>	<u>N.N.D.</u> <u>mm</u>	<u>N.N.D.</u> <u>km</u>
0.05	26	1222	1221	1.5	0.0375
0.0875	27	1378	1413	1.5	0.0375
0.05	28	0182	0183	2	0.05
0.1125	29	0506	0505	5	0.125
0.0875	30	0435	0436	5.5	0.1375
0.1	31	1606	1605	2	0.05
0.05	32	1380	1381	1	0.025
0.05	33	0881	0880	2	0.05
0.0375	34	1419	1418	2	0.05
0.05	35	0783	0784	1	0.025
0.0625	36	0443	0442	1.5	0.0375
0.0625	37	0307	0306	1.5	0.0375
0.05	38	0842	0843	2	0.05
0.0375	39	0462	0463	5	0.125
0.0625	40	0806	0807	2.5	0.0625
0.05	41	1402	1401	1	0.025
0.05	42	0206	0205	3	0.075
0.0875	43	1212	1211	4	0.1
0.0625	44	0234	0236	2.5	0.0625
0.05	45	1216	1215	3	0.075
0.0875	46	1255	1253	2	0.05
0.1	47	1567	1568	2	0.05
0.05	48	1415	1417	1.5	0.0375
0.0375	49	0308	0309	3.5	0.0875
0.0375	50	0648	0647	2.5	0.0625

CHINGA

(i) Calculating the Rn value

a) Nearest neighbour mean distance ( $\bar{D}_{obs}$ )

$$= \frac{\text{Total no. of Km}}{\text{No. of pts.}} = \frac{3.0875}{50}$$

$$\bar{D}_{obs} = 0.06175$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{n}}$$

$$a = 51 \text{ Km}^2$$

$$n = 1774$$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{1774}}$$

$$C = .5030$$

$$\begin{aligned} \bar{D}_{ran} &= .503 \sqrt{\frac{51}{1774}} \\ &= .0852 \end{aligned}$$

$$c) R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}} = \frac{0.06175}{0.0852}$$

$$\underline{R_n = .725}$$

(ii) Significance testing

$$v_{ran} = V. \bar{d}_{ran}$$

$$V = 0.0098 + 0.4701 (C \sqrt{\frac{4}{n}})$$

$$V = 0.0098 + 0.4701 (.503 \sqrt{\frac{4}{1774}})$$

$$V = 0.021$$

$$v_{ran} = V. \bar{d}_{ran}$$

$$= 0.021 \times 0.0852$$

$$= 0.00179$$

$$2. Z - \text{Score} = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{v_{ran}}$$

$$= \frac{0.06175 - 0.0852}{0.00179}$$

$$= -13.1$$

There is a significant difference between settlements other than the designated centres in Chinga location and a random point pattern.

N W E I G A

	Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km	
1	0567	0565	4	0.2	26
2	0551	0550	4	0.2	27
3	0275	1060	2	0.1	28
4	0981	0958	3	0.15	29
5	0161	0170	3	0.15	30
6	0291	0282	2	0.1	31
7	0758	0757	4.5	0.225	32
8	0640	0639	1	0.05	33
9	0172	0171	2.5	0.125	34
10	0405	0406	3	0.15	35
11	0774	0747	2.5	0.125	36
12	0831	0830	2.5	0.125	37
13	0341	0342	2	0.1	38
14	0671	0670	3	0.15	39
15	1015	1016	1	0.05	40
16	0920	0921	1	0.05	41
17	0182	0176	3.5	0.175	42
18	0506	0507	2	0.1	43
19	0435	0433	1	0.05	44
20	0861	0860	2	0.1	45
21	0783	0782	2	0.1	46
22	0443	0442	4	0.2	47
23	0307	0306	6.5	0.325	48
24	0842	0889	3	0.15	49
25	0462	0461	4	0.2	50



Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
0806	0807	1	0.05
0206	0207	3.5	0.175
0234	0256	4	0.2
0308	0304	1	0.05
1059	1058	3	0.15
0701	0700	1	0.05
0226	0200	19.5	0.975
0124	0125	2.5	0.125
0952	0953	2.5	0.125
0615	0277	0.5	0.05
0149	9148	2.5	0.125
0436	0550	4	0.2
0762	0761	1.5	0.075
0931	0932	2.5	0.125
0402	0443	6.5	0.325
1002	1002	1	0.05
0063	0064	1	0.05
0954	0953	4.5	0.225
0418	0282	0.5	0.025
0257	0258	4	0.2
0427	0428	2	0.1
0075	0074	1	0.05
0477	0476	3.5	0.175
0724	0726	5	0.25
0304	0303	3	0.15

MWEIGA

(i) Calculating the Rn value

a) Nearest neighbour mean distance ( $\bar{D}_{obs}$ )

$$\frac{7.5}{50}$$

$$50$$

$$\bar{D}_{obs} = 0.15$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{n}}$$

$$C = 0.497 + 0.127 \times \sqrt{\frac{4}{1060}}$$

$$C = .5048$$

$$\bar{D}_{ran} = .5048 \sqrt{\frac{291}{1060}}$$

$$= 0.264$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$$= \frac{0.15}{0.264}$$

$$= 0.568$$

1. Test for Significance

$$\sigma_{ran} = V \cdot \bar{D}_{ran}$$

$$V = 0.0098 + 0.4701 (C \sqrt{\frac{4}{n}})$$

$$V = 0.0098 + 0.4701 (.5048 \sqrt{\frac{4}{1060}})$$

$$V = 0.0243$$

$$\sigma_{ran} = 0.0243 \times 0.264$$

$$= 0.0064$$

2.  $Z = \frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$

$$= \frac{0.15 - 0.264}{0.0064}$$

$$= -17.8$$

There is a significant difference between settlements other than the designated centres in Mweiga location and a random point pattern.

NAROMORU

	Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
1	213	205	7	0.35
2	723	722	8	0.2
3	444	443	5.5	0.1375
4	532	533	2.5	0.0625
5	597	598	2.5	0.0625
6	370	369	4.5	0.1125
7	433	432	6.5	0.1625
8	349	350	3	0.075
9	454	452	6	0.15
10	056	058	1	0.05
11	429	430	3	0.075
12	055	056	1	0.05
13	126	121	1	0.05
14	298	299	4.5	0.1125
15	368	369	7	0.175
16	346	344	5	0.125
17	027	026	2	0.1
18	428	427	2.5	0.0625
19	169	170	2	0.1
20	098	097	1	0.05
21	486	485	4	0.1
22	592	593	4	0.1
23	615	614	2	0.05
24	743	730	1.5	0.0375
25	714	715	1.3	0.325

Random Points	Nearest Neighbour	N.N.D. mm	N.N.D. km
------------------	----------------------	--------------	--------------

26	161	162	1.5	0.075
27	144	143	1	0.05
28	241	240	1.5	0.0375
29	500	499	4	0.1
30	354	353	6	0.15
31	662	663	5.5	0.1375
32	133	135	1	0.05
33	016	015	0.5	0.025
34	448	447	6	0.15
35	747	739	1	0.025
36	204	203	0.5	0.025
37	158	159	0.05	0.025
38	347	346	5	0.125
39	737	745	1.5	0.0375
40	212	206	1	0.05
41	303	304	1.5	0.0375
42	219	216	1	0.05
43	029	028	0.5	0.025
44	742	741	1.5	0.0375
45	533	532	2.5	0.0625
46	075	076	1	0.05
47	245	244	2.5	0.0625
48	064	063	1	0.05
49	253	251	0.5	0.0125
50	756	757	7	0.175

NAROMORU

(i) Calculating the Rn value

a) Nearest neighbour distance ( $\bar{D}_{obs}$ )

$$\frac{4.5}{50}$$

$$\bar{D}_{obs} = 0.09$$

b) Expected mean distance ( $\bar{D}_{ran}$ ) =  $C \sqrt{\frac{a}{n}}$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{n}}$$

$$C = 0.497 + 0.127 \sqrt{\frac{4}{799}}$$

$$C = .5059$$

$$\begin{aligned} \bar{D}_{ran} &= .5059 \sqrt{\frac{227}{799}} \\ &= .269 \end{aligned}$$

c)  $R_n = \frac{\bar{D}_{obs}}{\bar{D}_{ran}}$

$$= \frac{.09}{.269}$$

$$R_n = .3345$$

$$R_n = 0.335$$

(ii) Test for significance

1.  $\sigma_{ran} = V \cdot \bar{D}_{ran}$

$$V = 0.0098 + .4701 \left( C \sqrt{\frac{4}{n}} \right)$$

$$V = 0.0098 + .4701 \left( .5059 \sqrt{\frac{4}{799}} \right)$$

$$V = 0.0266$$

$$\sigma_{ran} = 0.0266 \times .269$$

$$\sigma_{ran} = 0.0071$$

2. Z-score

$$\frac{\bar{D}_{obs} - \bar{D}_{ran}}{\sigma_{ran}}$$

$$= \frac{0.09 - .269}{.0071}$$

$$= -25.2$$

There is a significant difference between settlements other than the designated centres in Naromoru location and a random point pattern.

APPENDIX 10

FACTORS EXPLAINING THE EXISTENCE OF ISOLATED  
HOMESTEADS IN EACH OF THE SAMPLED LOCATIONS

FACTORS	OTHAYA		CHINGA		GIKONDI		MUHITO		TETU		RUGURU		KIRIMU KUYU		AGUTHI		MWEIGA		NAROMO RU		TOTAL LOCATI- ONS	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
<b>1. NATURAL CONDITIONS</b>																						
a) Rugged surface relief	13	25	24	75	12	60	27	56	16	53	18	42	7	18	45	66	11	42	12	52	185	48.
b) Good soil	36	68	26	81	18	91	24	50	17	57	30	70	32	80	44	65	11	42	13	57	251	66
c) Easily available water	30	57	31	97	19	95	21	44	17	57	27	63	33	83	37	54	10	38	10	43	235	61
d) Other natural conditions	5	9	-	-	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	7	2
e) Total																						
<b>2. ECONOMIC CONDITIONS</b>																						
a) People living in their own land	50	94	32	100	20	100	42	88	26	87	30	70	33	83	55	81	22	85	22	96	332	87
b) Respondent's farm size																						
(i) 0.1 - 1 acre	6	11	-	-	4	20	5	10	5	17	10	23	2	5	4	6	1	4	-	-	37	10
(ii) 1.1 - 4 acres	21	40	21	66	7	35	22	46	7	23	11	26	18	45	30	44	4	15	3	13	127	33
(iii) 4.1 - 10 acres	17	32	9	28	8	40	12	25	11	37	11	26	12	39	21	31	7	27	6	26	114	30
(iv) Over 10 acres	4	8	2	6	1	5	1	2	3	10	6	14	-	-	9	13	10	38	14	61	50	13
(v) Acreage not given	5	9	-	-	-	-	8	17	4	13	5	12	8	20	4	6	4	15	-	-	38	10
c) Common land tenure	6	11	-	-	1	5	1	2	-	-	-	-	3	8	1	1	1	4	-	-	13	3.
d) Ring-fenced land-holding	42	79	32	91	19	95	35	73	22	73	37	86	31	78	59	87	15	58	19	83	311	81
e) Other economic factors	4	8	1	3	1	5	-	-	-	-	3	7	-	-	-	-	-	-	-	-	8	2
f) Total																						
<b>3. SOCIAL CONDITIONS</b>																						
a) Original tendencies of the Kikuyus	11	21	22	69	10	50	3	6	4	13	20	47	11	28	25	37	4	15	6	26	116	30
b) Conditions of security	7	13	22	69	17	85	1	2	5	17	6	14	2	5	33	49	1	4	6	26	283	74
c) Population Pressure	9	17	20	63	11	55	10	2	10	33	12	28	4	10	29	43	2	8	15	65	122	32
d) Social organisation	8	15	28	88	11	55	5	10	5	17	14	33	16	40	41	60	6	23	17	74	151	39
e) Other social conditions	5	9	2	6	2	10	22	46	-	-	4	9	2	5	-	-	-	-	-	-	36	9
f) Total																						
<b>4. ADVANTAGES OF VARIOUS INTRUSIVE FACTORS</b>																						
a) Roads	32	60	29	91	19	95	33	63	13	43	28	65	31	78	48	71	22	85	13	57	265	69
b) Markets	22	42	31	97	16	80	16	33	12	40	23	53	14	35	21	31	22	85	7	30	184	48
c) Missionaries	15	28	31	97	14	70	14	29	8	27	14	33	7	18	18	26	16	62	13	57	152	40
d) Administration	7	13	21	91	17	85	16	33	11	37	9	21	7	18	13	19	16	62	12	53	137	36









FACTORS EXPLAINING THE EXISTENCE OF VILLAGES  
IN ALL THE SAMPLED LOCATIONS

FACTORS	,OTHAYA		CHINGA		GIKONDI		MUHITO		TETU		RUGURU		KIRIMU KUYU		AGUTHI		MWEIGA		NAROMO RU		TOTAL LOCAT- IONS	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
<b>1. NATURAL CONDITIONS</b>																						
a) Rugged surface relief	-	-	-	-	1	100	-	-	4	31	7	41	1	14	6	55	11	32	4	36	34	33
b) Good soil	-	-	-	-	-	-	-	-	5	38	10	59	7	100	8	73	14	41	9	82	53	52
c) Easily available water	-	-	-	-	-	-	-	-	5	38	11	65	7	100	6	55	14	41	7	64	50	49
d) Other natural conditions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e) Total																						
<b>2. ECONOMIC CONDITIONS</b>																						
a) People living in their own land	-	-	-	-	-	-	1	33	3	23	2	12	1	14	-	-	21	62	-	-	28	27
b) Respondent's Farm size																						
(i) 0.1 - 1 acre	1	33	1	50	1	100	-	-	5	38	15	88	2	29	8	73	7	21	10	91	50	49
(ii) 1.1 - 4 acres	-	-	-	-	-	-	1	33	-	-	-	-	-	-	-	-	5	15	-	-	5	5
(iii) 4.1 - 10 acres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	18	-	-	6	6
(iv) Over 10 acres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	1	1
(v) Acreage not given	2	66	1	50	-	-	2	67	8	62	2	12	5	71	2	27	15	44	1	9	39	38
c) Common land tenure	3	100	-	-	-	-	-	-	2	15	-	-	1	14	-	-	10	29	-	-	16	16
d) Ring-fenced land-holding	-	-	-	-	-	-	1	33	2	15	9	53	-	-	2	18	9	26	-	-	23	23
e) Other economic factors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f) Total																						
<b>3. SOCIAL CONDITIONS</b>																						
a) Original tendencies of the Kikuyus	-	-	1	50	-	-	1	33	4	31	-	-	-	-	3	27	-	-	-	-	8	8
b) Conditions of security	1	33	-	-	1	100	2	67	3	23	5	29	3	43	3	27	8	24	4	36	72	71
c) Population Pressure	-	-	-	-	-	-	1	33	5	38	15	88	4	57	6	55	19	56	8	73	54	53
d) Social organisation	1	33	-	-	1	100	2	67	5	38	13	76	5	71	5	45	12	35	10	91	54	53
e) Other social conditions	-	-	-	-	-	-	-	-	-	-	3	18	-	-	-	-	-	-	-	-	3	3
f) Total																						
<b>4. ADVANTAGES OF VARIOUS INTRUSIVE FACTORS</b>																						
a) Roads	3	100	2	100	1	100	1	33	4	31	9	53	6	36	9	82	19	56	4	36	58	57
b) Markets	2	67	2	100	1	100	1	33	5	38	9	53	5	71	5	45	20	59	4	36	54	53
c) Missionaries	-	-	2	100	1	100	-	-	3	23	-	-	6	86	7	64	7	21	7	64	33	32
d) Administration	2	67	2	100	1	100	1	33	3	23	4	24	1	14	3	27	7	21	6	55	30	29



APPENDIX 13

FACTORS EXPLAINING THE EXISTENCE OF ALL SETTLEMENT  
TYPES IN THE SAMPLED LOCATIONS

FACTORS	OTHAYA		CHINGA		GIKONDI		MUHITO		TETU		RUGURU		KIRIMU KUYU		AGUTHI		MWEIGA		NAROMO RU		TOTAL LOCAT- IONS	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
<b>1. NATURAL CONDITIONS</b>																						
a) Rugged relief	19	26	24	69	22	58	29	48	28	47	28	41	9	14	58	64	28	38	16	44	261	44
b) Good soil	40	54	27	77	29	79	29	48	30	51	45	66	54	83	59	66	32	44	23	64	368	61
c) Easily available water	34	46	32	91	30	79	25	41	30	51	45	66	53	82	51	57	30	41	18	50	348	58
d) Other natural conditions	7	9	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	13	2
e) Total																						
<b>2. ECONOMIC CONDITIONS</b>																						
a) People living on their own land	65	88	33	94	36	95	51	84	40	68	38	56	49	75	63	70	54	74	22	61	451	75
b) Respondent's farm size																						
(i) 0.1 - 1 acre	9	12	1	3	7	18	7	11	17	29	27	40	5	8	12	13	9	12	11	31	101	17
(ii) 1.1 - 4 acres	27	36	21	60	14	37	27	44	13	22	12	18	30	46	36	40	9	12	3	8	176	29
(iii) 4.1 - 10 acres	22	30	9	26	12	32	14	23	31	5	14	21	13	20	21	23	19	26	6	17	143	24
(iv) Over 10 acres	5	7	3	9	1	3	1	2	13	22	7	10	-	-	10	11	14	19	44	39	58	10
(v) Acreage not given	8	11	1	3	1	3	12	20	8	14	8	12	17	26	11	12	22	30	2	6	101	17
c) Common land tenure	10	14	-	-	4	11	3	5	32	54	1	1	6	9	2	2	16	22	1	3	51	9
d) Ring-fenced land-holding	54	73	33	94	34	89	38	62	-	-	52	76	44	68	66	73	31	42	19	53	403	67
e) Other economic factors	10	14	1	3	1	3	7	11	-	-	3	4	1	2	-	-	-	-	-	-	22	4
f) Total																						
<b>3. SOCIAL CONDITIONS</b>																						
a) Original tendencies of the Kikuyus	17	23	23	66	14	37	5	8	11	19	23	34	17	26	32	36	7	10	6	17	154	26
b) Conditions of security	9	12	23	66	23	63	3	5	10	17	14	21	6	9	10	44	11	15	10	28	449	75
c) Population Pressure	14	19	21	60	23	61	14	23	18	31	29	43	14	22	39	43	25	34	23	64	215	36
d) Social organisation	14	19	29	83	22	58	7	11	12	20	29	43	26	40	53	59	23	32	29	81	254	42
e) Other social conditions	6	8	2	6	2	5	25	41	-	-	8	12	2	3	-	-	-	-	-	-	49	8
f) Total																						
<b>4. ADVANTAGES OF VARIOUS INTRUSIVE FACTORS</b>																						
a) Roads	45	61	32	91	32	84	37	61	21	36	45	66	53	82	64	71	52	71	17	47	398	66
b) Markets	31	42	33	91	26	66	19	31	26	44	40	59	27	42	29	32	54	74	12	33	296	50



THE ROLE OF ADMINISTRATORS  
IN THE PRIMARY SCHOOLS OF  
THE CENTRAL DIVISION OF  
MACHAKOS DISTRICT, KENYA.

A THESIS  
PRESENTED TO  
THE FACULTY OF EDUCATION  
UNIVERSITY OF NAIROBI

IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS OF THE DEGREE OF  
MASTER OF EDUCATION

BY

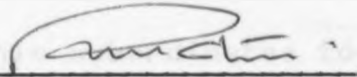
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APRIL 1977



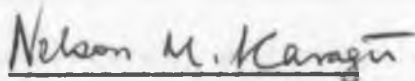
## DECLARATION

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



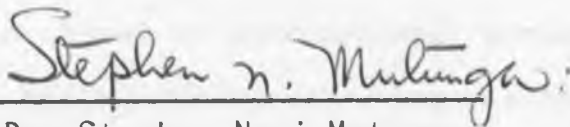
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## THESIS ABSTRACT, UNIVERSITY OF NAIROBI, 1977

For a professional organisation to attain its declared objectives, its leader has to have a clear perception of the professional and administrative requirements of the organisation. The personality of the leader also determines his effectiveness in stimulating his subordinates to attain the common goals of the organisation.

The Administrator in the Primary School directs, manages and controls all the activities of the school. His role has not, however, been clearly defined. Perception of the role, by the role incumbents, their superiors and subordinates has been used in this study to establish a basis for understanding of the role.

The purpose of this study was (A) to find out:

1. The aspects of personal characteristics, professional activities, and administrative responsibilities of the ideal Administrator in the Primary School perceived as (a) important and (b) unimportant by teachers, Education Officers and Administrators in the Primary Schools.

2. The effect of professional grades, sex and position in the hierarchy of primary school administration on perception of the role.

(B) Lay a foundation for further studies in:

1. Perception of the role of Administrators in the Primary Schools by members of school committees,



parents, and teachers and administrators with varying lengths of service in the teaching profession.

2. Teaching effectiveness of teachers serving under Administrators in the Primary Schools who have different administrative and professional tendencies and personal characteristics.

3. The personality characteristics administrative and professional practices which contribute to effective leadership.

The study may also help the body that employs teachers in Kenya to design reliable and valid criteria for the selection of Administrators in the Primary Schools. It may also serve as a useful guide for Education Officers in designing suitable in-service courses for Administrators in the Primary Schools. Lastly, findings of this study will improve perception of the role by Administrators in the Primary Schools, their superiors and subordinates and in so doing contribute to effective administration of the primary schools.

All the grades of trained primary school teachers in the central division of Machakos district could not be included in the study. Teachers of the  $S_1$  and  $P_4$  professional teaching grades were omitted in the study because their numbers in the target population were too small to make their proportionate sampling feasible.

A questionnaire designed from results of a preliminary study was used for the main study. The questionnaire was pretested in the Kaiti division of Machakos district. The subjects ranked items in three sections of the questionnaire. The items listed under the three sections were categorised into personal characteristics, professional activities and administrative responsibilities of the ideal Administrator in the Primary School.

Variables found likely to interfere with results of the study were identified as; chronological age and number of years individual respondents had worked in the Ministry of Education and location of schools within or outside the Machakos Township boundaries. These were controlled by means of proportionate random sampling of each category of respondents.

In the analysis of data, mean scores for particular items and groups of respondents, were obtained by adding all the ranks of a particular item for a given group and dividing the sum total by the number of respondents in the group. These mean scores were used for ranking the items in order of their importance as perceived by the group.

The Spearman's rank-order test of co-relationship was used to compare the ranking of items by different groups of respondents. The relationship between rank

orders for items in particular sections of the questionnaire and between groups of subjects was further examined by means of the t-test. The Chi-Square test of relationship was used for ranking orders of particular items between paired groups of respondents. It is this test that revealed striking differences, between paired groups of respondents, in their perception of particular aspects of the role of the Administrator in the Primary School.

On the whole the Spearman's rank-order test of co-relationship showed no statistically significant differences in the perception of the role as represented by each of the three groups of items on the questionnaire, between Education Officers, Administrators in the Primary Schools and Teachers. The same was true for teachers of different professional grades and sexes. A test of relationship in the perception of particular items in the questionnaire however, between different groups of respondents, revealed differences which were statistically significant.

Teachers and especially those of the  $P_3$  and  $P_2$  grades perceived the personal characteristics and administrative responsibilities related to the development of good human relationship among members of the school staffs, as most important, while the role occupants and their superiors did not.

Responsibilities of the role occupant, which did not relate directly to classroom instructions were perceived as unimportant by all groups of respondents.

The major recommendations made in the study were that:

1. The main responsibilities and personal characteristics of the Administrator in the Primary School need to be spelt out clearly by the Ministry of Education for the benefit of the role incumbents, their superiors and subordinates as well as parents. This will create ease of communication between all the groups affected by the role and facilitate efficient primary school administration.

2. Pre-service and in-service courses for prospective and incumbent holders of the post be mounted in teacher training institutions and in the schools to streamline the process of administering the primary schools.

3. The Human Relations Model of administration be adopted in primary schools to facilitate free exchange of educational ideas among teachers, between teachers and Administrators in the Primary Schools and between Administrators in the Primary Schools and Education Officers. This usually has the effect of increasing output among the people who practice it, and promoting the ability to innovate among teachers.

## ACKNOWLEDGEMENTS

The writer is deeply grateful to Mr. N.M. Karagu of the Faculty of Education, University of Nairobi for consistent advice and guidance throughout the period of research and thesis writing.

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## CHAPTER I

### INTRODUCTION.

Primary school enrolment in Kenya has risen rapidly over the last decade. By 1965, 50 per cent of the school age population were in primary schools. It was forecast that the percentage would rise to 80 by the year 1980<sup>1</sup>. In the country's 1966 - 70<sup>2</sup> and 1974 - 78<sup>3</sup> development plans the rates of population growth for the two plan periods were put at 3 and 3.5 per cent per annum respectively. These rates of population growth confirmed the inevitable rise in primary school enrolment.

The increasing rates of primary school enrolment have led to expansion of existing school facilities to cater for more pupils and employment of a larger number of teachers. These in turn mean greater responsibilities for the people who administer individual

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1 Republic of Kenya, Development Plan 1966 - 70 (Nairobi: Government Printer, 1966), p. 306.

2 Ibid. p. 53

3 Republic of Kenya, Development Plan 1974 - 78 (Nairobi: Government Printer, 1974), p. 5.

primary schools. The task of administering individual primary schools is further compounded by two important factors. One that the development of curriculum for the schools is centralised at the Kenya Institute of Education<sup>1</sup> whereas the supply of school equipment is the function of yet another centralized agency - The Schools Equipment Scheme<sup>2</sup>. This means that the Administrator in the Primary School has no direct control over the curriculum or the sources of his school supplies. He is thus relegated to the position of a middle man between the school and both the Kenya Institute of Education and the Schools Equipment Scheme.

The second factor is the quality of teachers serving under the Administrator in the Primary School. Between 1964 and 1965 the percentage of untrained teachers in Kenya primary schools rose from 30 per cent to 35 per cent<sup>3</sup>. The Administrator in the Primary School has no hand in the employment of the teachers who serve under him. Both the administrator and the teachers are employees of the Teachers' Service Commission. Thus while the administrator has no

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- 1 J.A. Lijembe, "The Role and Functions of the Kenya Institute of Education", (Nairobi: Kenya Institute of Education, 1973) p.3.
  - 2 David M. Mbiti, Foundations of School Administration, (Nairobi: Oxford University Press, 1974) p. 114.
  - 3 Republic of Kenya, Development Plan 1966 - 70 (Nairobi: Government Printer, 1966) p. 310.

control over the quality of teachers in his school he has the problem of helping both untrained and trained teachers in his school to improve their performance in teaching.

At the same time primary school education has continued to remain "largely a local responsibility" as stated in the 1966 - 70 Development Plan<sup>1</sup>. Local communities therefore bear the capital cost in the schools. Under these circumstances it becomes necessary for the Administrator in the primary school to understand, coordinate and even initiate community efforts to raise funds for the provision of the school's physical facilities. In this way the administrator becomes the bridge between his school and the local community.

The large number of expectations for the role of the Administrator in the primary school, points to a need for clear perception of the role by the Administrator in the primary school, his superiors and subordinates. However, a survey carried out by four Master of Education degree candidates, at the University of Nairobi in May 1975, revealed that there was neither a clear outline of the administrative responsibilities and professional activities for Administrators in the primary schools of

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<sup>1</sup> Ibid. p. 306.

Kenya nor a clear perception of the personal qualities expected of them<sup>1</sup>.

Beulah Raju (1971) perceived the personality of the administrator as the factor on which his leadership depended. She described an educational leader as:

... one who can guide the needy but not restrict the efficient person, who can inspire confidence, who can stimulate and guide professional study, research and co-operate efforts, who can demonstrate his ability in solving teaching problems and to whom his subordinates turn to for help, guidance and leadership. He is himself a teacher capable of aiding teachers in professional study and improvement<sup>2</sup>.

She distinguished between the professional leadership role of the school administrator from purely administrative functions which she perceived as:

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- 1 P.M. Kitui, J.G. Kaara, M. Mbithi, and M.A. Nyang'aya "History of the Development of Primary School Headship in Kenya", Department of Educational Administration and Curriculum Development, (Faculty of Education, University of Nairobi, 1975), p. 5.
  - 2 B. Raju, "The Headmaster as an Educational Leader", Journal of the Kenya Teacher (Number 12, November 1971), p. 13.

... the group of activities that:

- 1) plans a system which carries out the policies of education in providing the physical, financial and educational conditions under which educational personnel may work to best advantage;
- 2) maintains these policies in continuous effective operation;
- 3) provides channel<sup>s</sup> through which information about conditions may be promptly transmitted from the field to the central office;
- 4) provides channels through which all personnel and agencies of the school system work for continuous improvement and
- 5) furnishes leadership to both the school staff and the school management and control<sup>1</sup>.

#### Statement of the Problem

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The role of administrators in the primary schools of Kenya has not been defined. Its definition would constitute a synthesis of opinions about the role by all those affected by it. This study will establish perception of three important aspects of the role, namely, administrative responsibilities, professional activities and personal characteristics of the role occupant, by role occupants, their superiors and subordinates.

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1 Raju, Ibid.

### Purpose of the Study

The purpose of this study was two fold:

1. To find out the personal characteristics, professional activities and administrative responsibilities of the ideal Administrators in the Primary Schools of Kenya as perceived by the administrators, Education Officers and teachers.

2. To find out the relationship in perception of the role and personal characteristics of the role occupant by Administrators in the primary schools, Education Officers and teachers for three main groups of items namely, administrative responsibilities, professional activities and personal characteristics and for individual items.

### Importance of the Study

1. This study laid the foundation for further studies in:

a) Role-perception of the Administrator in the primary school. A wider range of independent variables such as membership of school committees, length of service for teachers and administrators participating in the study could be used.

b) The teaching effectiveness of teachers serving under Administrators in the primary schools with varying administrative and professional tendencies as perceived by subjects in this study.



In addition, studies of the effect of various personal characteristics of Administrators in the Primary Schools, on their styles of leadership could be designed from the results of this study.

c) Results of this study would help in the design of a study aimed at establishing the personal characteristics, administrative and professional practices which contribute to effective leadership in the primary schools.

2. The study would also help Education Officers to decide on the personal characteristics, administrative and professional tendencies they would give more weight in the selection of Administrators in the Primary Schools. If the system of selection for Administrators in the Primary Schools is to be reliable, then a valid criterion for it has to be worked out. The results of this enquiry were to serve as a guide in devising such a criterion.

3. Teacher trainers and those charged with the responsibility of organising courses for Administrators in the primary Schools should benefit from the findings of the study.

4. Findings of the enquiry should help to improve perception of the role among the role incumbents their superiors and subordinates. The role of the Administrator in the Primary School was seen as crucial to the achievement of the goals of the primary school.

### Basic Assumptions

1. Teachers of the P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> grades perceive the role and personal characteristics of the ideal Administrator in the Primary School differently because of their differences in professional qualifications.

2. Administrators in the Primary Schools performed administrative and professional tasks similar to those of Education Officers and would therefore perceive the role and personal characteristics of the ideal Administrator in the Primary School in the same way.

3. Female teachers tend to pay more attention to particular minor personal characteristics, administrative and professional responsibilities of the administrator while male teachers would concern themselves with the more crucial aspects of the role and personal characteristics of the ideal Administrator in the Primary School. Thus perception of the role and personal characteristics of the administrator by female teachers would be different from that of male teachers.

4. Teachers of the same professional grade perceive the role and personal characteristics of the administrator in the same way.

5. The role and personal characteristics of the ideal Administrator in the Primary School had not been made known to either the teachers, Administrators in the Primary Schools and Education Officers. Their perception by each of the three groups of items will therefore be influenced only

by the relative positions of members of the groups in the hierarchy of education, sex, and professional grades in the case of teacher respondents.

6. The role incumbents know more about the administrative, professional and personality requirements of the role than would the teachers. Their perception of these aspects of the role would therefore be different from that of the teachers.

#### Definition of Terms

Administrator in the primary school: referred to the primary school headmaster who, although a teacher by profession, concentrates mainly on the general administration of the primary school. The same is also true of the deputy primary school headmaster who deputises for the headmaster when the latter is away from the school. The deputy headmaster also shares most of the administrative responsibilities of the school with the headmaster.

Legal notice number 106 of 1968 put the teaching establishment in the primary schools of Kenya at one teacher per class excluding the headmaster<sup>1</sup>. The notice was published in recognition of the fact that the headmaster was mainly pre-occupied with the tasks of supervision of educational instructions in the primary school, placing

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1 Republic of Kenya, "The Education Act 1968," No. 5 of 1968, (Nairobi: Government Printer, 1968), p. 25.

orders for school equipment and supplies, supervising the repair and maintenance of the school plant, co-ordinating educational activities in the school, setting goals for the school and planning for the achievement of these goals. These tasks were mainly administrative in nature and were different from those of the classroom teacher. For this reason the primary school headmaster was viewed as the Administrator in the Primary School.

The word 'ideal' has been used to describe the responsibilities and personal characteristics of the Administrator in the Primary School which to the individual respondents represent what is perfect among the alternatives (statements) given in the tool used for the study.

Education Officer: Referred to an official of the Ministry of Education charged with the responsibilities of either supervising the work of teachers and Administrators in the Primary Schools within a particular part of a district, or in the whole district; or a person who administered primary education in general in either a part of a district or in the whole district. The Education Officers are employees of the Public Service Commission while teachers and Administrators in the Primary Schools are employees of the Teachers' Service Commission. Education Officers who are civil servants, have a more direct access to information on Government policy on education in the country, than teachers and Administrators in the

Primary Schools, who are not civil servants.

Trained Teachers: Included those who had gone through either pre-service or in-service training successfully to attain professional qualifications for teaching in the primary schools. Teachers who received such training after completing primary school education successfully were graded as Primary Three (P<sub>3</sub>). Those who trained after completing either two years secondary education and passing the Kenya Junior Secondary Examination or four years of secondary education and passing the East African Certificate of Education examination with a division four were graded as Primary Two (P<sub>2</sub>). The Primary One (P<sub>1</sub>) professional qualification was awarded to those who trained successfully for teaching, after passing the East African Certificate of Education examination with either a division three, two or one at the end of a four-year secondary education.

After obtaining the teaching qualifications, teachers who passed higher academic examinations were promoted to the next professional grades by the Teachers' Service Commission. A small number of teachers were promoted to the next professional grades on the basis of their performance in classroom teaching.

Role: Referred to the expected behaviour for the Administrator in the Primary School. The behaviour was determined by the tasks, duties or responsibilities

the administrator was expected to perform by the Ministry of Education, teachers, parents and pupils.

Perception: Was used to refer to the day-to-day sensory experience with the administrative responsibilities, professional activities and personal characteristics of the Administrator in the Primary School that led teachers to arrange in order of importance various aspects of the role and personal characteristics of the administrator.

Administrative Responsibilities: Were the administrative activities undertaken by managements in practically all organisations. These included supervision and personnel management, decision-making and planning, co-ordination of organizational activities, management of funds and facilities, and development of good working relations with the community an organization serves.

Professional Activities: Referred to the administrators behaviour that aimed at improving the quality of instructions at his school. This behaviour included setting a good example in teaching, interpreting and reviewing school programs of instruction, giving in-service courses to teachers in his school, setting high standards for pupils educational performance and involving parents and teachers in contributing suggestions on methods and means of improving the quality of instructions and life in the school.

Personal Characteristics: Were those attributes of the Administrator in the Primary School which influenced the execution of his administrative and professional duties.

District: Referred to the administrative area under a District Commissioner, who is a public administrator.

Division: Was used to refer to an area within a district where all the schools in the area were administered by an Education Officer of the Assistant Education Officer designation.

#### Limitations of the Study

Nearly half of the primary school teachers in the central division of Machakos district were untrained at the time of the study. Their terms of service were temporary while their levels of academic achievement varied. This group of teachers was not included in the study because of the temporary nature of terms of service for its members.

Trained teachers of the Secondary One ( $S_1$ ) and Primary Four ( $P_4$ ) grades were represented in relatively small numbers within the central division. They were excluded from the study because their small numbers would complicate the sampling of proportionate numbers of trained teachers in the population.

### Design of the Study

Instrument: A preliminary study was done in the low-cost primary schools in the city of Nairobi. These are the schools classified under schedule A by the City Council<sup>1</sup>. The fees paid in these schools total Kshs. 60 per child per year while in schedule B and C schools the fees are Kshs. 182, and Kshs. 579 respectively per child per year. Schedule A schools admit far more pupils than schedule B and C schools. The majority of teachers in schedule A schools are of the low professional grades namely P<sub>3</sub> and P<sub>2</sub>, while in schedule B and C schools the majority of teachers have either a P<sub>1</sub> professional qualification or higher.

Open-ended questions on the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School, were answered by teachers, and administrators in those primary schools. Education Officers at the City Education Office, and the primary schools section of the Ministry of Education in Nairobi also answered the open-ended questions shown in the appendix.

Responses to the open ended questions were summarised and used in designing a questionnaire for the final study. The questionnaire was pretested

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1 City Council of Nairobi, Annual Report of the City Education Department, (Nairobi: County Hall, 1972), pp. 61 - 62.



in eight primary schools in the Kaiti educational division of Machakos district. It was divided into three sections: section A carried thirteen items on personal characteristics of the ideal Administrator in the Primary School while sections B and C carried twelve items each on the professional activities and administrative responsibilities of the ideal administrator respectively. In the questionnaire the phrase 'a good headteacher in the primary school' was substituted for the 'ideal Administrator in the Primary School' as the latter phrase would be unfamiliar to the respondents.

The subjects were asked to rank all the items in each of the sections (A, B, C) in order of their importance. The task for the respondents was explained in the introduction of the questionnaire.

Population: The target population in this study consisted of all Education Officers in Machakos district, Administrators in the Primary Schools of the Central Division of Machakos district and both male and female teachers of the P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> professional grades in the Central Division of Machakos district. Each of the three categories of respondents was affected either directly or indirectly by the role of the Administrator in the Primary School.

There were seventy two primary schools in the Central Division of Machakos District at the time of the study. Seven of the schools had started functioning only three to four years back and did not have the full range of primary school classes. For this reason they were not in the category of full primary schools. The length of time within which they had been in operation was not enough to allow teachers and administrators in them to consolidate their perception of the role and personal characteristics of the ideal Administrator in the Primary School. The teachers and administrators in these schools were therefore excluded from the study.

Untrained teachers, P<sub>4</sub> teachers and S<sub>1</sub> teachers were also excluded from the study for reasons given under 'Limitations of the Study', above.

Sampling: Thirty two of the sixty five full primary schools in the Central Division were within Machakos township boundaries. The remaining thirty three full primary schools were situated outside the township boundaries. The proportions of schools within and outside the township boundaries were taken to account when drawing proportionate random and representative samples of administrators and teachers in the primary schools<sup>1</sup>.

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1 H.J. Butcher, Sampling in Educational Research, (Manchester University Press, 1965) pp. 7 - 8.

Although time would have been saved in the collection of data if a random sample of all the full primary schools was drawn for the study, it was found that due to an imbalance of trained and untrained teachers on one hand, and trained teachers of different grades and sexes within the schools on the other, it would be impossible to draw representative proportionate samples from such a group of schools. The sixty five full primary schools were therefore used to draw random and proportionate samples of each category of teachers and Administrators in the Primary Schools.

Male and female teachers of the P<sub>3</sub>, P<sub>2</sub> and P<sub>1</sub> grades were selected randomly from both the rural and urban full primary schools. It was ensured that the total number so selected, for any one category of subjects, was proportional to the other numbers in the other categories of subjects within the population.

#### Control of Variables:

The independent variables in this study were:

1. Position as teacher, Administrator in the Primary School or Education Officer.
2. Sex of teacher respondent.
3. Professional grade of teacher respondent.

These variables were tested against the dependent variable of perception of the personal characteristics, professional activities and administrative responsibilities of the ideal Administrator in the Primary School.

Other independent variables which could have interfered with the results of this study were identified as: teaching or administrative experience of respondents, chronological age of respondents, and location of school in which a particular respondent was found, that is within or outside Machakos township boundaries. These interfering variables were controlled by sampling respondents randomly and proportionately from both the rural and urban schools within the Central Division of Machakos District<sup>1</sup>.

#### Method of Analysis:

The data for Education Officers, Administrators in the Primary Schools, all the teachers, female teachers, male teachers, P<sub>1</sub> teachers, P<sub>2</sub> teachers and P<sub>3</sub> teachers was analysed separately.

For each group, all the ranks given to a particular item were added up and the total was divided by the number of respondents in the group to obtain a mean rank for the item. The mean rank for each item was treated as a score for that item. In each section the item with the least mean score was given an overall rank of one. The next least mean score in the section earned the corresponding item an overall rank of two. All items in each section were ranked from one to the last numeral for the scale of the section on the basis of relative sizes of mean scores. At the end average ranks for all the items for

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1 Colin Robson, Experiment, Design and Statistics in Psychology, (Richard Clay Ltd., 1974) p. 31.

each group of respondents were tabulated on table 3.31f in the appendix.

The Spearman's rank order coefficient of co-relationship and the t-test were used to determine relationship between the ranking orders of items of each section of the questionnaire for the following paired groups of respondents.<sup>1</sup>

1. Education Officers and Administrators in the Primary Schools.
2. Administrators in the Primary Schools and all the teachers.
3. Education Officers and all the teachers.
4. Female teachers and Male teachers.
5.  $P_1$  teachers and  $P_2$  teachers.
6.  $P_2$  teachers and  $P_3$  teachers..
7.  $P_1$  teachers and  $P_3$  teachers.

For each paired group of respondents corresponding items with a difference of two ranks or more were tested for significant difference using the Chi-Square test. A two by two table of expected values higher or lower than the median of the frequency distribution of ranks along the scale for the item was made. Expected values higher and below the median for one group were numbered a and b

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<sup>1</sup> W.W. Wyatt, Statistics for the Behavioural Sciences, (Boston: Heath and Company), pp. 193 - 216

respectively while those for the second group were numbered c and d respectively.

The Chi-square formula<sup>1</sup>:

$$\text{Chi-square} = \frac{N(ad - bc)}{(a+b)(c+d)(b+c)(a+d)} \quad \text{was used}$$

with the appropriate Yate's correction where any of the expected values in the cells of the two by two table was ten or less.

#### Hypotheses.

The following hypotheses were tested in the study:

1. Administrators in the Primary Schools, and Education Officers would show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

2. Administrators in the Primary Schools and teachers would not show agreement in the perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

3. Education Officers and teachers would not show agreement in the perception of the administrative responsibilities, professional activities, and personal characteristics of the ideal Administrator in the Primary School.

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<sup>1</sup> W.H. King, Statistics in Education, (London: McMillan and Company Ltd., 1969) pp. 105 - 108.

4. Female and male teachers would not show agreement in their perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

5.  $P_1$  and  $P_2$  teachers would not show agreement in their perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

6.  $P_1$  and  $P_3$  teachers would not show agreement in their perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

7.  $P_2$  and  $P_3$  teachers would not show agreement in their perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

#### Organisation of the Remainder of the Study

Chapter II will be a review and analysis of literature. The main issues of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School will be sought. Chapter III will give detailed information on the design of the study while Chapter IV will be a description and analysis of the study. Chapter V will discuss the main conclusions and recommendations of the study.

## CHAPTER II

## REVIEW OF LITERATURE

Introduction

The main purpose in this review of literature was to identify the main functions of a school administrator and the personal qualities of the administrator considered important for coping with those functions. The review drew from empirical research in the field of school administration, organization theories and the recorded experience of educational administrators.

In the course of reviewing the literature an attempt was made to determine the administrative responsibilities which were categorized as purely professional in nature and those which were regarded as general to the process of administration.

Review of the Literature

After carrying out a survey on the 'Nature of the Administrative Process' J.B. Sears (1950)<sup>1</sup> concluded that an administrative function derived its nature from the nature of the services it directed. Jacob W. Getzels (1968)<sup>2</sup>, however deviated from this organisation-

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1 Jesse B. Sears, The Nature of the Administrative Process, (New York: McGraw Hill, 1950), p. 623.

2 Jacob W. Getzels, Educational Administration as a Social Process: Theory, Research and Practice, (New York: Harper and Row, 1968).



centred view of administration when he postulated that the nature of the relationship between the job and the man was crucial in the functioning of an organization. Noting that current research in educational administration tended to centre on the interaction between individuals' characteristics and the role requirements. Jacob, W. Getzels (1968)<sup>1</sup> went on to suggest that the integration between personal qualities and the role requirements was probably the critical task of the administrator.

Both J.B. Sears (1950)<sup>2</sup> and J.W. Getzels (1968)<sup>3</sup> seem to belong to two different schools of thought. J.B. Sears (1950)<sup>4</sup> tends to identify himself with the Classical Organization Theory - the Bureaucratic Model of Organization. The theory which was propounded by Max Weber (1947)<sup>5</sup> placed greater value on organizational efficiency, institutionalised authority and impersonal relationships in organizations. It relegated man to the position of an irrational animal which is mostly emotional. According to it man was to be controlled by

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1 Jacob W. Getzels, Ibid.

2 Jesse B. Sears, op. cit.

3 Jacob W. Getzels, op. cit.

4 Jesse B. Sears, op. cit.

5 Max Weber, The Theory of Social and Economic Organizations, (New York: Oxford University Press, 1947).

the specific demands of his organization.

Getzel's ideas seemed to have been based on the Neo Classical Organization Theory - a Human Relations Model of Organization. This theory places greater emphasis on the motivations and aspirations of men in the organizational enterprise and directs managements to focus upon formal and informal relationships in their mobilization of resources according to K.V. Feyereisen (1970)<sup>1</sup>. The Neo Classical Theory of Organization seems to lead automatically to the Modern Organization Theory and Systems' Strategies. The latter theory concerns itself with a) problems of interrelationships and the integration of activity within the organization b) the relationship and responsibility of the organization to its environment c) the search for an integrated systematic model d) the benefit of multidisciplinary approaches e) the need for clarity in the projection of goals and purposes and f) the need for high output and high satisfaction on the part of the employee according to K.V. Feyereisen (1970)<sup>2</sup>.

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1 K.V. Feyereisen, Supervision and Curriculum Renewal, (Meredith Corporation, New York: 1970).

2 Ibid.

It was expected that in this study, perception of the role and personal qualities of the ideal Administrator in the Primary Schools would bear some close relationship to either of the three theories thereby reflecting the type of administrative structure preferred by the respondents.

Shepard (1956)<sup>1</sup> identified five key advantages of the Human Relations Model over the Bureaucratic Model of Organization: a) wide participation in decision-making rather than centralized decision-making, b) the 'face-to-face group process' rather than individuals as the basic units of the organization, c) mutual confidence rather than 'authority as the negative force in the organization' d) the 'supervisor as an agent for maintaining intra-group and inter-group communication' rather than the agent of higher authority, e) growth of members of the organization to greater responsibility rather than the external control of the members' performance of tasks.

92 If subjects in this study are inclined towards the Human Relations Model of organization they will inevitably tend to perceive personal qualities,

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1 H. Shepard "Superiors and Subordinates in Research", Journal of Business (October 1956)

administrative and professional activities related to the development and promotion of good human relations among teachers and pupils as important for the ideal Administrator in the Primary Schools. The behaviour of the administrator which leads to involvement of subordinates in decision-making, for example, will be regarded as important by respondents who favour the Human Relations Model of Organization.

L.A. Panttaja (1966)<sup>1</sup> postulated that if an administrator confined his behaviour to making decisions on the decision-making process rather than making terminal decisions for the organization, his behaviour would be more acceptable to his subordinates. His postulate was supported by H. Cabot et al (1953)<sup>2</sup> who had asserted that an administrator should give all the groups in his organization an opportunity to participate in decision-making while bearing in mind that he was answerable to higher authorities for the final decisions. Both views were in line with the Human Relations Model of Organization, and the description of administration as a 'process of solving mutual problems' by J.W. Getzels

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- 1 Leon A. Panttaja "Subordinates' Perception of the Decision-making Behaviour of their chief Administrator", Unpublished Doctoral Dissertation (University of Southern California 1966)
  - 2 Hugh Cabot and Joseph A. Khal, Human Relations, (Harvard University Press, Massachusetts 1953), Volume I p. 232.

(in Halpin 1958)<sup>1</sup>.

The first attempt to define the administrative responsibilities, professional activities and personal qualities of the ideal administrator in the Kenyan Primary Schools was made in 1971 at a conference of educational administrators from the Ministry of Education.<sup>2</sup>

The report described an Administrator in the Primary School as 'a professional man and public relations officer' and administrator of his school. It listed seven desirable personal characteristics of the administrator namely, a) knowledge of the requirements for school administration, b) professional competency and ability to advise teachers on professional matters, c) ability to supervise members of his staff, d) willingness to delegate responsibilities to teachers in his school, e) being influential, f) ability to motivate teachers at work, g) ability to cultivate good relationships between the school he leads and the Ministry of Education and h) integrity of character and a 'good example to others, especially the children'.

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1 Andrew W. Halpin (Ed.) Administrative Theory in Education, (Midwest Administrative Centre 1958), p. 188.

2 Ministry of Education, Kenya 'Primary School Headships', Report of the Education Administration Conference, (Nairobi: April 1971), pp. 98 - 99.

The list implied that apart from possessing high teaching qualifications the administrator was to have undergone some training in educational administration to be able to supervise instructions, and give administrative guidance to the teachers he delegated responsibilities to. It also implied the capacity and ability to cultivate good working relationships between himself, members of his staff, the community and especially the Ministry of Education. Integrity of character which although listed last was given the greatest emphasis among the desirable personal characteristics of the administrator implied the administrator should not only be duty conscious and efficient in his administration of the school but also of good moral character. The list was the longest compared to other lists of the administrative responsibilities and professional activities that followed it. This reflected greater concern on the personal qualities of the administrator on the part of the Ministry of Education.

Administrative responsibilities of the administrator listed in the report included decision-making, dealing with official correspondence, and accounting for the use of school finances. On the other hand supervision of instructions was listed as the sole professional responsibility of the administrator. Its major components were perceived as a) ensuring regular attendance to duties by members of staff.  
b) planning and drawing up the master timetable for

- the school in consultation with members of staff,
- c) helping newly appointed teachers to understand and adapt to the school routine.
  - d) seeing to it that teachers follow subject syllabuses faithfully,
  - e) advising both teachers and pupils on professional matters and
  - f) checking schemes of work and lesson notes made by teachers in the school.

The professional activities listed in the report thus omitted the role of active participation in the development of the curriculum for the school just as setting of goals for the school and planning for their achievement was omitted from the list of the administrative responsibilities of the administrator. This gave the impression that the responsibilities of developing the school curriculum and setting goals for the school were beyond the scope of the Administrator in the Primary School according to the officials of the Ministry of Education.

Hitherto Administrators in the Primary Schools learned their responsibilities on the job either entirely on their own or with the help of others who had acquired administrative experience on the job according to Peter J. Gachathi (1971)<sup>1</sup>. In spite of the 1971 conference recommendations, there was no sign of official job descriptions for the Administrator in the Primary

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1 Ministry of Education, Kenya 'Keynote Speech' Report of the Education Administration Conference (Nairobi: April 1971), pp. 9 - 14.

School in the Ministry of Education. Thus the administrator remained unaware of the role the Ministry expected him to play in the primary schools.

A.J. Price (1961)<sup>1</sup> and M.A Brottman (1963)<sup>2</sup>, found that the rated effectiveness of an administrator was a function of the congruence between the role and perceptions of it as held by a specified reference group. This conclusion was drawn from results of studies on interactions between administrators in schools and teachers in the schools. The studies showed that the extent of differences in the effectiveness of school administrators depended on congruity in role expectations existing between the administrator, his teaching staff, the parent group and his superiors. Significant differences in role expectations for various groups of subjects in this study could thus be viewed as affecting the effectiveness of the Administrator in the Primary School.

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1 Alfred J. Price, "A Study of the Interactions of Attitudes and Values of Elementary School Principals and their Staffs", Unpublished Doctoral Dissertation (Northwestern University, U.S.A. 1961).

2 Marvin A. Brottman "The Administrative Process and Elementary School Principals: An Empirical Test of a Concept", Administrators Notebook (11. 1-4 1963).



Neal Gross and Robert Herriot (1965)<sup>1</sup> attempted to arrive at an 'executive professional leadership score' for each of a large group of Administrators in the Primary Schools and then relate these assigned scores to such matters as morale of the teaching staff, professional behaviour of the teaching staff and the achievement of pupils. They found that higher scores were related to higher staff morale, more professional teacher behaviour and pupil success. The administrator's behaviour can and does have an effect on the operation of the school. Hence more must be known about the personal and organizational factors which contribute to the development of the leadership styles of Administrators in the Primary Schools.

Both authors found the ability of Administrators in the Primary Schools to motivate their staffs for improved performance to be highest in the administrators who:

- a) provided for their teachers' involvement in the decisions they made,
- b) 'kept interpersonal relationship on an egalitarian rather than a status basis,
- c) 'provided social support' to the staff,

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1 Neal, Gross and Robert Herriot, Staff Leadership in Public Schools: A Sociological Inquiry, (Wiley 1965) p. 247.

- d) 'provided managerial support' and
- e) supported the authority they delegated to their staff.

B. Raju (1972)<sup>1</sup> saw educational administration as the 'art and science of management applied to education'. On the basis of this assumption she classified the functions of education administration into four categories:

a) participation in interpretation of educational policy especially in programming of educational activities of the school, setting of long-term and short term goals for the school and planning for the achievement of these goals.

b) Managing personnel and resources. The personnel in a school includes both the teaching and non-teaching staff while the resources consist of school funds, equipment and supplies and the physical facilities.

c) Appraising results. This involves the evaluation of classroom teaching and the performance of teachers in all the educational activities assigned to them by the school. The curriculum used by the school is the standard measure for the performance of teachers and pupils and inevitably becomes subject to constant evaluation and renovation. This then implies that the school administrator has a duty to assess continuously the suitability of the curriculum.

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1 Beulah Raju "Concepts, Objectives and Scope of Educational Administration" The Kenya Teacher Journal (Number 14, Nairobi, December 1972).

d) working with the community to improve the quality of education offered by the school.

While supporting B. Raju's view that 'educational administration is the art and science of management applied to education'<sup>1</sup>, R.W. Mutua (1973)<sup>2</sup> described the major function of educational administration as that of ensuring:

- a) ... provision of the proper atmosphere and desirable conditions to enable the child to develop socially, morally, intellectually, ethically, creatively and physically.
- b) ... provision of the teacher, as the most immediate educational tool, of in-service training, for his professional development.

She urged a recognition of "consideration of human behaviour and human relations" as the basis for an educational administration that is in keeping with modern educational thought.

Outlining the personal qualities of a good school administrator, Richard A. Johnson et al (1967)<sup>3</sup> noted that the administrator must be a 'man of action',

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1 B. Raju, ibid.

2 R.W. Mutua, "The Concept of Educational Administration", Report of the Education Administration Conference (Nairobi: Government Printer 1973) pp. 41 - 42.

3 Richard A. Johnson, F.E. Kast and J.E. Rozenzweig, The Theory of Management of Systems, 2nd. ed. (New York: McGraw-Hill, 1967).

'realistic while holding high ideals' and 'motivated by a desire to get results'. He added that a school administrator must have a knowledge of research operations, child psychology and the ability to use new technology effectively. According to him the administrator should be able to cope with new social, political and economic forces within and outside the organization. He placed supervision of educational instructions among the important professional activities of a school administrator. Under 'supervision', he listed a) the instructional leadership tasks of curriculum design and decision-making b) giving expert advise on designs of learning experiences c) selection of instructional materials d) planning and implementation of teacher education programmes e) evaluating teaching effectiveness f) interpreting the programmes of the school system to parents and community interest groups and h) raising the morale of the school teaching staff.

On the academic and professional qualifications of a school administrator, S. Adesina (1974)<sup>1</sup> recommended a good education and a diploma or certificate in school administration. He suggested that in Nigeria, courses in school administration should include the learning

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1 Segun Adesina "Developing a Training Programme for Educational Administration in Nigeria" The Nigerian School Master Journal (1974).

units of a) administrative structure and control of the national education, b) theories of educational administration, c) staff personnel administration, d) structure and administration of school finances, e) administration of the school plant, f) community relations and g) contemporary problems in education.

In a research on the "Role Perception of Department Chairmen", R.G. Siever et al (1972)<sup>1</sup> found that agreement among the participants was high on items describing professional activities and administrative responsibilities of the department chairmen and low on personal characteristics of the chairmen. Among the items rated high by both the department chairmen and the faculty staff were:

- a) reputation for achieving goals
- b) good organization of faculty duties,
- c) personal reputation for scholarship and
- d) capacity for decisive thinking and action.

The characteristics of the chairmen which were rated low included:

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1 R.G. Siever, R.J. Loomis and C.O. Neidt 'Role Perception of Department Chairmen in Two Land Grant Universities', Journal of Educational Research volume 65 Number 9 (May, 1972), p. 405 of bound volume.

- a) being highly identified with ones own faculty.
- b) regarding oneself as first among equals in the staff.
- c) maintaining a low turnover rate among faculty and
- d) fund-raising along with other extra departmental involvement.

K.V. Feyereisen (1970)<sup>1</sup> suggested that personal qualities were less important than the ability to carry out the administrative and professional duties for the administrator. R.A. Johnson et al (1967)<sup>2</sup> however, suggested that a balance between desirable personal qualities and administrative and professional ability should be struck when selecting school administrators.

Yuda Komora (1973)<sup>3</sup> laid more emphasis on desirable personal qualities for a school administrator<sup>3</sup>. He pointed out that a good school administrator must have integrity of character, devotion to duty and high regard for truth, punctuality and industrious habits. This view was also

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- 1 K.V. Feyereisen, Supervision and Curriculum Renewal, (New York; Meredith Corporation, 1970).
  - 2 R.A. Johnson, F.E. Kast and J.E. Rozenzweig, The Theory and Management of Systems, 2nd. ed. (New York; McGraw-Hill 1967).
  - 3 Yuda Komora, 'Keynote Address to the Education Administration Conference', Report of the Education Administration Conference, (Nairobi; The Government Printer, 1973), p. 7.

supported by G.M. M'Mwirichia (1973)<sup>1</sup>, when he suggested that educational administrators should re-examine their attitudes and actions when dealing with their subordinate staff, colleagues and members of the public. Underlining the importance of self confidence and sincerity in educational administration he observed that:

Confidence in ourselves and our colleagues, sincerity in rendering our services and consideration in dealing with our customers are important if we have to create a climate where our offices are neither invaded nor avoided by the public.

The effect of role perception by the role occupant and his superiors on the relations of the two parties, was studied by Max Abbott (1960)<sup>2</sup>. He found that superintendent-school board relations in the American system of education, depended on both agreement in perception of basic issues and how each of the two parties perceived the position of the other. His findings were supported by results of an inquiry made by R. Grace (1972)<sup>3</sup>. This pointed to the need to establish

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- 1 G.R. M'Mwirichia 'Public Relations and Inter-Departmental Co-operation', Report of the Education Administration Conference, (Nairobi; The Government Printer, 1973) p. 9.
  - 2 Max G. Abbott 'Values and Value Perceptions in Superintendent - School Board Relationships' Administrators' Notebook 9: 4 (1960).
  - 3 R. Grace, Role Conflict and the Teacher (London: Routledge and Kegan Paul, 1972).

areas of agreement or disagreement on the role and personal characteristics of a school administrator between the role incumbents, their superiors and subordinates, in order to pave the way for further studies on the effects of the disagreement or agreement on the process of administering schools.

R. Grace (1972)<sup>1</sup> found that role conflict existed where there were significant differences in the ratings given for various expectations by those affected by the activities of the role occupant. He further postulated that perception of the legitimacy of expectations held for a role was crucial in the formation of role concept and the resolution of role conflict situations by an individual.

Whereas the studies of role conflict involved analysis of the functions of particular school administrators, this study aims at establishing perception of the role and personal qualities of the ideal Administrator in the Primary Schools without dwelling on the behaviour of particular role incumbents. It thus concerns itself with the degree of agreement or disagreement on the role and personal qualities of the role occupant, between those affected by the role of the Administrator in the Primary Schools.

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1 R. Grace, Ibid.



## Summary of Findings

### Conclusion

The varied descriptions of the desirable personal qualities of the ideal Administrator in the Primary School, as contained in this review of literature, indicated that the administrator should:

- a) have integrity of character and be able to provide an example of good behaviour to his pupils and members of staff. The behaviour in this case was a function of the values of the school community and the education system.
- b) be able to make firm decisions on matters of school administration and ensure that the decisions are implemented with speed and efficiency.
- c) have the ability to motivate his subordinates in their work by evoking in them a sense of co-operation, dedication to duty and hardwork. In this respect the administrator was to exploit his ability to develop good human relations between himself and those who worked under him.
- d) have the ability to plan the activities of the school.
- e) have high ideals about the expected behaviour of both teachers and pupils and at the same time be realistic.

f) the relevant training in school administration and a professional training that will enable him to supervise the work of his subordinates effectively.

and

g) have the ability to maintain good working relations with the community and the Ministry of Education.

The professional activities of the administrator highlighted in the review of literature were those revolving around the instructional activities of the school. These included supervision of instructions with all its attendant functions of developing the school curriculum, advising teachers on the designs of learning experiences for pupils, orientating newly appointed teachers in the affairs of the school, recommending teachers for in-service courses, and interpreting the system of education to parents and teachers.

The functions of the administrator which were regarded as purely administrative in nature were mainly those which were not special to school administration. These included; setting goals for the school, designing the procedure for decision-making, planning for the school development in general, looking after school funds and property, coordinating the activities of the

school, allocating resources of the school, appraising results and managing the school personnel. In some cases these administrative responsibilities were found to overlap with the professional activities of the administrator. This was thought as inevitable as the administrative machinery of the school was basically meant to service the professional activities in the school.

## CHAPTER III

## DESIGN OF THE STUDY

Preliminary Study

An open-ended questionnaire was administered to 55 trained teachers and administrators in 11 primary schools in the Eastern Division of Nairobi city. The primary schools included Saint Paul's, Saint Michael, Heshima Road, Morrison, Martin Luther, Dr. Livingstone, Uhuru, Ofafa Jericho, Cannon Apolo, Shule Road and Marurani.

The respondents were selected to represent female and male teachers of the S<sub>1</sub>, P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> professional grades. In each of the 11 schools, administrators in the schools participated in the study.

The open-ended questionnaire contained 17 items\*. Fifteen of the items sought responses of a specific nature. Eight of these sought information on various administrative responsibilities of the Administrator in the Primary School namely: a) decision-making by the administrator and participation of teachers in the process, b) supervision of educational activities in the school by the administrator,

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\*See open ended questionnaire in the appendix on page 124.

c) office duties and routine for the administrator, d) management of the school plant e) management of school finances, f) planning of school activities and setting of goals for the school, g) communication with teachers and manipulation of school-community relations by the administrator.

Perception of the professional activities of the administrator was investigated by means of a) general question requiring respondents to list the professional activities, b) two questions on the categories of people the administrator would involve in solving disciplinary problems of i) teachers and ii) pupils, c) one question on how the administrator would ensure that education in the school related to the needs of the school-community.

The personal qualities of the school administrator perceived as most important were investigated by means of a) a general question requiring respondents to list the personal characteristics of what they considered to be a good or the ideal Administrator in the Primary School, b) questions on the professional qualifications, marital status, age and teaching experience of the ideal Administrator in the Primary School.

Of the two general questions in the open-ended questionnaire, one required respondents to list general personal characteristics of a good Administrator in the Primary School while the other required them to list

the characteristics of a bad Administrator in the Primary School.

Frequency distributions of responses to the open-ended questions was used for selecting responses used in designing a questionnaire for the pilot study. The responses selected were those made by at least 40% of either teachers, Administrators in the Primary Schools or Education Officers of both the City Education Office and the Ministry of Education - Primary Education Section.

#### Pilot Study

The questionnaire for the pilot study was pre-tested in 8 schools in the Kaiti division of Machakos district. The schools were: Ukia, Kaumoni D.E.B., Kaumoni H.G.M., Kilala A.I.C., Mukuyuni, Iiuni, Ianzoni and Kyambai primary schools. In each of the schools all the male and female trained teachers of the P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> professional grades and administrators in the schools ranked items in the questionnaire. Items were to be dropped from the questionnaire if:

- a) the frequency of the ranks accorded to them was even throughout the scale for the section in which they occurred. The scale for section A was 1 to 13, while that for each of sections B and C was 1 to 12.

b) the frequency of ranks along the scale was the same as that of another item in the same section.

The frequency distribution of ranks for items in the three sections for all the grades and sexes of teachers showed that no items could be dropped from the questionnaire on the basis of a) and b) above. The questionnaire was therefore adopted and used in the final study in its original form. However, the term 'goal' as used in the questionnaire for the pilot study was not clear to a small number of respondents. It was consequently decided that the researcher would be present at the time of completing questionnaires, in the final study, so as to explain the term in simpler language as there was no suitable substitute for the word in the context in which it occurred in the questionnaire.

### The Main Study.

#### Sampling

There were 305 teachers of the P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> professional grades in the target population. Their distribution by grade and sex in the population was as in the table below.

Table 3.31a  
Distribution of teachers by grade and sex.

	Male	Female	Total
P <sub>1</sub>	36	18	54
P <sub>2</sub>	64	55	119
P <sub>3</sub>	66	66	132
Total	166	139	305

The 1973 map of Machakos township was used to categorize the schools into urban and rural. Schools lying outside the township boundary were 33. The total number of primary schools in the Central division was 65. Rural schools therefore formed about 50.7% of the total number while urban schools were 49.3% of the total. The ratio of urban: rural schools was rounded off to 1:1.

Separate lists of male and female teachers of each of the three grades ( $P_1$ ,  $P_2$  and  $P_3$ ), and Administrators in the Primary Schools were made from rural and urban schools from the monthly statistical returns for January 1976. These statistical returns were obtained from the office of the Assistant Education Officer for the division.

A high sampling fraction of  $\frac{3}{4}$  was used. Thus three out of every four possible respondents in the target population were selected. The high sampling fraction was used in order to realize at least 30 respondents for the smallest group of teachers, that is  $P_1$  teachers, who numbered 54.

Male and female teachers of the  $P_1$ ,  $P_2$  and  $P_3$  grades were selected randomly from lists of members of their respective groups for rural or urban schools. For example a list of 40  $P_3$  female teachers in urban schools was used to select randomly 30 respondents. Teachers on the list were first assigned numerals 1, 2, 3 ... to 40. The numerals were then written on small pieces of paper,



shuffled thoroughly in a chalkbox and thirty of them picked randomly from the box. The selected numerals were then matched with those against names of  $P_3$  women teachers on the list for urban schools to get the names of respondents and the actual schools where they would be found. A list of the  $P_3$  female respondents in urban schools was then drawn up. This procedure was repeated for all the groups of teacher respondents. The distribution of the teacher respondents selected was as in the table below:-

Table 3.31b

Sample of Male and Female Teachers of the  $P_1$ ,  $P_2$  and  $P_3$  grades.

	$P_1$		$P_2$		$P_3$		Total
	Male	Female	Male	Female	Male	Female	
Urban	16	8	16	24	20	30	114
Rural	11	5	32	8	30	20	106
Total	27	13	48	32	50	50	220

In order to obtain an unbiased sample of Administrators in the Primary Schools, their professional grades were used for selecting the sample. There was a total of 126 Administrators in the Primary Schools in the population.

This excluded administrators of the S<sub>1</sub> and P<sub>4</sub> grades and unqualified teachers. The administrators were distributed in the target population as in the table below:

Table 3.31c

Distribution of Administrators in the Primary Schools by Professional Grades and Location

	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	Total
Rural	14	42	20	76
Urban	15	28	7	50
Total	29	70	27	126

The sampling fraction of  $\frac{3}{4}$  was used in the random selection of administrators of each of the three grades and from urban and rural schools. The procedure used for selecting teacher respondents was used for selecting the administrators. The final distribution of administrators in the sample was as in the table below:

Table 3.31d

Distribution of Administrators in the Primary Schools by Location and Grade.

	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	Total
Rural	10	31	15	56
Urban	11	21	5	37
Total	21	52	20	93

There was only one Assistant Education Officer and one Assistant Primary Schools Inspector for the Central division at the time of the study. The district as a whole had 25 Education Officers. To obtain a larger sample of Education Officers, all the 25 in the district were included in the study. Only 20 of them returned their questionnaires duly completed. This number exceeded the number expected for the sampling ratio of  $\frac{3}{4}$  by one respondent.

#### Collection of Data

The researcher and his assistant went to the schools and administered the questionnaires to the selected respondents. The research assistant was trained on the job for two consecutive days before undertaking to administer the questionnaire in the absence of the researcher. However, the researcher had administered 80% of the questionnaires before engaging the assistant just towards the end of the first school term.

Some of the selected subjects could not be traced as they were away from the schools either on maternity leave or for other reasons, or had been transferred from the schools. However, more than 79% of respondents for each category of subjects completed the questionnaires. Their relative numbers and percentages were as shown in the table below:

Table 3.31e

Return of Questionnaires by Administrators and Teachers in the Primary Schools.

	Expected number	Completed questionnaire	Percentage
Administrators in the Primary Schools	93	87	94%
P <sub>1</sub> Teachers	40	38	95%
P <sub>2</sub> Teachers	80	76	95%
P <sub>3</sub> Teachers	100	80	80%

Space was provided in the questionnaire for respondents to indicate a) name of their school b) their professional grade c) designation in the school d) sex and e) teaching experience (see questionnaire in the appendix on page 144 ).

The subjects ranked items in each section separately. Either the researcher or his assistant was at hand when the questionnaire was being completed to explain any part of the instructions that was not clear. At the time of collecting the questionnaires the researcher or his assistant checked for a) repetition of a particular rank in the same section and b) items that may not have been ranked. Where such errors had been made, the respondent concerned was asked to correct them.

It may be noted that Education Officers completed the same questionnaire as teacher respondents and Administrators in the Primary Schools. For 11 of the Education Officers who worked at the district headquarters and in the divisions neighbouring Machakos Town, the questionnaire was administered by the researcher. The other 14 received the questionnaires by post. A covering note outlining the purpose of the research and stressing some parts of the introduction to the questionnaire, was enclosed with the questionnaire. The address the Education Officers were to post the completed questionnaires to was also indicated in the covering letter.

The Education Officers were required to indicate on the questionnaire, only the names of the areas under their charge and their designations. This was intended to aid checking on return of the questionnaires.

Space was provided for general comments in each questionnaire. Only a few respondents made comments mainly on the need to document the professional activities and administrative responsibilities of Administrators in the Primary Schools, for the information of those affected by the role.

## CHAPTER IV

## DESCRIPTION AND ANALYSIS OF THE STUDY

The Analytical Tool.

The questionnaires completed by Education Officers, Administrators in the Primary Schools, P<sub>1</sub> teachers, P<sub>2</sub> teachers and P<sub>3</sub> teachers were grouped separately. For each group, frequency distributions of ranks for individual items along the appropriate scales were determined by means of tallying. The tallied frequencies were then entered in a table for the group. A general impression of data for the group could be gained from the table. The same procedure was followed for groups of all the teachers, female teachers and male teachers.

The ranks were then treated in the manner scores would be treated, to compute mean scores for all the items using the formula  $\bar{X} = \frac{\sum fx}{N}$  where f stood for frequency of a particular rank, x for the rank and N for the total number of respondents in the group. In other words the ranks for one item were summed up and the sum was divided by the number of respondents to get a mean score.

The item with the least mean score was ranked 1 in that section while that with the second lowest mean score was ranked 2 and so on. The ranks based on the sizes of mean scores of items for a particular section became the average ranks of items in the section for the particular group of respondents. Table 3.31f in the appendix page 149 shows the average ranks of items

for all the eight groups of respondents.

Table 3.31f was used to categorize items into  
a) those ranked high or as important by all the eight  
groups and

b) those ranked low or as unimportant.

Items ranked between 1 and 5 inclusive in each of the  
three sections of the questionnaire were classified in  
category a) above while those ranked between 6 and 13  
inclusive, for section A and between 6 and 12 inclusive  
in sections B and C were classified under b) above.

The limit of rank 5 for items in category a) above was  
chosen because i) the average ranks of items for all  
the eight groups were more or less uniform up to that  
rank and ii) it was near the median for each of the  
three scales along which the items were to be ranked.

Groups of respondents were paired for further  
analysis of the order in which they had ranked the  
items. The pairs were:

i) Education Officers with Administrators in the  
Primary Schools.

ii) Education Officers with all the teacher  
respondents.

iii) Administrators in the Primary Schools with  
all the teacher respondents.

iv) Male teachers with female teachers.

v)  $P_1$  teachers with  $P_2$  teachers.

vi)  $P_1$  teachers with  $P_3$  teachers.

vii) P<sub>2</sub> teachers with P<sub>3</sub> teachers.

The Spearman's rank-order coefficient of co-relationship was worked out for each pair of respondents. The coefficient was tested for significant relationship using the t-test at 11 degrees of freedom for section A and 10 degrees of freedom for sections B and C of the questionnaire. It was expected that the t-test for significance would yield conservative estimates as the ranks were averages from large groups of respondents ranking the same items.

A chi-square test was used to determine significance of differences where the average ranks for one item showed a difference of 2 or more. The procedure for this test involved pairing the corresponding frequency distribution of ranks for that item and totaling them in a third column. A median was determined from the third column. Medians for the first and second columns were taken at the point of the median in the third column. A 2x2 table was then constructed to show the expected observations above and below the median for columns one and two. Expected values above the median were labelled a and c in the 2x2 table for columns one and two respectively. Those below the median were labelled b and d for columns one and two respectively. The formula chi-squared

$$= \frac{N(ad - bc)}{(a+b)(c+d)(a+c)(b+d)} \quad \text{was used}$$



with the appropriate Yate's correction where the expected value in any of the cells of the 2x2 table was less than 10, to get a value of the chi-square. The Chi-square tables were then used to determine the levels of significance of the chi-squares worked out in this way. The usual 1 degree of freedom for the 2x2 table was also used.

### The Analysis

#### General Analysis

1. Results of the tests of co-relationship between the paired groups of respondents showed agreement significant at the 1% level for all the three sections of the questionnaire for all the paired groups of respondents. Thus with similar tests of co-relationship for 100 of any of the pairs of subjects, only one pair would show disagreement on the role and personal characteristics of the ideal administrator in the primary schools. Table 4.11a below shows the Spearman's coefficients of co-relationship for all the eight pairs of subjects.

Table 4.11a

Spearman's Rank-order Coefficients  
for Paired Groups of Respondents.

Pairs Nature of Items	Educ. Offics.	Educ. Offics.	Admin.in Schools	Male Teacs.	P <sub>1</sub> Teac.	P <sub>1</sub> Teac.	P <sub>2</sub> Teacs.
	VS Admin. in Schools	VS All the Teacs	VS All the Teacs.	VS Femal. Teacs.	VS P <sub>2</sub> Teac	VS P <sub>3</sub> Teac.	VS P <sub>3</sub> Teacs
Person. Charac.	+0.94*	+0.91*	+0.94*	+0.99*	+0.94*	+0.91*	+0.96*
Profess Activit	+0.93*	+0.85*	+0.70*	+0.78*	+0.85*	+0.80*	+0.91*
Admin. Respon.	+0.77*	+0.70	+0.97*	+0.91*	+0.88*	+0.66*	+0.75*

\* agreement significant at 1% level.

Siever et al (1972)<sup>1</sup> showed that agreement between similar groups of participants on similar categories of items for the role of department chairmen was higher in the perception of administrative responsibilities and

1 R.G. Siever, R.J. Loomis and Charles Neidt "Role Perception of Department Chairmen in Two Land Grant Universities", Journal of Educational Research, volume 65, number 9 (May 1972).

and professional activities than on the personal characteristics of the role occupant. The results of the t-test for the Spearman's rank-order coefficients for the 8 paired groups in this study, however, indicate that there is no difference in the perception of the three aspects of the role. The findings of Siever et al (1972)<sup>1</sup> were supported by K.V. Feyereisen (1970)<sup>2</sup> and D. Kathleen<sup>3</sup>. Contrary to their findings results of this study show even higher agreement, between the paired groups of subjects, on the personal characteristics of the ideal Administrator in the Primary Schools than on the professional activities and administrative responsibilities of the administrator.

Neither sex, grade of teacher nor positions of participants in the hierarchy of primary school administration, affected perception of the personal characteristics of the ideal Administrator in the Primary Schools. The Spearman's coefficient of correlation was higher than 0.90 for each of the paired groups of respondents. This high agreement on the order of importance of the personal characteristics of the ideal Administrator in the Primary School is

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1 Siever et al. Ibid

2 K.V. Feyereisen Supervision and Curriculum Renewal, (New York: Meredith Corporation, 1970).

3 Devaney Kathleen "Developing Open Education in America", National Association for the Education of Young Children (Washington, D.C. 20009).

to a large extent a measure of the acceptance by the respondents, of the expectations of society and the school system for the person of the administrator. These expectations have been intuitively learned by the respondents in the course of their daily interactions with different sections of the society including parents, members of school committees, educational administrators and leaders of the teachers' national organization.

Agreement on the order of professional activities for the administrator was higher for the pairs of Education Officers and Administrators in the Primary Schools and  $P_2$  and  $P_3$  teachers. Thus perception of this aspect of the role was more or less the same for participants with administrative responsibilities and those teachers of the lower professional grades. This reflects a common understanding of the order of importance of the professional activities of the administrator for the two pairs of groups of respondents. Having more access to information from the Ministry of Education on the professional role of administrators in the primary schools, the Education Officers and Administrators in the Primary Schools were able to perceive this role in the same way. This view is confirmed by the relative difference of perception of the professional role of the administrator between the Education Officers and all the teachers on one hand and the Administrators in the Primary Schools and all the teachers on the other, where the Spearman's coefficients of co-relationship were +0.85

and +0.70 respectively. It is imperative that if the teachers had access to the same information on the professional role of the administrator, the agreement between them, Education Officers and the Administrators in the Primary Schools would have been higher.

The relatively low agreement on the professional role of the administrator between male and female teachers could be explained by their sex-oriented perception of the relative importance of particular aspects of the professional role. Thus sex was viewed as having some effect on the professional role of the administrator. The particular areas where this sex influence was greatest in perception of the professional role were investigated by means of chi-square tests on perception of particular items and reported elsewhere in the study.

It was found that the closer the grades of teachers the higher the agreement in perception of the professional role of the administrator. At the same time the agreement in perception of the professional role was higher between paired groups of the lower grades. Thus agreement in perception of the role was lowest between paired groups of  $P_1$  and  $P_3$  teachers, higher between the groups of  $P_1$  and  $P_2$  teachers and highest between the groups of  $P_2$  and  $P_3$  teachers. Spearman's Coefficients of co-relationship for the perception of this role were

+0.80, +0.85, and +0.91 respectively.

Agreement in perception of the administrative responsibilities of the administrator was highest between Administrators in the Primary Schools and all the teachers where the Spearman's Coefficient of Co-relationship was as high as +0.97. The agreement in perception of this role was low between Education Officers and Administrators in the Primary Schools and between Education Officers and all the teachers with the Spearman's coefficients of co-relationship of +0.77 and +0.70 respectively. This indicated that Education Officers and Administrators in the Primary Schools did not hold common views on the priorities of administrative responsibilities of the Administrator in the Primary School. At the same time Administrators in the Primary Schools and teachers had developed a common perception of the role. There was thus a dislocation of the role perception within the primary school system.

There were no pronounced sex differences in perception of the administrative responsibilities of the administrator, as the Spearman's Coefficient of Co-relationship of perception of the role between male and female teachers, was as high as +0.91. However, differences in perception of the role were revealed among teachers of different professional grades.

Agreement in perception of the role was lowest between  $P_1$  and  $P_3$  teachers, relatively higher between  $P_2$  and  $P_3$  teachers and highest between  $P_1$  and  $P_2$  teachers. The Spearman's Coefficients of co-relationship for the three paired groups of teachers were +0.66, +0.75 and +0.88 respectively. It was concluded that the greater the difference in professional grade between teachers the lower the degree of agreement in perception of the administrative responsibilities of the Administrator in the Primary Schools. Consequently the professional grade of a teacher affected his perception of the role.

In the study by Siever et al (1972)<sup>1</sup> the professional activities and administrative responsibilities of the department chairmen had been defined and were known to those who participated in the study. In the case of participants in this study the two facets of the role had not been defined and made known to the participants and hence the difference in perception of the two roles between participants in this study and those in the study of perception of the role of department chairmen. Thus the agreement on the administrative and professional roles between the role occupants, their superiors and subordinates was high where the roles had hitherto been defined and made known to the respondents. The reverse was also true as was the case in this study. Even more

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1 Siever et al, op.cit.

significant in a situation where the role had not been defined clearly to respondents, was the tendency to perceive it in terms of the personal characteristics of the role occupant. Agreement on this latter group of items (personal characteristics) was high in all cases, in this study, thereby reflecting greater emphasis on the personal characteristics of the role occupant.

The idea brought forward by Price (1961)<sup>1</sup>, Brottman, (1963)<sup>2</sup>, Abbot (1960)<sup>3</sup> and Grace, R (1972)<sup>4</sup> that congruence in role perception between subjects affected by the role, leads to formation of role-concept, would, if taken in the context of these findings, lead to the conclusion that the respondents had a clear concept of the personal characteristics

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- 1 Alfred, J. Price "A Study of the Interactions of Attitudes and Values of Elementary School Principals and their Staffs", unpublished Doctoral Dissertation (New West University 1961).
  - 2 Marvin, A. Brottman "The Administrative Process and Elementary School Principals: An Empirical Test of a Concept", Administrators Notebook (11: 1 - 4, 1963).
  - 3 Max, G. Abbot "Values and Value Perceptions in Superintendent-School-Board Relationships", Administrators Notebook (9: 4, 1960).
  - 4 R. Grace Role Conflict and the Teacher, (London: Routledge and Kegan Paul, 1972).



of the ideal Administrator in the Primary Schools while their concepts of the professional and administrative roles were not well formed. This would imply the possibility of role concepts being formed in the absence of universally agreed definitions of the roles provided that the environment in which the people affected by a role worked, was conducive to the intuitive acquisition of the role concept. Alternatively, since an administrative function (and behaviour) derives its nature from the services it directs, according to Sears, J.B. (1950)<sup>1</sup>, it was assumed that the significant degree of agreement between the subjects on the three aspects of the role, was due to their association of the nature of the services of primary school administration with the implied personal characteristics, professional activities and administrative responsibilities.

Item Analysis: Items Ranked High by all Groups of Respondents.

Personal Characteristics.

Among the personal characteristics of the ideal Administrator in the Primary School ranked high by the respondents were:

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1 Jesse, B. Sears The Nature of the Administrative Process, (New York: McGraw-Hill, 1950), p. 623.

A (a) Moral integrity

A (c) qualities related to good human relations

A (d) ability to motivate subordinates

A (m) high regard for truth, punctuality,  
responsibility and industrious habits and

A (e) a good organizer, full of new ideas and  
confidence.

Ranking of these items by all the groups of respondents is shown on table 3.31f in the appendix page 149. Perception of these personal qualities of the administrator as important supported the views of Raju (1973)<sup>1</sup>, Campbell, R and Gregg, (1957)<sup>2</sup> and Siever et al (1972)<sup>3</sup> who invariably maintain that the best school administrator is one who combines the skills of personnel management with the ability to plan, organize and keep good human relations.

The perception also agreed with the view that an administrator must be realistic while holding high ideals, held by Johnson A. et al (1967)<sup>4</sup> and Komora (1973)<sup>5</sup>.

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- 1 Beulah Raju, "Concepts, Objectives and Scope of Educational Administration" Journal of the Kenya Teacher, (Number 14, Nairobi, 1972).
  - 2 Roald F. Campbell and Russel T. Gregg (Eds) Administrative Behaviour in Education (Harper, 1957).
  - 3 Siever et al. Op. cit.
  - 4 Richard, A. Johnson et al The Theory and Management of Systems, 2nd ed. (New York: McGraw-Hill, 1967).
  - 5 Yuda Komora "Keynote Address by the Director of Educational" Report of the Conference of Education Administration, (Ministry of Education, Nairobi 1973).

The ranking order reflected emphasis on moral integrity of the role occupant, an aspect of the personal characteristics of the administrator that none of the authorities quoted above seemed to emphasize.

While those authorities discussed personal characteristics of the general school administrator, respondents in this study focussed their attention on the administrator at the primary school level. In so doing they perceived personal qualities of the administrator in relation to the nature of the students at that level. It is at the primary school age that pupils take their superiors as models to imitate and are in their formative stages of moral development. An administrator in the school, who was lacking in moral integrity would therefore misdirect the moral development of pupils in the school while the reverse would also be true. High ranking of that particular item by practically all the groups of respondents made it apparent that a study on the primary school administrator's manifestation of moral integrity on his effectiveness as rated by teachers, pupils, parents and other reference groups would throw light on the importance of moral integrity in the primary school administrator.

In spite of the items A(a), A(c), A(d), A(m) and A(e) on the questionnaire being ranked high by all the groups

of subjects, the chi-square test revealed significant differences, between the groups, in the perception of the relative importance of the items\*.

There was significant difference at the 1% level between P<sub>1</sub> and P<sub>3</sub> teachers in their perception of the relative importance of the personal attribute of moral integrity. The pronounced difference in professional qualifications between the two groups of teachers was most probably responsible for this difference in perception, as a similar difference in perception of the same item only significant at the 20% level was observed for the paired groups of P<sub>1</sub> and P<sub>2</sub> teachers. It was concluded that the higher the grade of a primary school teacher, the less concerned he was about moral integrity being an important personal characteristic of the Administrator in the Primary School. 7

While teachers perceived the personal characteristic of being social, kind, understanding, patient and co-operative as very important, Administrators in the Primary Schools and Education Officers perceived it as less important. The chi-square tests revealed differences, each of which, was significant at the 5% level between Administrators and teachers, Education Officers and teachers in their perception of the relative importance of this personal quality. There were no

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\* See results of the chi-square tests in table 4.11e in the appendix page 158 - 160.

significant differences in the perception of the quality between female and male teachers and between teachers of the three professional grades. It was concluded that the difference in perception between teachers on one hand and Education Officers and Administrators in the Primary Schools on the other were due to the relative positions of authority the groups occupied. While the Education Officers and Administrators in the Primary Schools had hardly anything to loose if the Administrator in the Primary Schools did not possess those qualities, the teachers would feel more secure and happier in their work if the administrators in their schools had these personal characteristics. Hence the teachers laid more emphasis on this human relations aspect of primary school administration than did the Education Officers and Administrators in the Primary Schools.

More weight was lent on the finding that teachers were more concerned about the personal characteristics of the school administrator which led to the development of good human relations, than those purely related to organization of the school, in the perception of the personal qualities of a 'good organizer, full of new ideas and confidence'. Administrators in the Primary Schools perceived this characteristic as crucial

to their role while teachers perceived it as less crucial. A difference in perception of this characteristic between Administrators in the Primary Schools and all the teachers was found significant at the 2% level.

Cabot and Kahl (1953)<sup>1</sup> postulated that in a bureaucratic organization workers who are low in status within the hierarchy, rarely share the views of administrators higher in the hierarchy. This was mainly because they regarded themselves as underprivileged in terms of those higher in status. Viewed against this postulate, the differences in perception of those personal qualities of the administrator which were prerequisite to the development of good human relations in school administration, between Education Officers and administrators in the Primary Schools on one hand, and all the teacher respondents on the other, tended to suggest that bureaucratic modes of administration were predominant in the primary school system. The postulate referred to, however, does not refer only to views on matters of human relations. Nevertheless if the latter aspect of school administration is singled out to test the hypothesis of Cabot and Kahl (1953)<sup>2</sup> then these findings would go a long way to confirm that primary schools

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1 Hugh Cabot and Joseph A. Kahl, Human Relations (Massachusetts: Harvard University Press, 1953) Vol. 1 p. 232.

2 Ibid.

in the Central division of Machakos District fall under bureaucratic forms of organizations.

Perception of the characteristic - holding the ideals of truth, punctuality and industrious habits as expressed in item A(m) was affected by position in the administrative hierarchy of respondents on one hand and the professional grades of teacher respondents on the other. Differences in the ranking of item A(m) were significant at the 1% level between Education Officers and Administrators in the Primary Schools and teachers. Education Officers perceived the characteristic as very important while the other two groups perceived it as significantly less important. Thus administrators in the schools and teachers in general, were more concerned about the practical day-to-day school administration than idealism as a basis of action in school administration.

Among different grades of teachers differences in perception of the same personal characteristic were significant at the 2% and 1% levels between P<sub>1</sub> and P<sub>2</sub> teachers and between P<sub>1</sub> and P<sub>3</sub> teachers respectively. P<sub>1</sub> teachers perceived the characteristic as the most important while the other two grades of teachers perceived it as less important. Thus the view that ideals must form the basis of action in school administration as expressed by R.A. Johnson (1967)<sup>1</sup> and Y. Komora (1973)<sup>2</sup>

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1 Op. cit.

2 Op. cit.

was shared by Education Officers and the P<sub>1</sub> teachers but not Administrators in the Primary Schools and teachers of the P<sub>2</sub> and P<sub>3</sub> grades.

Professional Activities:

The professional activities perceived as most important for the ideal Administrator in the Primary Schools were:

- B(h) Achieving goals the administrator has set for the school,
- B(i) Encouraging teachers to train pupils to think and study on their own,
- B(k) Working with parents to improve the general standard of education in the school, and
- B(l) Teaching effectively in the classroom\*.

The activities B(h) and B(l) were also perceived as most important by subjects in the study of 'Role Perception of Department Chairmen', conducted by Siever et al (1972)<sup>1</sup>. The high ranking of items B(i) and B(k) reflected a desire by all the groups to see a departure from traditional methods of teaching which encouraged rote learning to child-centred learning and the integration of primary school education with the aspirations and activities of the communities in which the schools were located. Leadership that gave serious consideration to these aspects of education was perceived as the ideal type for the administrator in the primary

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\* See Table 4.11c in appendix, page 153.

1 Op. cit



schools.

Differences due to professional grades were observed between the  $P_1$  and  $P_3$  teachers and between  $P_2$  and  $P_3$  teachers in their perception of the activity B(h). In both cases the differences in perception were significant at the 1% level. Thus while the  $P_1$  and  $P_2$  teachers perceived the activity of achieving goals the administrator has set for the school as most important,  $P_3$  teachers perceived it as less important. Teachers of the high professional grades therefore perceived this activity as the most important.

A sex difference was observed in the perception of the professional activity B(i). The difference was significant at the 1% level. While male teachers gave prominence to this activity, female teachers did not, although they ranked it among the important activities for the Administrator in the Primary Schools. Thus male teachers believed more in the idea of child-centred learning and independent study by the pupils than did female teachers.

#### Administrative Responsibilities:

The administrative responsibilities ranked high by all the groups were:

- C(b) Making arrangements for teachers to participate in making decisions on matters affecting them, pupils and the school;
- C(e) Attending to the problems of pupils and teachers;
- C(d) Planning for the achievement of goals of the

schools;

C(h) Assessing the progress being made by teachers in their work and recommending ways and means of improving their performance;

C(f) Placing orders for school equipment and distributing it in time to those who should use it.

The groups thus gave top priority to the process of decision-making, personnel management, planning and supervision of educational instructions. Their priorities reflected the view that a good administrator is one who combines the skills of a technical expert (therefore able to supervise the work of his subordinates) a good planner and a personnel manager as expressed by B. Raju (1972)<sup>1</sup>, R.F. Campbell, and R.T. Gregg (1957)<sup>2</sup> and to some extent R.W. Mutua (1973)<sup>3</sup>.

Making arrangements for teachers to participate in the process of decision-making was ranked as the most important administrative responsibility by all

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1 Op.cit.

2 Op. cit.

3 Rosalind W. Mutua, "The Concept of Educational Administration", Report of the Education Administration Conference, (Ministry of Education Nairobi, Kenya 1973).

the groups of respondents. As the teachers, in this case, showed high agreement with Administrators in the Primary Schools and Education Officers it was deduced that the decision theory advanced by L.A. Panttaja (1966)<sup>1</sup> applies to the process of administering the primary schools. His theory was that if an administrator confined his behaviour to making decisions on the decision-making process, rather than making terminal decisions, his behaviour would be more acceptable to his subordinates.

High agreement in perception of this responsibility also seemed to reflect an acceptance of the Neo-Classical Organization Theory which is a Human Relations Model rather than the Classical Organization Theory or Bureaucratic Model as explained by Johnson R.A. et al (1967)<sup>2</sup>.

However, by failing to rank high, the administrator's responsibility of setting long-term and short-term goals for the school, teachers and Administrators in the

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- 1 Leon A. Panttaja "Subordinates' Perception of the Decision-making Behaviour of their Chief Administrator" unpublished Doctoral Dissertation, (University of Southern California 1966).
  - 2 Op.cit.

Primary Schools tended to negate their high ranking of item C(d) - planning for the achievement of goals of the school. This indicated that the administrator did not expect and was not expected by the teachers to shoulder the responsibility of determining the purposes which his school was to serve. The Education Officers however, ranked this responsibility high. The deduction made for this difference in perception of the role, which was significant at the 5% and 1% levels for Education Officers and Administrators in the Primary Schools and Education Officers and all the teachers respectively, was that Education Officers expected primary schools to set their own goals thereby determining the expectations, roles and functions of personnel in order to establish appropriate structures for operation while Administrators in the Primary Schools and teachers expected the goals of their schools to be defined outside the schools, possibly by the Ministry of Education and handed down to them to interpret and plan for their achievement.

Such a dichotomy in perception was viewed as inevitable in a centralized education system, although detrimental to the process of educational development at the institutional level. It was likely to undermine the effectiveness of the school administrator as effectiveness in the role would to a large extent depend on the administrators understanding of the goals of the school.

Getzels J.W. et al (1968)<sup>1</sup> also found that contradiction among several reference groups in defining the expectations for the same role undermined effectiveness in the role.

The Chi-Square test showed significant differences in the perception of the administrative responsibility of attending to problems of teachers and pupils, between teachers on one hand and Administrators in the Primary Schools and Education Officers on the other. The teachers perceived the responsibility as very important while Education Officers and Administrators in the Primary Schools perceived it as less important. The statistical difference in perception between Education Officers and teachers was significant at the 5% level while that between teachers and Administrators in the Primary Schools was significant at the 1% level. This difference in perception was attributed to relative positions within the hierarchy of administration in the primary school system.

The teachers who were lowest in the hierarchy viewed the responsibility as most important while the Education Officers and Administrators in the Primary

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1 Jacob, W. Getzels and others Educational Administration as a Social Process: Theory, Research and Practice, (New York: Harper and Row 1968).

Schools who are higher up on the hierarchy did not. Teachers inevitably felt that if their problems were ignored they would not be happy at work. They needed more attention and thus preferred the type of administrator who would give them such attention.

The  $P_1$  teachers however, perceived the responsibility as less important compared to teachers of the  $P_2$  and  $P_3$  grades. The statistical difference in perception was greatest between  $P_1$  and  $P_3$  teachers where it was significant at the 1% level. Among the three grades of teachers, the  $P_3$  teachers showed that they were most insecure by giving the highest rank to the item thereby showing preference for the type of administrator who would pay more attention to their personal and professional problems.

Similar professional grade differences between  $P_1$  and  $P_3$  teachers were manifested in the ranking of responsibilities  $C(f)$  and  $C(i)$  where in each case the differences in perception were statistically significant at the 1% level.  $P_3$  teachers perceived the responsibility of ordering for school equipment as <sup>more</sup> important than did  $P_1$  teachers. Probably their scanty knowledge of the content and methodology of the subjects they taught made them perceive availability of the right textbooks and teaching materials as crucial to their successful teaching. The  $P_1$  teachers on the other hand were

more sure of subject matter and in a position to design methods of teaching various subjects on the school curriculum even in the absence of textbooks.

P<sub>1</sub> teachers perceived the responsibility of planning for school activities ahead of time as very important while the P<sub>3</sub> teachers perceived it as less important. The P<sub>1</sub> teachers were therefore more aware of the advantages of prior planning in school administration than the P<sub>3</sub> teachers.

#### Items Ranked Low by the Groups.

#### Personal Characteristics.

The personal attributes of the ideal Administrator in the Primary Schools which were ranked low by all the groups included:

- A(g) impartiality,
- A(b) attending to official duties immediately,
- A(h) respect for other people's opinions,
- A(k) long experience in school administration as deputy Administrator in the Primary School,
- A(l) capacity to keep official secrets,
- A(i) long teaching experience
- A(f) high teaching qualifications
- A(j) being a married person\*.

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\* See table 4.11b in the appendix .

It was observed that although impartiality and respect for other people's opinions were ranked low, the qualities they referred to were embraced in two other items which were ranked high. These were A(a) moral integrity, and A(c) ability to cultivate good human relations.

It was interesting that experience in both school administration and teaching and high teaching qualifications were ranked low. This was at variance with earlier perception of the role in instructional leadership as being very important. It also contradicted the view by Raju, B (1973)<sup>1</sup>, Johnson, R.A. (1967)<sup>2</sup> and Adesina, S. (1974)<sup>3</sup> that the instructional leadership role required knowledge of the subjects in the curriculum and methods used in teaching the subjects. A school administrator with low professional qualifications, little teaching and administrative experience would thus be ineffective in the role.

Sears, J.B. (1950)<sup>4</sup> postulated that administrative functions derive their nature from the services they

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1 Op. cit.

2 Op. cit.

3 Segun Adesina "Developing a Programme for Educational Administrators in Nigeria", The Nigerian School Master Journal (August 1974).

4 Jesse B. Sears, The Nature of the Administrative Process, (New York: McGraw-Hill, 1950) p. 623.



direct. Since educational administration focuses mainly on the quality of educational instructions, it was apparent from these findings that the groups were not aware of both the nature of instructional leadership and its basic requirements at the primary school level.

The Chi-square tests did not reveal any significant differences in the perception of personal characteristics of the ideal Administrator in the Primary School, which were ranked low by all the groups. Therefore there was high agreement in the perception of these personal characteristics.

#### Professional Activities:

The professional activities of the ideal Administrator in the Primary Schools ranked low by all the respondents were:

- B(c) active participation in out-of-class educational activities;
- B(e) raising funds for the school;
- B(f) being an active member of local Church and welfare committees;
- B(g) aiming at high CPE passes for all pupils in the school;
- B(b) in-servicing teachers in the teaching of their own subjects;
- B(d) scrutinizing subject syllabuses and recommending changes to the KIE.

B(l) making sure that new teachers fit into the school activities; and

B(j) attending courses in school administration.

The activities described in items B(c), B(e) and B(f) were non-academic and hence the respondents were inclined towards the school administrators role in fostering academic education. Low ranking of item B(g) however, contradicted this inclination. This nevertheless was so only in general as all the teachers combined and female teachers, P<sub>2</sub> and P<sub>3</sub> teachers taken separately ranked the item high.

Scrutinizing subject syllabuses and recommending changes to the Kenya Institute of Education (the body incharge of drafting school syllabuses) is an important component of curriculum and instructional leadership. Low ranking of this item by all the groups displayed lack of understanding of the fact/the Administrator /that in the Primary School was expected to play the role. This was possibly due to lack of involvement of most of the administrators and teachers in the drafting of syllabuses for the subjects taught in the primary schools.

Education Officers and Administrators in the Primary Schools ranked high item B(b) ie in-servicing teachers in the subjects they teach while the

teachers ranked it low with the exception of one group - the P<sub>1</sub> teachers. This dichotomy in perception of the in-service dimension of the instructional leadership role showed that teachers needed some education in the importance and nature of the role.

Attendance of in-service courses (item B(1)) was ranked low by all the groups except the P<sub>1</sub> teachers. This was attributed to the fact that such courses were no longer being organized for the administrators by the Inspectorate section of the Ministry of Education. Without knowledge of the nature, purpose and importance of the administrative courses the respondents could not value them. Courses in school administration would serve as a firm basis for sound administration of the schools and a source of confidence to both newly appointed and experienced Administrators in the Primary Schools.

Item B(1) on the role of the school administrator in the orientation of newly appointed teachers in the affairs of the school was ranked low by all the groups. It was observed that as the Administrator in the Primary Schools did not play any part in selecting teachers for their schools since the staffing of primary schools was done by the Teachers Service Commission, he would tend to neglect this particular role. This negligence of the role was attributed to

lack of training on the part of the administrators. With the perpetual large numbers of unqualified teachers and constant flow of fresh graduates from teachers' colleges into the primary schools, stability of the working atmosphere for teachers in the schools, cannot be maintained without deliberate orientation programmes for newly appointed teachers. All groups of respondents needed some form of in-service education on the importance of this role.

Significant differences in the perception of the professional activity of in-servicing teachers in the subjects they taught were observed between teachers on one hand and Administrators in the Primary Schools and Education Officers on the other. The differences were statistically significant at the 1% level between each of the paired groups of Education Officers and all the teachers and Administrators in the Primary Schools and all the teachers. Education Officers and Administrators in the Primary Schools perceived the role as important while the teachers perceived it as unimportant. It appeared that Administrators in the Primary Schools would meet with resistance from teachers if they attempted to play this role as the teachers did not expect them to.

Sex differences in role perception were significant at the 1% level for each of items B(d) and B(g). Female teachers perceived the role of aiming at high passes in the Certificate of Primary Education examination for all pupils in the school as important while male teachers perceived it as unimportant. On the other hand male teachers perceived the role of scrutinizing subject syllabuses and recommending changes to the KIE as important while female teachers did not.

#### Administrative Responsibilities:

Delegating responsibilities to other members of staff was perceived as unimportant by all the groups of subjects. This was interpreted to mean that Administrators in the Primary Schools would not entrust some of their responsibilities to teachers. On the other hand the teachers showed they would not wish to shoulder administrative responsibilities delegated to them by the administrators. Without prior courses in school administration the administrators were bound to lack confidence in taking final administrative decisions on matters they had delegated to subordinates. They would also be unable to explain the basic principles underlying the responsibilities. However, the teachers needed the experience that could be gained in discharging administrative responsibilities if they were to assume posts in school administration

with confidence in the future.

On the part of Education Officers, failure to rank this item high showed that they expected the Administrator in the Primary Schools to shoulder all the administrative responsibilities in the school. This would not only deny teachers the opportunity to participate in making decisions on matters of administrative nature but also create a situation where the administrator would be overburdened with details of school administration to the extent that he could not be efficient.

The role of supervising classroom instructions given by teachers was perceived as unimportant by all the groups of respondents. The respondents probably found it too extreme a method of instructional leadership. However the fact that the respondents ranked item C(h) high suggested that they regarded supervision of educational instructions by the school administrator as important. The methods of supervision implied in these two related items C(a) and C(h) were different and the groups therefore showed that a consultative nature of supervision was preferred to direct supervision in the classrooms.

The low ranking of items on the roles related to maintenance of the school plant, management of school finances and organization of functional

office routine, thus items C(g), C(k) and C(l) showed that responsibilities which were not directly connected with educational instructions were perceived as unimportant by all the groups. The ranking of these items was consistent with the findings of Siever et al (1972)<sup>1</sup>.

Results of the Chi-square test showed that there was a statistical difference, significant at the 1% level, between each of the pairs of P<sub>1</sub> and P<sub>3</sub> teachers and P<sub>2</sub> and P<sub>3</sub> teachers in the perception the role described in item C(a). P<sub>3</sub> teachers perceived supervision of class instructions by the school administrator as important. The P<sub>1</sub> and P<sub>2</sub> teachers perceived the responsibility as less important. There was however no significant difference in the perception of this responsibility, between P<sub>1</sub> and P<sub>2</sub> teachers.

While Administrators in the Primary Schools agreed with teachers in their perception of the importance of setting long-term and short-term goals for the school, there were statistical differences significant at the 5% and 1% levels between Administrators in the Primary Schools and

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1 Op. cit.

Education Officers and between Education Officers and teachers respectively. Education Officers perceived this role as important while teachers and Administrators in the Primary Schools perceived it as unimportant. Perception of the same role by teachers of different professional grades showed significant statistical differences when subjected to the Chi-square test. The difference in perception between  $P_1$  and  $P_2$  teachers was significant at the 5% level while that between  $P_1$  and  $P_3$  teachers was significant at the 1% level. Like the Education Officers,  $P_1$  teachers viewed the role as important while  $P_2$  and  $P_3$  teachers viewed it as unimportant. Of the three grades of teachers, the  $P_3$  teachers perceived the role as the least important.

The Chi-square test also showed a difference statistically significance at the 5% level between the  $P_1$  and  $P_3$  teachers in the perception of the role described in item C(1). A similar grade difference in role perception was observed in the ranking of item C(g) where the difference in perception between the  $P_2$  and  $P_3$  teachers was significant at the 2% level.



## CHAPTER V

## DISCUSSION OF FINDINGS AND CONCLUSIONS

Introduction

The purpose of this study was to find out the personal characteristics, professional activities and administrative responsibilities of the ideal Administrator in the Primary School, as perceived by primary school teachers, Education Officers and Administrators in the Primary Schools.

A list of items perceived as important or unimportant for each of the three aspects of the role, by all groups of subjects was expected at the end of the study. The degree of agreement for each set of items on the three aspects of the role was determined. At the same time the effects of sex and grade of teacher and position of subjects in the hierarchy of administration within the primary school system on perception of personal characteristics and role of the ideal Administrator in the Primary School was also investigated.

In this chapter the basic assumptions and hypotheses advanced for the study will be reviewed in the light of the findings. The implications of the main findings to administration in the primary schools will be discussed.

Suggestions for measures that could be taken to unify perception of the role and characteristics of the role occupant, among the various categories of subjects in the study was made.

#### Summary of the Main Findings

The hypothesis that Administrators in the Primary Schools and Education Officers would show agreement in their perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School was proved correct in the t-test of the Spearman's rank order coefficient of co-relationship. The hypothesis was therefore accepted as being true. Ipsa facto, the assumption that these two categories of respondents perform similar professional and administrative tasks was true.

On the other hand the following hypotheses were not accepted on the basis of results of the Spearman's test of co-relationship:

a) Administrators in the Primary Schools and teachers will not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

b) Education Officers and teachers would not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

c) Female and male teachers would not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

d)  $P_1$  and  $P_2$  teachers will not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

e)  $P_1$  and  $P_3$  teachers will not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

f)  $P_2$  and  $P_3$  teachers will not show agreement in perception of the administrative responsibilities, professional activities and personal characteristics of the ideal Administrator in the Primary School.

The assumptions underlying these hypotheses were thus not true. Thus sex and professional grade of a teacher did not influence the teacher's perception of the administrative responsibilities, professional activities and personal characteristics of the ideal

Administrator in the Primary School. Similarly, position in the hierarchy of primary school administration did not affect perception of the role and personal characteristics of the role occupant.

An item by item analysis of perception of personal characteristics and role of the administrator revealed statistically significant differences between paired groups of respondents.

#### Administrators in the Primary Schools and Education Officers.

The Chi-square test of relationship showed a difference significant at the 1% level, in perception of the personal characteristic of having 'high regard for truth, punctuality, responsibility and industrious habits' between the Education Officers and Administrators in the Primary Schools. Education Officers gave this characteristic a rank of 1 while Administrators in the Primary Schools gave it a rank of 5.

There was no significant difference observed in the perception of any of the professional activities of the ideal administrator between the Education Officers and Administrators in the Primary Schools.

A difference in the perception of the administrative responsibility of 'setting long-term and short-term goals for the school', significant at the 5% level was observed between Administrators in the Primary Schools and Education

Officers. The Education Officers ranked this responsibility 3 while Administrators in the Primary Schools ranked it 9.

#### Education Officers and Teachers:

Education Officers and teachers in the primary schools showed differences significant at the 5% and 1% levels in their perception of the administrator's personal characteristics of (i) being 'social, understanding, kind, patient and co-operative', and (ii) having 'high regard for truth, punctuality, responsibility and industrious habits', respectively.

Perception of the professional activity of taking an active part in out-of-class educational activities by the two groups of subjects showed a difference significant at the 2% level.

The two groups of respondents also showed differences significant at the 1% and 5% levels in their perception of the administrative responsibilities of (i) 'setting long-term and short-term goals for the school' and (ii) attending to the problems of teachers and pupils, respectively.

#### Teachers and Administrators in the Primary Schools

There were four major differences in the perception of the personal characteristics and role of the ideal Administrator in the Primary School between teachers and Administrators in the Primary Schools. Differences

in the perception of the personal characteristics of (i) being 'social, understanding, kind, patient and co-operative' and (ii) being 'a good organizer, full of new ideas and confident', by subjects in the two groups, were significant at the 5% and 2% levels respectively. The item numbered (i) above was ranked 3 by Administrators in the Primary Schools and 1 by the teachers. The personal characteristic (ii) above was ranked 2 by Administrators in the Primary Schools and 5 by the teachers.

There was a difference, significant at the 1% level in the perception of the professional activity of in-servicing teachers in the teaching of their own subjects, between Administrators in the Primary Schools and the teachers. Administrators in the Primary Schools ranked the item 2 while teachers ranked it 9.

The only difference between these two groups, in the perception of the administrative responsibilities of the ideal Administrator in the Primary School occurred in their perception of the responsibility of attending to the problems of teachers and pupils. The difference was statistically significant at the 1% level.

### Female and Male Teachers

Male and female teachers showed complete agreement in their perception of the personal characteristics and administrative responsibilities of the ideal Administrator in the Primary School. The two groups of teachers however, showed differences in perception of three professional activities of the administrator for which no other paired groups of respondents showed any statistically significant differences. The professional activities for which these purely sex differences in perception were revealed were those of (i) scrutinizing subject syllabuses and recommending changes to the KIE (ii) aiming at high CPE passes for pupils in the school and/encouraging teachers to train pupils to think. Differences in perception for each of the three activities were statistically significant at the 1% level. Female teachers ranked the activity (i) above 8, while male teachers ranked it 5. Male teachers ranked the activity (ii) above, 7 while female teachers ranked it 3. The activity (iii) above was ranked 1 by male teachers and 4 by the female teachers.

### P<sub>1</sub> and P<sub>2</sub> Teachers

Teachers of the P<sub>1</sub> and P<sub>2</sub> grades showed a difference, significant at the 2% level in their

perception of the personal characteristic of having 'high regard for truth, punctuality, responsibility and industrious habits.  $P_1$  teachers ranked the responsibility 1 while  $P_2$  teachers ranked it 4.

The two categories of teachers did not show any statistically significant differences in their perception of the professional activities of the ideal Administrator in the Primary School. However, differences each of which was significant at the 5% level, were observed in the perception of the administrative responsibilities of (i) 'setting short-term and long-term goals for the school' and (ii) 'planning a good office routine and following it closely'. While the  $P_1$  teachers ranked the responsibility (i) above, 6,  $P_2$  teachers ranked it 9.  $P_1$  teachers gave responsibility (ii) above a rank of 10 while  $P_2$  teachers ranked the same 7.

### $P_1$ and $P_3$ Teachers

The greatest number of item by item differences in the perception of the three aspects of the role of the ideal Administrator in the Primary School, occurred between the  $P_1$  and  $P_3$  grades of teachers. The two groups showed differences in their perception of 5 administrative responsibilities, 2 professional activities and 2 personal characteristics. It was also noted that the Spearman's coefficient of



of co-relationship for the  $P_1/P_3$  pair of subjects, though statistically significant at the 1% level was the lowest among all the paired groups of respondents.

While the  $P_3$  teachers ranked the personal characteristics of being 'an honest person whose behaviour is constant and a good example to pupils and teachers', 1, the  $P_1$  teachers ranked it 4. The difference in their perception of this personal characteristic was statistically significant at the 2% level.  $P_1$  teachers ranked the personal characteristic of having a 'high regard for truth, punctuality, responsibility and industrious habits', 1, while  $P_3$  teachers ranked it 4. The difference was statistically significant at the 1% level.

The two professional activities in which  $P_1$  and  $P_3$  teachers showed statistically significant differences in perception were: (i) the activity of achieving the goals the administrator has set for his school and (ii) attending courses in school administration. The differences for the two items were significant at the 1% and 5% levels respectively.  $P_1$  teachers ranked the activity (i) above 1, while  $P_3$  teachers ranked it 3. The activity (ii) above was ranked 5 by the  $P_1$  teachers and 9 by the  $P_3$  teachers.

The administrative responsibility of supervising class instructions given by teachers was given a rank

of 12 by  $P_1$  teachers while the  $P_3$  teachers ranked it 6. There was a statistical difference, significant at the 1% level between the two groups of teachers in the perception of this administrative responsibility.

Other differences in perception of various administrative responsibilities between the two groups of teachers, were each statistically significant at the 1% level and included perception of the responsibilities of: (i) setting long-term and short-term goals for the school.  $P_1$  teachers ranked this responsibility 6 while  $P_3$  teachers ranked it 12. (ii) attending to the problems of teachers and pupils.  $P_1$  teachers ranked this responsibility 4 while  $P_3$  teachers ranked it 2. (iii) ordering for school equipment and distributing it in time to those who should use it.  $P_1$  teachers gave this item a rank of 8 while the  $P_3$  teachers gave it a rank of 5. and (iv) Planning for school activities ahead of time, which  $P_1$  teachers ranked 5 while  $P_3$  teachers ranked it 7.5.

### $P_2$ and $P_3$ Teachers

$P_2$  and  $P_3$  teachers showed agreement in their perception of all the personal characteristics of the ideal Administrator in the Primary School. They however showed disagreement in their perception of the professional activity of achieving goals the administrator has set for his school.  $P_2$  teachers

ranked this activity 1 while P<sub>3</sub> teachers ranked it 3. The difference in perception between the two groups was significant at the 1% level.

Differences occurred in the perception of two administrative responsibilities by teachers of the two professional grades. These were the responsibilities of (i) supervising class instructions given by teachers and (ii) attending promptly to the repair and maintenance of school buildings and equipment. P<sub>2</sub> teachers ranked the responsibility (i) above 12 while P<sub>3</sub> teachers ranked it 6. The difference in perception was significant at the 1% level.

Responsibility (ii) above was given a rank of 11 by the P<sub>2</sub> teachers and 9 by P<sub>3</sub> teachers. The difference was statistically significant at the 2% level. Although items (i) and (ii) above were both ranked low, it was particularly significant that there was a difference of six ranks in the perception of the responsibility of supervising class instructions given by teachers for the two groups of teachers.

The personal characteristics of the ideal Administrator in the Primary School which were ranked high by all the groups of respondents were:

- i) being social, understanding, kind, patient and cooperative.
- ii) being able to arouse the enthusiasm of teachers, pupils and non-teaching staff in their work.

- iii) a good organizer, full of new ideas and confident.
- iv) an honest person whose behaviour is constant and a good example to pupils and teachers.
- v) having a high regard for truth, punctuality, responsibility and industrious habits.

The characteristics ranked low by practically all the groups were:

- i) impartiality in dealing with pupils and teachers.
- ii) attending to official duties immediately.
- iii) respect for other people's opinions.
- iv) long experience as deputy headmaster.
- v) inclination to keep official secrets.
- vi) long teaching experience.
- vii) high teaching qualifications and
- viii) being a married person.

Only four professional activities of the administrator were ranked high by all the groups.

These were:

- i) achieving the goals the administrator has set for the school.
- ii) encouraging teachers to train pupils to think and study on their own.
- iii) working with parents to improve the general standards of education in the school, and
- iv) being good at teaching.

The professional activities which were ranked low by practically all the groups were:

- i) Aiming at high CPE passes for pupils in the school.
- ii) In-servicing teachers in the teaching of their own subjects.
- iii) Scrutinizing subject syllabuses and recommending changes to the KIE.
- iv) Making sure that new teachers fit easily into the school activities.
- v) Attending courses in school administration.
- vi) Taking an active part in out-of-class educational activities (eg. games).
- vii) Raising funds for the school.
- viii) Taking an active part in functions of local church and welfare committees.

The administrative responsibilities ranked high by all groups of respondents were:

- i) Making arrangements for teachers to participate in making decisions on matters affecting them, pupils and the school.
- ii) Attending to problems of teachers and pupils.
- iii) Planning for the achievement of goals of the school.
- iv) Assessing the progress being made by teachers and pupils in their work very often and recommending ways and means of improving

their performance.

- v) Ordering for school equipment and distributing it in time to teachers, pupils and others who should use it.

The administrative responsibilities of the ideal Administrator which were ranked low by practically all the groups of respondents were:

- i) Planning for school activities ahead of time.
- ii) Delegating responsibilities to other members of staff.
- iii) Setting long-term and short-term goals for the school.
- iv) Supervising class instructions given by teachers.
- v) Planning a good office routine and following it closely.
- vi) Attending promptly to the repair and maintenance of school buildings and equipment.
- vii) Spending school funds as required and keeping accurate records of receipts and expenditure for the funds.

#### DISCUSSION AND CONCLUSIONS

The high degree of agreement among respondents in the perception of the role and personal characteristics of the ideal Administrator in the Primary School implies

a consensus on priorities of various aspects of the role. Observation of the administrator in action seems to have led teachers, Education Officers and Administrators in the Primary Schools into common expectations for both the role and the role occupant.

It is important for perception of administrative roles to be based in both theory and practice. The theory of administration acts as a framework upon which administrators and those affected by administrative roles can build new structures as well as improve existing ones. It thus provides for the growth of a dynamic administrative system that can adjust itself to changing institutional needs and personnel requirements. It lays the foundation for a continuous critical appraisal of administrative practices and saves the institution from decay in the face<sup>?</sup> of changing ideas about the tasks the institution should perform and the type of human relations that make it possible for the institution to perform these tasks.

Within an organization there are special organizational tasks which cannot be fitted in a general description of administrative tasks for the organization. An Administrator who has undergone a vigorous training in the theory of administration is usually more capable of discerning the right kinds of procedures for dealing with these peculiar

administrative tasks. Thus an administrative structure which is not built on a frame work of theory is not only subject to different interpretations but also apt to lure those it affects into a conservative view of administration. There were indications in this study that perception of the role and personal characteristics of the Administrator in the Primary School did not have a theory base.

The highest degree of agreement among respondents in the study occurred in their perception of the personal characteristics of the Administrator in the Primary School. This showed that in the course of day-to-day exposure to the realities of primary school administration the respondents had come to associate success in administration with certain personal characteristics. It implies that the role occupant, his superiors and subordinates attach alot of importance to the personality of the Administrator in the Primary School. A quick look at the ranking of items on the personal characteristics of the ideal Administrator in the Primary School gives the impression that the respondents regarded as important only those characteristics that enabled the administrator to cultivate good human relations within the school. The characteristics that would make the administrator more effective as an



educational leader were ranked low. This showed that there was a danger of emphasizing personal characteristics of the administrator at the expense of the crucial professional and administrative tasks the administrator should perform for the achievement of goals of his institution.

The professional leadership role of the Administrator in the Primary School requires him to have a clear understanding of the principles of education. This knowledge makes it possible for him to lead teachers under him in the improvement of teaching, evaluation of teaching and learning, creative curriculum development, school living, educational methodology and parent and community relations<sup>1</sup>. Organizational management within an educational institution seeks to support the institution's professional activities so that the right education can be imparted to learners in the institution. The professional leadership role of the Administrator in the Primary School is therefore

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1 Beulah Raju, 'The Headmaster as an Educational Leader', Journal of the Kenya Teacher (No. 12, Nairobi 1971), p. 14.

his most important leadership role in the institution.

It is in this area of school administration that all respondents in the study were expected to show the highest degree of agreement in their perception of the role of the Administrator in the Primary School. On the contrary the agreement was relatively low between all paired groups of respondents with the exception of the pair of Education Officers and Administrators in the Primary Schools. This showed that teachers in the primary schools were not fully conversant with the nature, scope and importance of the professional leadership role of the Administrator in the Primary School. If they were, then their priorities of activities pertaining to the role would be very nearly the same if not completely similar.

The administrative activities of the Administrator in the Primary School are the means by which the said administrator achieves desired professional goals. Making arrangements for teachers to participate in the process of decision-making within the school for instance, is an administrative function which leads to development of good human relations with and among members of staff. This development sets the stage for full and meaningful participation, by the staff, in the professional tasks of improving and evaluating teaching, learning and living conditions

in the school. It makes it easier for the administrator to identify, develop and use the special talents of individual members of staff and to co-ordinate their activities both in and outside the classroom. It also offers the administrator an opportunity to organise appropriate channels of communication through which the staff work for continuous improvement. There is thus a remarkable degree of relationship between the professional activities of the administrator and his administrative activities.

The relationship between professional and administrative activities for the Administrator in the Primary School was not perceived by both Education Officers and Administrators in the Primary Schools. While these two groups of respondents showed relatively high agreement in their perception of the professional activities they showed relatively low agreement on the administrative responsibilities. It was also anomalous that Administrators in the Primary Schools and Teachers showed very high agreement in their perception of administrative responsibilities whereas they had shown relatively low agreement in the perception of the professional activities. Thus an understanding of the nature and

purpose of this interrelationship between professional activities and administrative responsibilities needs to be developed in Education Officers, Administrators in the Primary Schools and teachers alike.

The item by item analysis of responses to the questionnaire revealed differences in perception of the role, between paired groups of respondents, which had far reaching implications for administration in the primary school.

Perception of the personal characteristic of being 'an honest person whose behaviour is constant and a good example to pupils', as important for the ideal Administrator in the Primary School, raises two important questions about the moral conduct of the administrator. The first question is, what are the standard forms of human behaviour that pupils and teachers in the primary school should emulate from their school administrator? Secondly, how are these desirable forms of behaviour determined?

Much has been written by research psychologists about the development of moral judgement in children. The published works of such psychologists would be of great assistance in the endeavour to understand the type of behaviour that the administrator should exhibit in the school situation. The social values of communities in school surroundings could also be

studied and integrated into the concepts of social responsibility the school develops in primary school children of varying chronological and mental ages. Indeed the primary school administrator cannot be expected to be the sole source of ideas about socially acceptable behaviour and working habits. It appears that within the school system planned instructions in moral conduct and judgement need to be offered. These may be integrated in the learning units to reflect national expectations and contribute to the moral development of individual children. Within the same structure the local social values could be accommodated and the room left for the older children to examine the values critically.

The difference in perception of this personal characteristic of the ideal Administrator in the Primary School, between  $P_1$  and  $P_3$  teachers, which was statistically significant at the 2% level would be greatly reduced, if the social values it implies are clearly spelt out and made part of instructions in the primary school. Clarification of these social values and responsibilities would help development of a framework that would guide formulation of well-reasoned school rules to guide primary school pupils in their moral and social growth.

The emphasis laid on the administrator's personal characteristics of (i) being social, understanding, kind, patient and co-operative and (ii) having the ability to arouse the enthusiasm of teachers, pupils and non-teaching staff in their work, by all the respondents in this study indicates pronounced preference for the Human Relations Model of administration. This model recognizes the identification and satisfaction of the special needs and aspirations of workers in an organization as crucial to the creation of a happy working atmosphere and the promotion of the output of workers within the organization. Sound human relations contribute to success in educational leadership. The teaching staff in a school consists of professional people who have varied professional experiences which have to be identified, harnessed, harmonized and used fully for both the benefit of the learners and the development of ideas about education within the teaching profession. Thus by ranking these two items among the most important, participants in the study differed with the Bureaucratic Model of administration.

There was a moderate preference for the Bureaucratic Model of administration by the Education Officers and Administrators in the Primary Schools. This was evident

in the ranking of the personal characteristic of being social, understanding, kind, patient and co-operative by the two groups of subjects. The difference in perception of this personal characteristic between each of the two groups of subjects and the teachers was statistically significant at the 5% level. It was in contrast to the preference for the Human Relations Model by the teachers. This dichotomy in perception of the personal characteristic inevitably has a negative effect on the functioning of the machinery of administration in the primary schools. It calls for a re-examination of the model of administration that should be adopted and used in the primary schools. Such a model should suit the needs of primary school education. Education Officers, Administrators<sup>3</sup> in the Primary Schools, and teachers share the responsibility of identifying the needs of primary school education and the implication of these needs to the structure, content, methodology and scope of primary school education. Hence the need for a working atmosphere that encourages critical appraisal of results among primary school teachers and administrators. A free and fruitful exchange of ideas about primary education among the three groups can take place in a professional climate where there is mutual understanding, willingness and patience to listen

to new ideas and a spirit of cooperation. This atmosphere would be more easily realized within a Human Relations Model of administration.

In order to motivate teachers under him in their work the Administrator in the Primary School not only sets a good example to them in the performance of his duties but also influences their attitude to teaching. His influence on the teachers to a great extent depends/his ability to communicate with them /on about professional ideas that appeal to their needs and aspirations both individually, and in groups. He assigns them responsibilities within the school after identifying their talents and interests. He offers guidance and support to the teachers in their various areas of responsibility. In so doing the administrator is able to encourage those who perform their special responsibilities well.

The administrator cannot offer any financial or promotional incentives to his staff as this is within the power of the Teachers Service Commission. Indeed the Teachers Service Commission Act of 1966 specifies that only the commission can promote teachers and review their terms and conditions of service<sup>1</sup>.

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1 Republic of Kenya, The Teachers Service Commission Act 1966 Number 2 of 1967 (Nairobi: Government Printer, 1967) p. 3.



Although high regard for truth, punctuality, responsibility and industrious habits was perceived as a very important attitude for the Administrator in the Primary School, by all groups of subjects there were striking differences in perception which raise four fundamental questions. The first question is: Why do Education Officers perceive this characteristic for the administrator as the most important? Why do the Administrators in the Primary Schools and Education Officers perceive this characteristic so differently? Why do teachers and Administrators in the Primary Schools agree almost entirely in their perception of this personal characteristic for the administrator? Finally, What are the implications of differences in perception of this personal characteristic of the administrator to primary school administration?

The Education Officers are usually appointed from among Administrators in the Primary Schools. One of their responsibilities is to advise Administrators in the Primary School on the management, control and direction of the activities of the primary schools, and to advise on educational policy changes. They are thus removed from the day-to-day administrative experiences in the primary school. Their advisory task would become very difficult if they perceived administrative

responsibilities as specified tasks with specific procedures and solutions. They meet varied administrative problems which although capable of classification into different components in the administrative process differ in their nature. They have therefore to work on the basis of certain assumptions and generalizations about different facets of the administrative process, to solve varied administrative problems.

Administrators in the Primary Schools are exposed to the practical realities of primary school administration each day. They usually solve administrative and professional problems as they arise in the school. To them it is more important to solve an immediate administrative problem than to hold high ideas about the administrative process that leads to the solution of the problem. However, it is important to be both idealistic and practical in school administration. Idealism is usually the end result of learning and practical experience. It is necessary in the process of identifying problems that relate to practical realities and aids the process of establishing the most suitable solutions to these problems. In fact many administrative and professional decisions are based on certain basic assumptions about the type

of problems they pertain to . It is possible to subject most of these assumptions to empirical tests and to modify them according to results of the tests.

It was interesting to note that while  $P_1$  teachers gave the administrators' personal characteristic of having 'high regard for truth, punctuality, responsibility and industrious habits', a rank of 1,  $P_2$  and  $P_3$  teachers gave it a rank of 4. The differences in perception of this characteristic were statistically significant at the 2% and 1% levels between  $P_1$  and  $P_2$  teachers and  $P_1$  and  $P_3$  teachers respectively.

It was deduced that  $P_1$  teachers understood and accepted that high ideals were the best basis for decision-making in the process of school administration. Teachers of the  $P_2$  and  $P_3$  grades would rather deal with practical administrative problems as they arose.

Although day-to-day administrative problems and activities appear to be varied in nature and demands on the administrator, they fall into defined categories. A recognition of the general nature of administrative activities that fall under one classification leads the administrator to evolve a general attitude or principle about those activities.

The administrator uses the established principle to deal with problems of that category of administrative problems. This minimizes inconsistency in decision-making on related administrative problems. Thus ideals coupled with a grasp of and ability to deal with the realities of school administration contribute to effectiveness in school administration.

These findings show that primary school teachers of higher professional grades such as the P<sub>15</sub> are capable of idealising about the tasks of school administration and therefore appreciating the importance and purposes of school administration. They should thus be preferred to teachers of the lower grades in the selection of primary school administrators.

The task of in-servicing teachers in the subjects they teach is mainly a function of the inspectorate section of the Ministry of Education in Kenya<sup>1</sup>. The Administrator in the Primary School however shoulders the professional responsibility of assessing the performance of individual and groups of teachers under him. This helps him to identify areas where the teachers need in-service education about new concepts, purposes and content of the subjects they

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1 Philip M. Kitui et al "History of the Development of Primary School Headship in Kenya" (University of Nairobi, 1975) p. 4

teach. He could be depended upon to recommend in-service education for teachers in his school. On the other hand the administrator can organise seminars and workshops for teachers in different subject areas/facilitate exchange of ideas between /to teachers on the subjects they teach. His grasp of the content and methods requirements in various subject areas would be a great asset to him in providing professional leadership. The perception of the professional activity of in-servicing teachers in the subjects they teach as important by Administrators in the Primary Schools is an index of their willingness to organise for in-service education of teachers under them. On the other hand teachers perceive the activity as unimportant. This implies that teachers do not expect Administrators in their primary schools to organise in-service courses for them. It is also a reflection of the confusion that exists about who should initiate, organise and run in-service courses for primary school teachers. The Education Officers perceive in-servicing of teachers by the administrator in their school as an important professional activity for the administrators and so do the P<sub>1</sub> teachers. This confirms the need to clarify the role of the Administrator in the Primary School in the in-service education of Primary School teachers.

The statistically significant differences, between Education Officers and teachers in the perception of the administrative responsibilities of (i) attending to the problems of teachers and pupils and (ii) setting long-term and short-term goals for the school has important implications to the process of administering individual primary schools. A school administrator's willingness to listen to and solve professional and personal problems of subordinates, is an important factor in promoting efficiency and output among the subordinates. Teachers and pupils usually may have problems which make it difficult for them to teach or learn, or even perform tasks assigned to them by their school administrator. The administrator has a duty to establish channels of communication with teachers and pupils about such problems and to provide for means of helping solve these problems. In so doing he improves the working and living conditions for pupils and teachers thereby facilitating improved performance. In helping subordinates to solve work problems the administrator acquires deeper understanding of the potentialities of his personnel and pupils. The ever growing numbers of teachers and pupils in the primary schools make the administrator's task of dealing

with problems of individual teachers and pupils formidable. This makes it necessary for the administrator to delegate the responsibility of counselling individual pupils to teachers while leaving room for teachers to bring to his attention the difficult problems of individual pupils. Thus a system of feedback about counselling of pupils would ensure that the administrator is kept informed about problems in this area.

Administrators in the Primary Schools ranked this administrative responsibility low indicating a tendency to ignore or minimize the importance of attending to problems of teachers and pupils. Ignoring dialogue with individual pupils and teachers on educational matters would be tantamount to ignoring the development of their personalities and character. This is an important aspect of education which is usually not fully catered for in both classroom instructions and the normal communication between the administrator and his subordinates.

The setting of long-term and short-term goals for an organization is the crucial task of the administrator. For an organization to derive maximum benefit from past and present experiences of all its personnel and to maximize the use of that personnel and resources it has to be involved in setting its goals. At the primary school level,

the administrator and his staff need to set up a machinery for decision-making for all the tasks the school performs. The administrator and his staff can then identify the requirements of their institution and the constraints for the satisfaction of these requirements. He will then be in a position to involve his personnel in setting goals for the institution while accepting ultimate responsibility for the final decisions taken. By perceiving the role of setting goals for the school as important for the Administrator in the Primary School, Education Officers lend weight to the argument advanced above. However, by perceiving this responsibility as unimportant, Administrators in the Primary Schools and teachers reflect lack of awareness of its nature, purpose and significance in school administration. This divergence of perception of the responsibility needs to be resolved by means of a clear Ministry of Education policy on the matter and subsequent clarification of what the role involves.

The supervision of class instructions by school administrators is aimed at giving a second opinion to the teachers on the organization and management of learning situations. Its ultimate goal is the improvement of the quality of education given to pupils or students in the institution.



While  $P_3$  teachers ranked supervision of class instructions by the administrator 6 both  $P_2$  and  $P_1$  teachers ranked it 12. This indicated that  $P_3$  teachers were far more inclined to accept supervision of their class instructions by their administrator than either the  $P_1$  or  $P_2$  teachers.

Teachers need to be fully informed about the objectives, methods and usefulness of instructional supervision. The techniques of instructional supervision in any one situation determine its success and the extent to which the supervision is accepted by teachers. A mutual exchange of opinions between the supervisor and the teacher about the situation observed, followed by joint recommendations on methods of improving the quality of instructions, promotes mutual trust and confidence apart from enhancing understanding of the importance and purpose of instructional supervision. The teacher has to be led to develop a positive attitude towards criticism of his lessons by the supervisor. To do this, the supervisor usually gives a balanced view of the strengths and weaknesses of the learning situation he has observed and also displays a willingness to accept correction on his views. The supervisor needs therefore to be well-informed about the type of learning situations he assesses.

Administrators in the primary schools used for the study were mainly of the P<sub>3</sub>, P<sub>2</sub> and P<sub>1</sub> grades. It was apparent that unlike the P<sub>3</sub> teachers, P<sub>1</sub> and P<sub>2</sub> teachers felt that they had little to gain from evaluation of the learning situations they organized for children, by administrators whose professional grades were either equivalent to theirs, or lower. Thus in order to build teachers' confidence in their school administrators' ability to supervise the professional grades of Administrators in Primary Schools should be above the P<sub>1</sub> grade.

#### Recommendations

Programmes for pre-service and in-service education of teachers of primary schools, Administrators in the Primary Schools, and Education Officers on the professional and administrative responsibilities of the Administrator in the Primary School should be drawn up and implemented by the Ministry of Education. Such education is necessary for the development of realistic uniform perception of the role by the role occupant, his superiors and subordinates. It should include the theory of school administration and the professional leadership role of the Administrator in the Primary School.

Research in moral development of children of primary school going age should be carried out to establish the role of the Administrator in the Primary School in promoting this development. The research may use community norms, national expectations of the behaviour of individuals, and the findings of research by psychologists on the development of moral judgement in children.

The Human Relations Model of administration should be used in the primary schools to facilitate a more efficient exchange of ideas among primary school teachers, Administrators in the Primary Schools and Education Officers. This model was found acceptable to each of the three groups of subjects.

Supervision of educational instructions by the Administrator in the Primary School should be given a wider scope and meaning. Instructions on the nature, purpose and means of effecting that supervision within the Human Relations Model of administration should be imparted to the Administrators in the Primary Schools, primary school teachers and Education Officers. It should aim at improving the quality of educational instructions through a process of critical self evaluation of the

personnel in primary schools and appropriate in-service education. In this connection Administrators in the Primary Schools should be encouraged to initiate, plan, organize and carry out educational in-service courses, seminars and workshops for the teaching staff in their schools.

Administrators in the Primary Schools should be assisted by the Ministry of Education in setting up the administrative machinery for helping teachers and pupils solve individual personal and educational problems which hinder their progress in teaching and learning. Counselling of pupils and teachers should therefore be encouraged and developed within the primary school system.

The Ministry of Education should consult Administrators in the Primary Schools and teachers when making major policy decision in setting long-term and short-term goals for their institutions.

Valid criteria for the appointment and evaluation of the performance of Administrators in the Primary Schools should be worked out and used by the Teachers Service Commission in order to focus attention on the crucial tasks of the administrator and facilitate growth of the right attitude to the role of the administrator.

Administrators in the Primary Schools should have higher professional qualifications than the teachers under them. This will facilitate provision of sound professional guidance of teachers by their administrator and enhance their confidence in him as an educational leader.

APPENDIX A

OPEN-ENDED QUESTIONNAIRE

RESPONSIBILITIES AND CHARACTERISTICS OF A GOOD HEADTEACHER

STATUS: E.O./Headteacher/Deputy/Class<sup>P1</sup>teacher ( )  
(delete as )  
PROFESSIONAL GRADE: Graduate/S.1/P.2/P.3 (necessary )

OCCUPATIONAL EXPERIENCE: ..... years.

This study requires your honest opinion about the responsibilities and characteristics of a good Primary School Headmaster/Headmistress.

Please complete the statements listed below with what you personally consider as the most suitable answers.

SECTION A.

A good Headmaster is one who:

- (1) gives teachers an opportunity to participate in:-
  - (a)
  - (b)
  - (c)
  - (d)
  - (e)
- (2) supervises the following aspects of school activities:-
  - (a)
  - (b)
  - (c)
  - (d)
  - (e)

(3) gives more time to the following aspects of office routine:-

- (a)
- (b)
- (c)
- (d)
- (e)

(4) attends to the following duties connected with the maintenance and improvement of school buildings and facilities (play fields etc.):-

- (a)
- (b)
- (c)
- (d)
- (e)

(5) devotes time to discussions with parents, Education Officers and, other important visitors to the school on (matters related to):-

- (a)
- (b)
- (c)
- (d)
- (e)

A good Headmaster is one who:

(6) has the following personal qualities:-

- (a)
- (b)
- (c)
- (d)
- (e)

(7) has the following qualifications, experience and, status (e.g. marital):-

- (a)
- (b)
- (c)
- (d)
- (e)

(8) involves himself in the following professional and/or school activities:-

- (a)
- (b)
- (c)
- (d)
- (e)

(9) informs his members of staff by means of:-

- (a)
- (b)
- (c)
- (d)
- (e)



(10) takes the following steps in making important decisions that affect his school:-

- (a)
- (b)
- (c)
- (d)
- (e)

(11) relates the education of children to the needs of society by:-

- (a)
- (b)
- (c)
- (d)
- (e)

(12) plans for the following school activities ahead of time:-

- (a)
- (b)
- (c)
- (d)
- (e)

(13) looks after the following aspects of school finances:-

- (a)
- (b)
- (c)
- (d)
- (e)

(14) involves the following categories of people in solving pupil disciplinary problems:-

- (a)
- (b)
- (c)
- (d)
- (e)

(15) involves the following categories of people in solving teacher disciplinary problems:-

- (a)
- (b)
- (c)
- (d)
- (e)

SECTION B

(16) Other characteristics of a good Headmaster might be:- (give your own list)

- (a)
- (b)
- (c)
- (d)
- (e)
- (f)
- (g)
- (h)
- (i)
- (j)

(17) some outstanding characteristics of a BAD headmaster might be:-

- (a)
- (b)
- (c)
- (d)
- (e)
- (f)
- (g)
- (h)
- (i)
- (j)

2

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THANK YOU FOR YOUR ASSISTANCE

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APPENDIX B

PRELIMINARY STUDY ON THE CHARACTERISTICS AND RESPONSIBILITIES OF A GOOD HEADTEACHER: RESPONSES TO THE OPEN-ENDED QUESTIONNAIRE.

ITEM 1: A good Headmaster is one who gives teachers an opportunity to participate in:

1. discussing problems affecting pupils, teachers and school-community relations.	TCH 42	HMS 10
2. setting goals for pupils and teachers.	8	4
3. planning and organising of school activities (e.g. games and clubs), making of block timetables	37	12
4. ordering school equipment	3	-
5. in in-service courses and experimentation.	4	-
6. in research work	3	-
7. enforcing school discipline	25	6
8. choosing the subjects they teach	4	-
9. in social activities during school hours.	2	-
10. in games and extra-curricula activities.	27	6

	TCH	HMS.
11. in deciding what should be taught and how it should be taught	2	4
12. in making school rules for teachers and pupils.	3	1
13. in curriculum development and visits to other schools to note methods of teaching and administration.	5	1
14. parents-teachers contacts	2	3
15. discussing freely with the headmaster teachers' and pupils' problems.	1	-
16. contributing agenda for staff discussions	1	-
17. supervising expansion and maintenance of school buildings and facilities.	2	2
18. in allocating and choosing extra- curricula activities they will supervise.	3	1
19. in discuss academic progress of pupils	-	3
20. in storing of school equipment	-	2

ITEM 2: .... supervises the following aspects of  
school activities:

1. actual teaching	27	11
--------------------	----	----

	<u>TCH</u>	<u>HMS</u>
2. preparation of schemes of work and lessons by teachers.	11	7
3. attendance and punctuality of teachers and pupils to classes and other school activities.	26	8
4. subordinate staff at work	9	5
5. keeping of pupil achievement records by teachers	5	8
6. running of extra-curricula activities.	32	10
7. maintenance and improvement of physical facilities (by teachers pupils and parents) and equipment	17	4
8. admission and transfer of pupils	1	0
9. general cleanliness of pupils and teachers	9	1
10. keeping of school rules by pupils and teachers	11	3
11. smooth running of the school in general	9	3
12. checks pupil school meals	1	0
13. collection of school funds (e.g. building funds etc.)	0	1

	TCH	HMS
ITEM 3: . . . . gives more time to the following aspects of office routine:		
1. discussing with parents and casual visitors	18	11
2. attending to teacher and pupil personnel	26	8
3. attending to official correspondence and calls	19	10
4. keeping school records	20	6
5. planning for school improvement (teaching, buildings and supply of equipment)	6	4
6. ordering and supplying teaching equipment to teachers	15	3
7. making a daily schedule for office work	4	5
8. filing	4	4
9. admission and transfer of pupils	6	2
10. paying school bills and debts	6	2
11. allocating duties to teachers	0	1
12. attending to emergency cases	2	1
13. evaluating and setting of standards for all school activities	0	1

	<u>TCH</u>	<u>HMS</u>
ITEM 4: ..... attends to the following duties connected with the maintenance and improvement of school buildings and facilities (play fields etc.):		
1. improving of school buildings and facilities(repairs, paint)	34	12
2. extention of buildings, classrooms, latrines and other necessary buildings	10	4
3. planning for proper use of existing buildings, equipment and facilities	12	3
4. raising funds for additional school buildings and facilities	3	0
5. employing and supervising school maintenance staff	7	0
6. ordering for repair equipment	11	4
 ITEM 5: ...devotes time to discussions with parents, education officers and other important officers and visitors to the school on matters related to :		
1. expansion and improvement of physical facilities (additional classrooms, lavatories etc.)	21	5
2. introduction and/or evaluation of educational programmes (e.g.		



	<u>TCH</u>	<u>HMS</u>
pre-science activities, social studies, new maths, and general school progress of individual pupils	37	16
3. admission and transfer of pupils	3	2
4. financial obligations of individual pupils to the school (e.g. building funds, money for the purchase of uniforms, school fees, replacement of lost school items etc.)	11	1
5. discipline of pupils and of teachers	34	11
6. supply of school equipment	14	6
7. staffing	8	7
8. general school welfare (improving school standards - health facilities, explaining school policies and routine, etc.)	30	9
9. interschool activities	6	0
ITEM 6: ... has the following personal qualities:		
1. understanding, kind, patient and co-operative	36	11
2. respects other peoples' opinions, courteous	12	3
3. impartial	11	5
4. firm	11	2

	<u>TCH</u>	<u>HMS</u>
5. has strong moral character, principled	34	7
6. duty conscious	18	7
7. forward-looking, progressive, plans ahead, broad minded	3	1
8. social	16	4
9. able to motivate teachers, pupils, parents and subordinate staff; good organiser; resourceful; intelligent; enthusiastic	15	8
10. self confident	22	6

ITEM 7: ... has the following qualifications,  
experience and status (e.g. marital):

1. (a) S:1)	6	2
(b) P:1)	6	2
(c) P:2)      Qualifications	3	1
(d) P:3)	1	0
2. (a) 2 years      )	2	0
(b) 4-5 years      )	13	3
(c) 6 years      )	1	2
(d) over 6 yrs      )	3	1
(e) as a deputy)	0	1
3. (a) married	22	8
(b) marriage does not matter	3	0
(c) elderly (25+)	4	0

COMMENT: this was not a good item it should have specified professional qualifications, teaching experience, and marital status.

	<u>TCH</u>	<u>HMS</u>
ITEM 8: .... involves himself in the following professional and/or school activities:		
1. extra-curricula activities	32	13
2. classroom teaching	33	6
3. inservicing teachers and supervising teaching	4	3
4. attending in-service courses	6	2
5. curriculum development	2	2
ITEM 9: ... informs his members of staff by means of:		
1. staff meetings	45	12
2. circulars, letters, news-letter	35	16
3. individual contacts	32	7
4. through intermediaries (pupils, teachers, <sup>messengers</sup> etc.)	6	2
5. notices on the <sup>bulletin</sup> -board		
or in the staff-room	19	2
6. announcement to the whole school	3	1

	TCH	HMS
<u>ITEM 10:</u> .... takes the following steps in making important decisions that affect his school:		
1. consults teachers, parents or education officers	43	12
2. identifies/studies and defines the situation/problem	5	3
3. decides on his/her own	2	2
4. compares alternative solutions	4	3
 <u>ITEM 11:</u> ... relates the education of children to the needs of the society by means of:		
1. inviting parents to impart knowledge to pupils (e.g. on occupational or life experiences)	15	6
2. organising educational programmes in which pupils develop sense of service to the society (scouting, harambee projects and/or walks)	10	3
3. designing programmes for moral education (leadership in sports)	20	4
4. encouraging the learning and interpretation of local traditions, customs, history and current events	8	5

	<u>TCH</u>	<u>HMS</u>
5. teaching the occupational skills used in the society	7	4
6. attaining reasonable C.P.E. results	0	1

ITEM 12: ... plans for the following school activities ahead of time:

1. duty rosta	12	1
2. master timetable	20	6
3. staff and committee meetings (parents, etc.)	10	7
4. school calendar (exams. tours, competitions etc.)	39	11
5. ordering-collection and/or purchases school supplies	8	2
6. building of new classrooms, staff houses and other physical facilities	6	1
7. admission of new students	1	2

ITEM 13: ... look after the following aspects of school finances:

1. activity fees	6	1
2. school building fund	27	7
3. donations	3	1
4. school farm, Art and Craft, and Home-science fund	8	2

	<u>TCH</u>	<u>HMS</u>
5. Harambee projects' fund	2	2
6. parent-teacher association fund	1	1
7. school meals' fund	5	3
8. educational tours' fund	6	0

ITEM 14: ... involves the following categories of people in solving pupil disciplinary problems:

1. deputy headteacher	13	5
2. teachers	47	15
3. parents or guardian	39	15
4. education officers	22	8
5. police	3	2
6. school committee	25	12
7. social workers or psychologists	9	2
8. prefects	11	2

ITEM 15: ... involves the following categories of people in solving teacher disciplinary problems:

1. deputy headteacher	15	5
2. staff (meetings)	2	0
3. staff (elderly)	26	4
4. education officers/T.S.C.	40	14
5. school committee	17	7

	TCH	HMS
6. K.N.U.T.	9	5
7. Police	6	3

ITEM 16: CHARACTERISTICS OF A GOOD HEADTEACHER

1. enthusiastic, healthy (mentally and physically)
2. smartly dressed, intelligent
3. duty conscious, always punctual
4. resourceful and confident, courageous
5. fair and impartial
6. sober during working hours
7. friendly, kind, understanding and patient
8. motivates others by personal example
9. consults colleagues before making main decision;  
collects all relevant facts to solve administrative  
problems
10. plans ahead, good organizer, good co-ordinator
11. firm
12. puts school welfare before personal business  
interests
13. a good teacher, interested in reading
14. social, diplomatic, cheerful, sympathetic, humane
15. courteous to all
16. morally straight, principled, self-disciplined
17. understands teachers' problems and loves children
18. should be elderly (35 or +)
19. well educated (academically, professionally and in  
the art of educational administration)

- 20. does not back-bite other teachers
- 21. married person
- 22. fluent in speech

ITEM 17: CHARACTERISTICS OF A BAD HEADTEACHER

- 1. harsh, cruel, does not listen to views of teachers, parents or pupils
- 2. dictator, aggressive, arrogant
- 3. absents himself from work often
- 4. reports teachers to the E.Os. before finding out reasons for their bad behaviour
- 5. drunkard
- 6. lazy, irresponsible, inefficient
- 7. corrupt (accepts bribes for favours)
- 8. works with a clique of teachers
- 9. discourages those who work hard among teachers
- 10. partial
- 11. quick to anger
- 12. dirty and carelessly dressed
- 13. poor teacher
- 14. lacks creativity and initiative
- 15. against change
- 16. poor planner
- 17. does not keep official secrets
- 18. inconsistent, unstable in personal life, immoral



19. reprimands teachers in the presence of pupils,  
shouts at subordinate staff
20. makes intimate friends with school girls
21. entertains gossip about his teachers
22. tribalistic
23. sickly
24. antisocial, too official.

APPENDIX C

THE FINAL QUESTIONNAIRE

Name of School \_\_\_\_\_  
Your Professional grade  
P3/P2/P1

Position held: Teacher/  
Deputy Head teacher/AEO  
PSI/EO/DEO.

SEX: Male/Female.

Teaching Experience \_\_\_\_\_

IMPORTANT QUALITIES AND RESPONSIBILITIES OF A PRIMARY  
HEADTEACHER  
SCHOOL

You are required to show the order of importance of some personal qualities and responsibilities of a primary school headteacher. Use the numerals 1, 2, 3, 4 etc. to show the importance of each of the statements listed under A, B, and C below. No particular order of the statements is either right or wrong. Just feel free to choose the statement which in your honest opinion is most important in each section. Put the number 1 on the space provided at the beginning of that statement. Choose the next most important statement and give it the number 2. Proceed that way until you come to the end of the section. Please do not give the same number to any two statements in the same section.

A

A good primary school Headteacher is one who:

- (a) \_\_\_\_\_ is an honest person whose behaviour is constant and a good example to pupils and teachers.
- (b) \_\_\_\_\_ attends to his duties immediately.
- (c) \_\_\_\_\_ is social, understanding, kind, patient and co-operative.
- (d) \_\_\_\_\_ is able to arouse the enthusiasm of his teachers, pupils and non-teaching staff in their work.
- (e) \_\_\_\_\_ is a good organizer, full of new ideas and confident.
- (f) \_\_\_\_\_ has high teaching qualifications (e.g. PIs, SIs)
- (g) \_\_\_\_\_ does not favour any of his teachers or pupils (is impartial).
- (h) \_\_\_\_\_ respects other peoples' opinions.
- (i) \_\_\_\_\_ has been a teacher for a long time.
- (j) \_\_\_\_\_ is a married person.
- (k) \_\_\_\_\_ has had long experience in school administration as deputy headteacher.
- (l) \_\_\_\_\_ can keep official secrets.
- (m) \_\_\_\_\_ has a high regard for truth, punctuality, responsibility and industrious habits.

B

A good primary school headteacher is one who:

- (a) \_\_\_\_\_ is good at teaching.
- (b) \_\_\_\_\_ in-services teachers in the teaching of their own subjects.
- (c) \_\_\_\_\_ takes an active part in out-of-class educational activities (e.g. games, clubs and societies).
- (d) \_\_\_\_\_ scrutinizes subject syllabuses and recommends changes to the KIE.
- (e) \_\_\_\_\_ is good at raising funds for the school (e.g. for buildings and school improvements)
- (f) \_\_\_\_\_ is an active member of local church and welfare committees.
- (g) \_\_\_\_\_ aims at high CPE passes for pupils in his school.
- (h) \_\_\_\_\_ achieves the goals he has set for the school.
- (i) \_\_\_\_\_ encourages teachers to train pupils to think and study on their own.
- (j) \_\_\_\_\_ has attended courses in school administration.
- (k) \_\_\_\_\_ works with parents to improve the general standards of education in the school.
- (l) \_\_\_\_\_ makes sure that new teachers fit into the school activities easily.

C

A good primary school headteacher is one who:

- (a) \_\_\_\_\_ supervises class instructions given by teachers.
- (b) \_\_\_\_\_ makes arrangements for teachers to participate in making decisions on matters affecting them, pupils and the school.
- (c) \_\_\_\_\_ sets long-term and short-term goals for the school.
- (d) \_\_\_\_\_ plans for the achievement of goals of the school.
- (e) \_\_\_\_\_ attends to the problems of teachers and pupils.
- (f) \_\_\_\_\_ orders for school equipment and distributes/in time to teachers, pupils and /it other persons who should use it.
- (g) \_\_\_\_\_ attends promptly to the repair and maintenance of school buildings and equipment.
- (h) \_\_\_\_\_ assesses the progress being made by teachers and pupils in their work very often and recommends ways and means of improving their performance.
- (i) \_\_\_\_\_ plans for school activities ahead of time.
- (j) \_\_\_\_\_ delegates some of his responsibilities to his members of staff.

- (k) \_\_\_\_\_ spends school funds as he is required to and keeps accurate records of receipts and expenditure for those funds.
- (l) \_\_\_\_\_ plans a good office routine and follows it closely.

Comments on the Questionnaire (if you have any):-

2

TABLE 3.31f

Average Ranks of the Items for Different Groups of Respondents •

CATEGORY ITEM	n= 20 EOs	n=87 Adm. in Sch- ools	n=194 All the tea- chers	n=102 Men Tea- chers	n=92 Women teac- hers	n=38 P1 tea- chers	n=76 P2 tea- chers	n=80 P3 tea- chers
A a)	2	1	2	1	2	4	2	1
b)	6	6	7	7	7	6	8	7
c)	5	3	1	2	1	2	1	2
d)	4	4	3	3	3	3	3	5
e)	3	2	5	5	5	5	5	3
f)	11	11	12	12	12	11	12	12
g)	7	7	6	6	6	8	6	6
h)	8	8	8	8	8	7 ½	7	8
i)	12	12	11	11	11	12	11	11
j)	13	13	13	13	13	13	13	13
k)	10	10	9	10	9	9	9	9
l)	9	9	10	9	10	10	10	10
m)	1	5	4	4	4	1	4	4

Table 3.31f continued.

B a)	4	3	5	4	5	6	5	4
b)	5	2	9	6	10	4	9	8
c)	10	11	10	10	9	10	11	10
d)	7	6	8	5	8	8	8	6
e)	11	10	11	11	11	11	10	11
f)	12	12	12	12	12	12	12	12
g)	8	7	4	7	3	7	4	5
h)	1	1	1	2	1	1	1	3
i)	2	4	2	1	4	2	3	1
j)	9	9	6	9	6	5	6	9
k)	3	5	3	3	2	3	2	2
l)	6	8	7	8	7	9	7	7
C a)	6.5	8	8	11	7	12	12	6
b)	1	1	1	1	1	1	1	1
c)	3	9	10	8	11	6	9	12
d)	5	2	3	3	3	2	2	4
e)	4	4	2	2	2	4	3	2
f)	8	5	5	5	5	8	5	5
g)	12	12	11	10	10	9	11	9
h)	2	3	4	4	4	3	4	3
i)	9	6	6	6	6	5	6	7.5
j)	6.5	7	7	7	8	7	8	7.5
k)	11	11	12	12	12	11	10	10
l)	10	10	9	9	9	10	7	11



TABLE 4. 11b

Personal Characteristics Ranked High or Low by All the Groups of Respondents.

GROUP OF RESPONDENTS AND OF AVERAGE RANKS.

ITEM	EOs	AD.	M	F	PIT	P2T	P3T	All T
A) Personal Characteristics								
<u>1.1 ITEMS RANKED HIGH</u>								
A(a) An honest person whose good behaviour example to pupils and teachers.	2	1	1	2	4	2	1	2
A(c) Social, understanding, kind, patient and co-operative.	5	3	2	1	2	1	2	1
A(d) Able to arouse the enthusiasm of teachers, pupils and non-teaching staff.	4	4	3	3	3	3	5	3

A(m) High regard for truth  
punctuality responsibility  
and industrious habits.

1	5	4	4	1	4	4	4
---	---	---	---	---	---	---	---

A(e) Good organizer  
full of new ideas  
and confident.

3	2	5	5	5	5	3	5
---	---	---	---	---	---	---	---

### 1.2 ITEMS RANKED LOW

A(g) Does not favour  
any teachers or  
pupils(impartial).

7	7	6	6	8	6	6	6
---	---	---	---	---	---	---	---

A(b) Attends to his  
duties immediately.

6	6	7	7	6	8	7	7
---	---	---	---	---	---	---	---

A(h) Respects other  
peoples' opinions

8	8	8	8	7 <sup>2</sup>	7	8	8
---	---	---	---	----------------	---	---	---

A(k) Has had long  
experience as  
deputy Head <sup>teacher</sup>

10	10	10	9	9	9	9	9
----	----	----	---	---	---	---	---

A(l) Can keep  
official secrets.

9	9	9	10	10	10	10	10
---	---	---	----	----	----	----	----

A(i) Has been a  
teacher for a  
long time

12	12	11	11	11	12	11	11
----	----	----	----	----	----	----	----

A(f) Has high teaching  
qualifications.

11	11	12	12	11	12	12	12
----	----	----	----	----	----	----	----

A(j) Is a married person

13	13	13	13	13	13	13	13
----	----	----	----	----	----	----	----

TABLE 4.11c

Professional Activities Ranked High or  
Low by All the Groups of Respondents.

GROUP OF RESPONDENTS AND  
AVERAGE RANKS OF ITEMS

ITEM	B) Professional Activities	EOs	Ad.	All	M	F	PIT	P2T	P3T
<u>ITEMS RANKED HIGH.</u>									
	B(h) Achieves the goals he has set for the school.	1	1	1	2	1	1	1	3
	B(i) Encourages teachers to train pupils to think and study on their own.	2	4	2	1	4	2	3	1
	B(k) Works with parents to improve the general standards of education in the school.	3	5	3	3	2	3	2	2
	B(a) Is good at teaching.	4	3	5	4	5	6	5	4
<u>ITEMS RANKED LOW</u>									
	B(g) Aims at high CPE passes for pupils in his school.	8	7	4	7	3	7	4	5
	B(b) Inservices teachers in the teaching of their own subjects.	5	2	9	6	10	4	9	8



TABLE 4.11d

Administrative Responsibilities Ranked High  
or Low by All the Groups of Respondents.

ITEM C) Administrative Responsibilities	GROUP OF RESPONDENTS AND AVERAGE RANKS OF ITEMS							
	EOs	AD.	All Ts	M	F	PIT	P2T	P3T
<u>ITEMS RANKED HIGH</u>								
C(b) Makes arrangements for teachers to partici- pate in making decisions on matters affecting them, pupils and the school.	1	1	1	1	1	1	1	1
C(e) Attends to the problems of teachers and pupils.	4	4	2	2	2	4	3	2
C(d) Plans for the achievement of goals of the school.	5	2	3	3	3	2	2	4
C(h) Assesses the pro- gress being made by teachers and pupils in their work very often and recommends ways and means of improving their	2	3	4	4	4	3	4	3

performance.

C(f) Orders for school equipment and distributes it in time to teachers, pupils and other persons who should use it.

ITEMS RANKED LOW

C(i) Plans for school activities ahead of time.

C(j) Delegates some of his responsibilities to his members of staff.

C(c) Sets long-term and short-term goals for the school.

C(a) Supervises class instructions given by teachers.

C(l) Plans a good office routine and follows it closely.

EOs	AD	All Ts	M	F	PIT	P2T	P3T
8	5	5	5	5	8	5	5
9	6	6	6	6	5	6	7.5
6.5	7	7	7	8	7	8	7.5
3	9	10	8	11	6	9	12
6.5	8	8	11	7	12	12	6
10	10	9	9	9	10	7	11

C(g) Attends promptly  
to the repair and  
maintenance of  
school buildings  
and equipment.

12	12	11	10	10	9	11	9
11	11	12	12	12	11	10	10

C(k) Spends school  
funds as he is  
required and  
keeps accurate  
records of  
receipts and  
expenditure  
for those funds.

2

TABLE 4.11e

Values of Chi-square for Test of Relationship Between Paired Groups of Subjects on Perception of Personal Characteristics.

PAIR OF SUBJECTS	EOS VS ADM	EOS VS TEAs	ADMINS VS TEAs	MEN Ts VS WOME Ts	PI Ts VS P2 Ts	PI Ts VS P3 Ts	P2 Ts VS P3 Ts.
A a)					2.12	5.52 **	
b)					0.43		
c)		5.05 *	5.10 *				
d)						2.10	1.99
e)		1.67	5.57 **			0.62	1.79
f)							
g)					2.55	1.60	
h)							
i)							
j)							
k)							
l)							
m)	8.42 ***	11.72 ***			5.70 **	8.32 ***	

\*\*\* Difference significant at the 1% level.  
 \*\* Difference significant at the 2% level.  
 \* Difference significant at the 5% level.



TABLE 4.11f

Values of Chi-square for Test of Relationship  
Between Paired Groups of Subjects on Perception  
of Professional Activities.

Pair of SUBJECTS ITEM	EOs VS ADM	EOs VS TEs	ADMIN VS Ts	MEN Ts VS WOMEN	PI Ts VS P2 Ts	PI Ts VS P3 Ts	P2 Ts VS P3 Ts
B a)						0.06	
b)		5.95 **	28.29 ***	3.02	0.15	0.82	
c)							
d)			2.18	6.86 ***		0.01	0.95
e)							
f)							
g)		1.02	1.58	9.07	1.12	1.11	
h)						11.61 **	12.48 ***
i)	1.51		1.43	8.45 ***			0.24
j)			3.64	3.02		4.02 *	3.04
k)	3.64		1.31				
k)					0.63	1.11	

\*\*\* Difference significant at the 1% level.  
\*\* Difference significant at the 2% level.  
\* Difference significant at the 5% level.

TABLE 4.11g

Values of Chi-square for Test of Relationship Between Paired Groups of Subjects on Perception of Administrative Responsibilities.

PAIR OF SUBJECTS	EOs VS	EOs VS	ADM VS	MEN VS	PI VS	PI VS	P2 VS
ITEM	ADM	Ts	Ts	WOM Ts	P2 Ts	P3 Ts	P3 Ts
C a)				1.90		11.61 ***	7.35 ***
b)	1.36						
c)	3.91 *	8.98 ***		1.61	4.57 *	10.04 ***	0.88
d)	1.43	1.02				1.47	0.67
e)		4.68 *	6.91 ***			9.05 ***	
f)	3.45	3.43	0.35		2.12	9.53 ***	
g)					0.35		6.52 ***
h)		0.56					
i)	0.73	0.11				7.83 ***	
j)							
k)							
l)					4.83		2.11

\*\*\* Difference significant at the 1% level.  
 \*\* Difference significant at the 2% level.  
 \* Difference significant at the 5% level.

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**UNIVERSITY OF NAIROBI**

**PARTICIPATION OF MICRO AND SMALL ENTERPRISES IN  
EXPORT: A CASE STUDY OF KENYA**

**BY WAMUYU WACHIRA  
REG NO R/50/7028/99**

**A dissertation submitted in partial fulfillment for the award of the  
degree of Masters of Arts in International Studies at the Institute of  
Diplomacy and International Studies, University of Nairobi.**

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## DECLARATION

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



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## **DEDICATION**

This dissertation is dedicated to my parents **Mr. and Mrs. Wachira Kahoro** and my husband **Mr. Mwangi Mungai** who have been my pillar of support and encouragement.

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Wanjuyu Wachira

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## **ABBREVIATIONS**

<b>MSEs</b>	<b>Micro and Small Enterprises</b>
<b>AGOA</b>	<b>African Growth And Opportunity Act</b>
<b>COMESA</b>	<b>Common Market for Eastern and Central Africa</b>
<b>ACP – EU</b>	<b>African, Caribbean And Pacific–European Union</b>
<b>EAC</b>	<b>The East African Community</b>
<b>EPC</b>	<b>Export Promotion Council</b>
<b>KIE</b>	<b>Kenya Industrial Estates</b>
<b>K-REP</b>	<b>Kenya Rural Enterprises Programme</b>
<b>MNCs</b>	<b>Multinational Co-operations</b>
<b>K-MAP</b>	<b>Kenya Management Assistance Programme</b>
<b>EPZA</b>	<b>Export Processing Zone Authority</b>
<b>GDP</b>	<b>Gross Domestic Product</b>



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## Abstract

The importance of Micro and Small Enterprises (MSEs) has been highlighted in various government publications and policy papers. Regional markets have opened up opportunities for Micro and Small Enterprises to engage in exporting activities, which include COMESA, the East African Community, the European Union and the North American markets.

Despite the opportunities created as a result of these trading blocs and markets, as well as the government's initiatives to enhance and try to implement good policy guidelines in the realm of MSEs engaging in exporting activities, MSEs still face many challenges which hamper their participation in export activities. These includes:- poor infrastructure, high taxation, political instability, lack of adequate credit, high insurance costs, lack of contacts and genuine trading partners, as well as high levels of competition.

The government has attempted to formulate an appropriate policy environment for MSEs to operate in by drafting various policy papers including Sessional Paper No2 of 1992 which aims at promoting and facilitating the operations of MSEs. Furthermore, strategies to enhance MSE activities have been well articulated. However only a small proportion of MSEs engage in export activities as compared to those engaging in businesses that depend on the local market. This is well illustrated in the survey data where only 30% of the MSEs surveyed engaged in export activities.

In order to enhance MSE participation in export, the government should continue to modify and implement the policy framework especially aimed at facilitating access to affordable credit, reducing taxation and insurance tariffs, improving physical infrastructure, enhancing entrepreneurship training and availing information on how to access foreign markets by MSE operators.

This study is divided into five chapters. Chapter One dwells on the methodology and theoretical framework as well as the literature review of MSE activity in a global perspective. Chapter two discusses the overview of Kenyan Micro and Small Enterprise

sector, delving into the historical background of these enterprises as well as discussing the overview of their structure, roles that they play and the problems that are experienced by the enterprises.

Chapter three discusses the government policies on the promotion of MSEs in Kenya. Chapter four examines the survey data of the research that was undertaken on MSEs that participate in exporting activities. Finally, chapter five presents the conclusions and recommendations made for the research that was undertaken.

## CHAPTER ONE: INTRODUCTION

### 1.0 GENERAL BACKGROUND

There were about 1.3 million registered Micro and Small Enterprises (MSEs) in Kenya, by 1999, according to one of recent and quite comprehensive national baseline survey on MSEs, (*Government of Kenya, 1999*). The term Micro and Small Enterprises is defined as “enterprises that employ up to fifty workers”. However distinction is made between ‘Micro’ and ‘Small’ whereby the former refers to enterprises that employ between one to ten persons, including the owner, while the latter employs from eleven up to fifty employees, (Harper, 1984). In Kenya, MSEs are also generally or loosely referred to as the ‘informal sector’ or the “jua kali” sector.

Export, which is the focus of this study is defined as *the sale of goods or services to another country, outside the boundaries of the country of origin of the products or goods.* (Almonte, 1992). Export occurs when foreigners seek certain goods and services from another country. Therefore foreign students in Kenya are said to use export educational services from educational institutions in Kenya. Tourism is another example whereby the service provider does not leave his/her country but still engages in export activities. Tourists leave their countries and go to consume the services offered by another country by tour operators and hotels, (Paje, 1992).

MSEs that engage in export activities have various characteristics. These enterprises are located in varying premises that include the home of the business owner, in a commercial building at the town center, or in a mobile unit.

Over the past decade, the Kenyan economy has experienced a decline in economic growth and performance which culminated in a negative growth rate of -0.2% in the year 2000, contributing to rising unemployment, high levels of poverty and related socio-economic problems. This situation has been further aggravated by the implementation of the Structural Adjustment Programme, which recommended the retrenchment of thirty four thousand (34,000) civil servants by the year 2002, (*Daily Nation, March 2002*).

In addition to the retrenchment of civil servants, many privately owned enterprises laid off many of their workers because of the poor performance of the economy. This includes large multinational companies such as Coca – Cola, which laid off three hundred employees in 2002, (*Daily Nation, June 2002*). Proctor and Gamble, another large multinational corporation, closed down its manufacturing plant in Nairobi in January 2002, complaining of myriad problems including high taxes and poor sales. The company now imports the finished products and sells them to the domestic market, (*Daily Nation, January 2002*).

Kenya's unemployment has continued to rise as thousands of school leavers enter the labour market every year. Each year 10,000 university graduates enter the labour market, while 120,000 leave secondary school, while another 250,000 leave primary school. In total approximately 500,000 school leavers join the labour market annually, (*Government of Kenya, 1999*).

## 1.1 STATEMENT OF THE PROBLEM

Micro and small enterprises in Kenya play an important role in the overall economy of the country. However most of these enterprises operate in the domestic market which has been reeling in economic problems such as low growth rates and unemployment. The cause of this state of affairs is corruption in government spending, poor infrastructure and poor governance. Moreover low levels of foreign investments partly caused by political instability, high bank interest rates, high tariffs on energy, high taxation and general mismanagement of the economy by the government of Kenya, has aggravated economic problems over the last two decades, (*Daily Nation, September 2002*). This has led to the closure of many MSEs. Approximately 60% of MSEs are closed down within their first year of operation, (*Government of Kenya, 1999*).

Although MSEs play an important role in the Kenyan economy, they have largely limited their operations to the domestic market in spite of the fact that government has signed various trade agreements to try and widen the market for enterprises, such as COMESA, EAC, and AGOA, which provide an opportunity for Kenyan businesses to participate in export activities. Exporting has tended to be largely left to medium and large enterprises in both the manufacturing and services sectors, especially in the large enterprises, which export plastics, leather products, beverages and a host of other goods.

Lack of limited participation of MSEs in the export markets, despite the opportunities being created by the government of Kenya is a problem that requires more attention in the efforts of the search for ways and means of how to unlock the potential of MSEs in the socio-economic development of Kenya and other developing countries. This study seeks to investigate the causes of lack of adequate participation, and poor performance of MSEs in export activities as opposed to medium and large -scale enterprises.

## 1.2 JUSTIFICATION OF THE STUDY

There has been limited research conducted in the area of Kenya's MSEs with reference of their participation in export activities. In fact, data that is available from the Export Promotion Council, the department of external trade and the Economic Survey do not categorize the enterprises that engage in export according to size, that is MSEs, medium sized firms or large firms.

Documented research that has been conducted on MSEs in Kenya, concentrate on MSEs as a whole, that is, those that operate in the domestic realm as well as those that operate in the export realm. The most comprehensive research done in this field is the 1999 National Baseline survey on MSEs in Kenya, which was conducted by the Central Bureau of Statistics in collaboration with the Centre for Economic Growth and the Rural Enterprises Programme. This survey did not however explore the crucial area of exporting including the modes of accessing of such markets and the policy and regulatory framework that influence such undertakings.

The policy documents that the government has formulated regarding MSE development also do not tackle the issue of MSEs engaged in exporting activities. These policy documents include *A Renewed Policy and Strategy Framework For Micro and Small Enterprise Development in Kenya of 1998*, (Government of Kenya, 1998), *Sessional Paper No 2 of 1992 on Small Enterprise and Jua Kali Enterprise (Republic of Kenya, 1992)*, and *A Strategy for Small Enterprise Development In Kenya Towards the Year 2000*, (Republic of Kenya, 1090). These policy documents concentrate on the domestic factors that need to be enhanced in order to foster growth of MSEs operating in the domestic market.

Kenya experienced its worst economic performance in the year 2000, when a negative growth rate was recorded. During that year the only sector that recorded a positive growth rate was the tourism sector, (*Daily Nation, July 2001*). The country is still reeling from a number of economic problems such as high unemployment and high government domestic borrowing.

In order to tackle this problem of unemployment, it is necessary to promote the establishment of MSEs, which are profitable and self-sustaining. Exposing more MSEs to export activities would create larger markets for the Kenyan enterprises.

The Kenya government has spearheaded the promotion of export trade through participation in various trade initiatives. Kenya for instance is a member of the Common Markets for Eastern and Southern Africa (COMESA), The East African Community (EAC), The Contonou Agreement and the African Growth and Opportunity Act. These wide markets are exploited by very few MSEs. On the other hand, these markets are dominated by medium and large firms. Moreover these firms dominate 60% of the manufactured goods exports to Uganda and the COMESA markets.

To achieve this goal, this study attempts to identify the factors that hamper the expansion of the MSE sector in the export markets and government policies and mechanisms that would foster the participation of MSEs in exporting activities.

### 1.3 OBJECTIVES OF THE STUDY

The world has become a global village as there are advanced communication channels



such as the internet. These had opened up the export business arena. Therefore this study seeks to explore whether there are numerous opportunities for MSEs to engage in exporting, in light of the telecommunications breakthrough.

Another objective of this study is to identify the reasons why MSEs do not actively engage in exporting activities even though the government of Kenya has been actively participating in various regional and international pacts such as the EAC, COMESA, AGOA, and Cotonou Agreement, which have created significant market opportunities.

The survival rate of MSEs is very low during the first year of inception as approximately 60% of these establishments collapse, (*Government of Kenya, 1999*). Therefore, this study seeks to identify the problems that face MSEs, which lead to the collapse or lack of growth of the enterprises both in the domestic and export markets.

Scrutinizing the relevance and practicability of the government policies relating to MSE development in Kenya, is another objective for this study. Policies lay down the framework under which the MSEs operate under, hence the success of these enterprises is pegged on the structure and implementation of these policies.

The fourth objective of this study is the identification of incentives that the government should give to MSEs so as to foster growth and development in the arena of exporting.

## **LITERATURE REVIEW**

### **1.4.1 Micro and Small Enterprises Engaging in Export activities in the Third World**

In most of the third world countries, MSEs are created by individuals who are seeking to

problems of unemployment, poor housing standards, low standards of sanitation and poor health facilities. Moreover these countries are faced with various economic problems such as low Gross Domestic Product levels (GDP), low economic growth and high birth rate which directly lead to high levels of poverty, *(Tonenko and Dondo, 1992)*.

MSEs have created many job opportunities for the unemployed in many developing countries. In Mexico out of the two million businesses recorded in 1996, 97.5% are MSEs employing approximately six million people, *(Alison Morrison ed. 1998)*. In Kenya 2.4 million jobs have been created by micro and small enterprises by 1991, *(Republic of Kenya, 1992)*.

Governments in some third world countries have realised the potential of job creation through MSEs that engage in export activities. They have implemented these measures which such as availing business information, promoting the use of sophisticated technology, that will help enhance their growth. This is well demonstrated in the Caribbean, the Asian developing countries and in Egypt.

The Caribbean governments have recognized the importance of MSEs engaging in export in order to foster economic development. The governments have identified business information as a key factor in the development of MSEs. Business information plays a key role in helping MSEs achieve business competitiveness and business success in the international realm, *(Arthur, 1985)*. The ability to access the right business information at the right time at the right price and using it to add value to business activities is a major factor in a business's ability to compete successfully, especially in export markets.

In the Caribbean, business information comes in a variety of forms; from oral advice to traditional publications and online databases. Suppliers of business information range from the in-house market research unit to independent information brokers and government institutions, such as trade promotion organizations, development corporations or the department of statistics.

Many Caribbean governments especially Barbados, Trinidad, Tobago and Jamaica are actively involved in disseminating and fostering an information culture among the MSEs which engage in exporting activities.

In Jamaica, the government's Economic Development Agency was created as a one-stop shop for exporters. The agency provides information on Jamaica's investment opportunities, the prevailing economic and market trends, as well as cost models and data on various types of investment. A comprehensive library is maintained which provides information on marketing, trade and investment. Other agencies that provide business information are the Entrepreneurial Centre of the University of Technology, the Chamber of Commerce and the Jamaica Employers' Federation.

Barbados has information services in the public, quasi-public and private sectors. These include the National Library Service, the New Enterprise Division Resource Centre, the Caribbean Export Development Agency Resource Centre and the Ernst and Young Business Information Centre.

On the other hand Guyana is the only Caribbean nation that does not have an information resource centre to provide relevant information to MSEs engaging in export activities.

In Asian developing countries there are two types of MSEs; those that use traditional techniques of production and those that use modern high technology. The former, serves the local market and have low productivity. On the other hand the MSEs with modern high technology which use state of the art production technology, exports their products all over the world. These MSEs first appeared in Japan but they are increasingly seen in Taiwan Province of China, the Republic of Korea, Hong Kong, and more recently in Singapore. The modern MSE produces electronics and communications equipment as well as high quality sports and computer products for export. (*Technonet Asia, 1993*).

They are organized along modern management lines and they are very productive and highly competitive. For example, in Taiwan Province of China, the MSE sector accounts for 80 per cent of total exports and 60 per cent of the manufacturing sector, (UNIDO, 1986).

The Asian experience shows that it is possible to transform traditional, low technology MSEs into modern high technology, efficient and export oriented MSEs.

Analysis of successful development experiences shows that sustained and accelerated economic growth is built on the development of productive capacities, international competitiveness, and on a structural transformation away from a narrowly specialized primary commodity economy. Success of MSEs depends on establishing a virtuous circle between investment, exports, and savings. In this process exports support investment because they earn foreign exchange required for the importation of goods and technology needed for capital accumulation and growth.

Investments support export by providing the basis for technological change, productivity growth, increased competitiveness and structural change. As incomes and profits are increased through investment, they increasingly provide additional resources for capital accumulation, (UNIDO, 1990).

Cambodia another Asian developing country, is another case that illustrates the policies that the government is implementing to foster development in the area of garment and agricultural exporting activities for MSEs. Prior to 1986, export enterprises suffered from high trade facilitation costs such as transport, customs, inspections and financing. This undermined their competitiveness in global markets.

With the identification of these shortcomings, the Cambodian government is trying to

diversify the destination of export products and developing new export products. This involves the identification of market and product potential and sectoral trade action plans to support MSE development. These includes strengthening producer associations, disseminating trade information and intelligence services, promoting services, facilitating export financing services, and services to help MSEs meet technical standards and packaging requirements for export markets.

In addition to increasing the value-added content of exports, the Cambodia government is trying to regionalize and decentralize its export sector so that the benefits of globalization are to be distributed more widely within the country.

Cambodian MSE exporters have demonstrated their ability to increase their export performance despite fierce international competition. This is due in part to Cambodia's economic infrastructure and the liberal trade regime.

Cambodia's garment export sector is performing well. The garment products include knitted T-shirts, Women's and girl blouses, pullovers, cardigans, men's and boys trousers and shorts. Other exports of importance to Cambodia's economy are footwear, wood, rubber, shrimps and prawns, fish and fishery products.

The agricultural products such as rubber and wood have shown a substantial increase in trade volumes and most of this trade is transacted as border trade with neighboring Vietnam and Thailand, (*Almonte, 1992*).

Exporting offers numerous advantages for the MSEs but, many of these enterprises do not take advantage of the opportunities that exist in the worldwide marketplace. The

restructuring of political boundaries, the opening of new consumer markets, historic trade agreements, and the new World Trade Organization have created many opportunities for MSEs to export. The Cambodian MSEs are trying to capitalize on these market shifts and to export for the following reasons: increase sales and profits, gain global market share, reduce dependence on existing domestic markets, stabilize market fluctuations, make use of excess production capacity, enhance competitiveness, and create domestic jobs, (*Almonte, 1992*).

The Cambodian government has helped MSEs to identify ways of entering the export market through - direct exporting and indirect exporting. With direct exporting, the MSE owner undertakes the entire export process and does not use any intermediaries. By becoming a direct exporter, the MSE owner takes responsibility for the entire range of export activities starting with identifying the customer through to collecting payment. Direct exporting has several advantages. First, the enterprise has complete control over the exporting process, hence increasing profit margin by saving on payments to an intermediary. Secondly, it develops a closer relationship with the overseas buyer.

On the other hand, the disadvantage of engaging in direct exporting is that the enterprise is exposed, more to direct risk for example the lack of payment by the customer.

Indirect exporting is another way Cambodian MSEs engage in export activities. This is done through commission agents, local buying offices and merchant exporters

These entities have the necessary infrastructure and expertise to export to a number of different countries. The advantages of indirect exporting are that it allows the enterprise

to concentrate on production without having to learn all the technical and legal aspects concerning exporting, and also to benefit from the professional expertise that an exporting company provides.

Cambodian MSEs also enter into joint ventures with foreign firms in which marketing arrangements can be in the form of partial or total buy-back by the foreign business partner. Cambodia MSEs engage in export activities, which stimulate economic growth but more importantly provides sustainable employment opportunities and income.

Third world MSEs are well suited for engaging in the export of handicrafts. For example in Cambodia the success of MSEs in this export sector has significantly contributed in meeting the country's vital priorities, namely; maintaining or increasing the degree of self-sufficiency, mobilizing less capital investment than other sectors, encouraging rural development by generating employment. Moreover it protects the natural resources and the environment, both through recycling and making substantial use of nature-based raw materials.

Engaging in the export of handicrafts reconciles the uniqueness and artistic value of crafts with its socio-economic value, contributing to fostering tourism, and increasing foreign exchange inflows. Moreover in Cambodia, MSEs engaging in the export of services contributes 41 percent of GDP within the export sector, which contributes close to 25 percent of GNP, employing about 6 to 7 percent of the labour force,

*(UNIDO, 1993).*

It is important to recognize that exports bring a wide range of national development benefits such as foreign exchange earnings and the creation of jobs. Environmentally speaking, services are clean industries and they can be started with modest means. Indeed, very small service firms (under 5 persons) can export niche services successfully. In addition such service firms create jobs for skilled university graduates, thus helping to stem the brain drain that is common in less developed regions. They also create jobs for a range of school-leavers who often find it hard to obtain work, including women.

The Egyptian government has also recognized and given prominence to MSEs that engage in export activities as they are fundamental to the development and modernization of the Egyptian economy. MSEs in Egypt account for about 99% of non-agricultural private sector activities and three quarters of the total labour force in the private sector. The ministry of foreign trade (MOFT) initiated a policy framework regarding exports and MSEs so that these enterprises will be able to break into the international markets, compete more effectively in the domestic marketplace, and take the lead in redressing the balance of trade.

The Ministry enables MSEs representatives to participate in the Commodity Councils and take part in decisions related to exports. They also help the enterprises to identify the sectors where they exist and enhance their export efficiency.

The introduction of a consortium of quality control systems and a consortium of marketing and branding systems are to be implemented in Egypt as well as internationally. This program was elaborated within a consultative framework whereby



various stakeholders provided feedback, which was collated and analyzed through workshops and questionnaires, (*Almonte, 1992*).

The MOFT has established the following bodies to help assist MSEs engage in export.

The Foreign Trade Policy Sector represents MSE owners on commodity councils, where it puts forth the problems facing this sector and seeks solutions. It also helps formulate the MSE Export Promotion Strategy, studying marketing opportunities and providing information on markets.

The General Authority for Export and Import Control helps MSEs in technical guidance to small exporters on export advantages and packaging techniques. The Authority also provide information on procedures to obtain export or import registers, with the importation of production requirements and also gives guidance on the roles of different monitoring entities and the guidelines of examination of exported goods.

The Egyptian Center for Export Promotion assists MSEs in using advanced technology to promote exports and also informing MSEs on the preparation of international accounting standards for MSEs.

The Export Development Bank facilitates various financial procedures for MSEs exports and is researching ways of providing financial services to small investors.

In Pakistan the role of MSEs engaging in export has been realized in fostering growth in the economy. With the help of the Asian Development Bank, MSEs, which engage in

exporting activities have been awarded a loan of US\$150 million to help these enterprises to engage in exporting operations. Furthermore the Asian Development Bank (ADB) also approved a partial risk guarantee of up to a maximum aggregate liability of \$150 million to reduce risks associated with letters of credit that are issued by Pakistani banks to import goods required for export production. It is ADB's second partial risk guarantee.

In addition, the ADB approved an investment through its Private Sector Group of up to \$2 million in an export credit agency established in the private sector. The Pakistan Export Finance Guarantee Agency Limited (PEFG) is sponsored by thirteen commercial and private sector banks in Pakistan together with ADB and will issue guarantees on behalf of small scale exporters to Pakistan banks providing trade finance.

PEFG plays an important role in risk mitigation and export promotion for MSEs in both new markets and non-traditional sectors. The leveraging effect of the Pakistan bank and joint ADB equity investment covers up to \$100 million per year in guarantee volume. By improving access of MSEs to trade finance, the project has increased Pakistan's exports by about \$350 million annually, (*Asian Development Bank, 2000*). This has created about 135,000 new jobs, and supports the livelihood of about 1 million people.

MSEs that are benefiting are those involved in textiles, silk art, carpets, sporting goods, jewelry, footwear, electrical equipment, machinery, food and information technology.

The general view held by third world governments as discussed above is that MSEs that engage in exporting activities aid in promoting the economy of these countries by creating job opportunities, developing new production technologies and by providing the much needed foreign exchange.

## 1.4.2 THE CONCEPTUAL FRAMEWORK

The important role of MSEs has been debated over the years and different theories have been put forward regarding the role of entrepreneurship being the basis of the creation of MSEs, in economic development. These theories range from debates about the role of religion in the rise of capitalism, Marxian debates over the role of national capital and the more recent theory of the development state which emphasizes the entrepreneurial role of the state. Moreover, the Schumpeterian theory which portrayed entrepreneurs as the critical agents for economic change and development (Schumpeter, 1934)

This theory indicates that the entrepreneur introduces new goods and services into the market, develops new methods of production, opens up new markets and sources of supply of raw materials, and pioneers new forms of business organizations. In export, entrepreneurs play a crucial role in adapting technologies to indigenous needs and promoting structural changes.

Notwithstanding entrepreneurs engaging in export realize that the basic premise for exporting is that different countries have different resource endowments and different production capabilities. One country may produce in excess or surplus of certain goods and on the other hand may experience shortages in others. There is no country that can produce all the products that it needs in sufficient and economic quantities, therefore the inevitable result is the need to exchange goods amongst nations.

There is a significant contribution to the economy in terms of output in services and goods. MSEs that engage in export carry out numerous activities which include manufacturing of various products, commerce and trade and engaging in services such as

transport, storage, repair and professional services

It is generally agreed that MSEs engaged in export create jobs at a relatively low capital cost with entrepreneurs able to buy small quantities of products and sell them hence incurring minimal costs due to low overheads. This is also essentially true in the realm of service provision, as minimal costs are used to set up these enterprises, (GTZ, 2002).

Human resource development is a direct positive effect of the creation of MSEs that engage in exporting activities. Skilled and Semi skilled labour is developed, which in turn becomes a platform for industrial development. (ILO, 1998)

The creation of demand and supply relating to MSE activities fosters economic development. Rural enterprises usually supply agricultural goods and raw products to urban enterprises, which in turn are refined for the purpose of exporting hence spurs economic growth. This is well illustrated in the soap- stone industry in Kenya, where soap- stone is mined in Kisii, curved, then bought by entrepreneurs from Nairobi who then export the curvings to various overseas markets, (ILO, 1998).

The nurturing of entrepreneurial and managerial talent is another important benefit of MSEs development especially in the realm of exporting. When business owners become competent in managing their own businesses, success will be achieved in the economic development of Kenya.

Micro and Small Enterprises engaging in export also encourage the use of local resources, for example MSEs which engage in the sculpturing of wood carvings will use

local varieties of wood, hence there is no need of importing the raw material, thereby the cost of raw material will be lower than that which is imported. Furthermore the cost of production will be reduced thereby the pricing of the product will be competitive in the outside market. (GTZ, 2002)

MSEs engaging in export help to continue promoting indigenous entrepreneurs to engage in export activities which usually dominated by foreign owned large and medium sized enterprises especially in the African countries.

Expansion and diversification into exports provides for the improvement in the level of technological know how of the MSEs. Competition in the international markets stimulates exporters to adopt their products to meet the needs and high standards of foreign markets, (Almote, 1992).

Market expansion is another aspect that stimulates MSEs to engage in export activities. Some MSEs may possess natural resources and skills to produce large quantities of products, but find the local market too small for them, thereby the need to exploit other markets outside that particular country.

Foreign exchange benefits that stem from engaging in export activities help to boost the country's overall economy. Moreover engaging in export activities helps in improving the balance of payment, which can be defined as the “ overall ratio or balance between a country's outward flow of cash and its inward flow from the rest of the world”,

( Almote ,1992).

Many developing countries have a balance of payment problem as they spend more than they can earn. It is important to note that excess spending over earnings jeopardizes a country's ability to produce necessary goods and services available only from foreign sources. A country that continuously incurs external trade deficits strains its balance of payments. Relief can only be found in foreign borrowing, which leads a country into financial crises. In order to solve this problem of a loop - sided balance of payment, a country should try and increase its foreign exchange earnings, which can be achieved through MSEs engaging in export activities.

The stabilization of market fluctuations is a positive result of MSEs engaging in export activities. By expanding into global markets, MSEs are no longer held captive to economic changes, consumer demands, and seasonal fluctuations within the domestic economy.

The economy of scale is increased when MSEs engage in export activities. This is a result of the production capacity increasing, thereby decreasing the average per unit costs of the items.

## 1.5 HYPOTHESIS

The following hypotheses guided this study.

- i) Lack of appropriate policies and strategies lead to slow growth of Micro and Small Enterprises engaging in export trade.
- ii) Micro finance institutions haven't played a significant role in the promotion of exports by MSEs
- iii) Lack of affordable credit has lead to poor performance by MSEs in the export trade.

## 1.6 METHODS OF DATA COLLECTION

In this study, both primary and secondary data were used. The primary data was collected through a survey of fifty MSEs based in the Kenya Industrial Estates, tour firms and educational institutions. Interviews were also conducted with senior officials at the Export Promotion Council and the Kenya External trade Authority. The secondary data was compiled from government documents such as Sessional Papers on MSEs development in Kenya, the Economic Surveys, reports from the Export Promotion Council, the Centre For Business Information in Kenya, the National Chamber of Commerce and Industry and the Ministry of Trade.

Non governmental reports were also used as sources of secondary data and these included some reports of NGOs were used. They includes the Kenya Gatsby Charitable Trust, the Institute of Policy Analysis and Research, Jitegemee Cottage Industries, the Kenya Rural Enterprises Programme, Micro Enterprise Support Programme, the Jua Kali Association of Kenya and the Kenya Management Assistance Programme.

The secondary data collection also involved library research encompassing journals, periodicals and newspapers.



## **CHAPTER TWO: AN OVERVIEW OF KENYA'S MICRO AND SMALL ENTERPRISES ENGAGING IN EXPORT ACTIVITIES.**

### **2.0 Introduction**

The MSE sector in Kenya has seen dramatic growth especially with the participation of indigenous entrepreneurs venturing into self-employment. This chapter seeks to discuss the main features that distinguish Kenyan MSEs. The data does not distinguish those MSEs that engage in export and those that operate within the boundary of Kenya.

### **2.1 Historical Background of MSEs In Kenya**

MSE participation in exporting developed in Kenya before the era of colonization as many communities practiced barter trade. This involved the exchange of goods between two parties. There was no currency used as the two parties exchanged goods which each of them did not have. This barter trade was also practiced between different countries, hence exporting was common place. The Ivory trade was practiced by the Akamba of Kenya, and Arabs who were mainly from Zanzibar. The Arabs exchanged spices and gold with the Akamba who in return gave them ivory, which the Arabs shipped to the Asian continent. Moreover the infamous slave trade involved the export of human labour to the Asian and American continents. The Arabs exchanged various commodities with different Kenyan chiefs, including textiles, spices and gold, in exchange for slaves who were exported to Asia and America to be used as slaves, (Hallot, 1974).

The colonization of Kenya in the late 19<sup>th</sup> century, brought about rapid and positive development in the MSE sector as the monetary system was introduced, replacing the barter system. Moreover slave trade had been abolished. The colonialists focused on developing the country's infrastructure by embarking on the construction of the railway from Mombasa to Malaba, which has had a significant impact in the development of the MSE sector in Kenya.

The construction of the railway began in 1895. Indian and Pakistani nationals were recruited as laborers as it was difficult to get local Kenyan labour with the required skills and attitudes. After 1902, a number of these Asian immigrants remained in Kenya. It is estimated that there were about 5000 immigrants from Asia in 1900. This number rose to 25,000 in 1913, and to 168,000 in 1948. (Kristeinsen, 1974). Most of the Asians began MSE activities along the railway line and later moved into the rural areas and smaller towns after the completion of the railway. They set up small shops known as *dukas* where they traded in household goods. Some of them turned into small-scale manufacturing. The products that they produced were mainly cheap household goods, furniture, kitchen utensils and they also dealt with repair works. These business activities formed the basis for exporting. The Asians introduced the Africans to small-scale business activities which were the foundations to engaging in exporting activities.

Europeans also owned MSEs, which constituted a large percentage of MSEs registered in Kenya while Africans who owned MSEs were very few. This is well illustrated in Table 1, which highlights the fact that many of the MSEs during the colonial period were owned by foreigners especially by Europeans as they were in control of the political system. Africans on the other hand suffered due to political insurgence while trying to gain independence from Britain. This led to a state of emergency in 1952, which hampered the growth of African owned enterprises. Moreover many Africans were restricted in movement, as a measure by the colonizers to curb the uprising.

**Table 1: Micro and Small Enterprises Among Different Ethnic Groups in Nairobi And Mombasa In 1963.**

Racial Group	Percentage
European	57
Asian	36
African	3
Other	4
<b>TOTAL</b>	<b>100</b>

**Source: Kristensen, 1974**

During the period between 1946 and 1993, the African population was usually hired as unskilled labourers for the small scale industries owned by the Asians as well as the large scale European industries. They usually performed subordinate roles and were taught only minimal skills required for a specific job. But the situation changed during the Second World War as many Africans went to fight for the British. They were not only trained on how to fight but also how to service equipment.

After the war, a large number of Africans were demobilized with good skills but with limited capital. Some of them invested in Micro and Small Enterprises while a few others managed to penetrate the manufacturing sector on a low level. Eventually, they slowly took over from the Asians who had moved to large-scale industries. Since independence,

## 2.2 STRUCTURE OF MICRO AND SMALL ENTERPRISES IN KENYA

Micro and Small Enterprises including those that engage in exporting activities, play an important role in the Kenyan economy by offering alternative sources of incomes to the country's unemployed people. In 1999 MSEs contributed 18.4% of the Gross Domestic Product (GDP). The National MSE Baseline Survey of 1999, also found that there are about 1.3 million MSEs countrywide including those that engage in export, employing some 2.3 million people, (Government of Kenya, 1999).

The working definition of this study has already been pointed out is that MSEs including those that engage in exporting, are enterprises that primarily employ between one to fifty individuals. Moreover, these enterprises can be defined using the following characteristics as outlined by Robert Gichira and Douglas Dickson (1991).

- They are independently owned and managed.
- Have owner- supplied capital.
- There is open communication between the business owner and the employees.
- They find difficulties in obtaining funds especially for expansion
- The job descriptions of the employees are usually varied and they are expected to perform multi task.

MSEs engaging in exporting activities, engage in farm based business activities. These involve some form of processing before marketing. For example Canbera Tea, a Kenyan MSE specializes in the growing, processing and packaging of herbal tea to Japan, Italy and Spain.

MSEs that participate in exporting activities also participate in non- farm based activities which include manufacturing, commerce and trade and services. In the manufacturing sector, MSEs engage in the production of metal, plastics, forest products, Food/beverage/Tobacco products , Textile and leather products.

In the commerce and trade sector, MSEs trade products that were acquired from the manufacturers, hence acting as wholesalers when they export the products.

The service sector is another area that MSEs which engage in exporting activities. This sector includes Repair, Transport, Storage, Education, recreation and professional services such as consultancy.

MSEs engaging in export activities can also be categorised into five broad categories for classification, which includes extractive enterprises, manufacturing, wholesaling, retailing and service provision.

### **Extractive Enterprises**

These are enterprises that grow products or extract raw materials and then export them. These include Agriculture, Forestry, Commercial Fishing and Mining. In Kisii, MSE owners mine soap stone from the quarries of Tabaka and then carve them. The ornaments and handicrafts made are then sold to middle- men or directly to overseas buyers with whom they get into contact by using the internet.

### **Manufacturing MSEs**

These enterprises take raw materials and change them into a form that consumers can use and then export them. For example iron sheet roofing material, which is manufactured here in Kenya, is exported to different COMESA member countries. Other products that are manufactured in Kenya for the purpose of export include Food, beverage, tobacco products, Textiles, leather, Minerals, detergents and metal products.

### **Wholesaling MSEs**

These are enterprises whereby wholesalers buy goods from extractive or manufacturing businesses. They usually buy them in large quantities and then export in small quantities. For example Food, beverage and Tobacco products are exported by wholesalers in Kenya.

### **Retailing MSEs**

Retailers buy goods from wholesalers or extractive businesses and then export these products to consumers. The export of these commodities in Kenya is usually limited to the neighboring countries.

### **Service MSEs**

The export of services are usually the easiest businesses to start as they require less capital as opposed to manufacturing, extractive enterprises, wholesaling and retailing. Services can be classified in the following categories:

- Personal services, which involves performing a task directly on a client, who resides in another country, for example the installation of a computer network.
- Other services include entertainment, hotel and lodging. In this case people who do not reside in the country consume the hotel and entertainment services of the host country, hence these businesses can be said to be engaging in export activities.
- General business services, which involves those tasks that are performed by one MSE to another that is located outside the country. For example auditing, advertising and maintenance services. (*Gichira and Dickson, 1991*)

### ***The Rural/Urban Distribution of MSEs in Kenya***

The distribution of these broad categories of MSEs engaging in export in Kenya is illustrated as follows in Table 2, which also includes those that operate locally. The table illustrates a marginal difference between the number of MSEs in the rural areas and those in the urban areas. In the manufacturing sector the rural MSEs were 1.6% less than the urban enterprises. While in the Commerce and services sector differences were minimal as 1.9% and 7% respectively were recorded.

Table 2 Distribution Of MSEs In Kenya In 1993

Enterprise Category	Rural	Urban	Total
<b>MANUFACTURING</b>	26.9%	28.5%	20%
Food/Beverage/Tobacco Products	11%	24.8%	10.1%
Textile/Leather Products	2.3%	5.4%	2.9%
Forest Products	11%	3.6%	9.4%
Mineral Products	3.7%	0.1%	2.9%
Metal Products	0.6%	3.1%	1.2%
Other Manufacturing	0.3%	0.5%	0.4%
<b>COMMERCE/TRADE</b>	60.2%	62.1%	60.6%
Wholesale	2.3%	1.5%	2.1%
Food/Beverage/Tobacco Products	57.9%	60.6%	58.5%
<b>SERVICES</b>	10.9%	17.9%	12.5%
Hotels/Restaurants/Bars	2.7%	6.3%	3.5%
Personal Services	2.4%	5.1%	3.1%
Professional Services	0.0%	0.1%	0.1%
Repair Services	1.6%	3.9%	2.1%
Transport/Storage	1.3%	1.2%	1.3%
Professional Services	0.0%	0.1%	0.1%
Repair Services	2.9%	0.5%	2.4%

Source: National MSE Baseline Survey 1993.



## ***Business Organisations***

MSEs engaging in export activities in Kenya adopt any of the four forms of business organizations in Kenya. This includes the sole trader, partnerships, co-operative societies and private companies. (Gichira and Dickson, 1991)

The sole trader is a business organisation whereby an MSE engaging in export is owned and controlled by one person. The business owner cannot be legally separated from the business. There are several advantages of being a sole trader. Firstly, the trader makes most of the business decisions. Secondly, he/she keeps all the profits and finally, the sole trader can give personal attention to his/her customers.

On the other hand, the sole trader experiences a myriad of problems, which include losing all the property he/she owns if the business cannot pay its debts. Also sole traders may not be able to raise enough resources to expand the business, which automatically means that many individually owned businesses do not expand rapidly. Finally, the business may end if the owner dies, as he/she was the one who knew how to run the business.

Another form of business organization found in MSEs that participate in export are partnerships. These are businesses formed and owned by two or more people who come together for the purpose of sharing profits. There are various advantages of this form of business organization. This includes sharing of losses and debts equally amongst the partners. It is easier to raise more money as capital to start off the partnership as opposed to the sole trader.

The disadvantages of these form of business organizations is that the partners take longer to make decisions as they may disagree on certain issues. Also profits are shared amongst all the partners, which means that the profits enjoyed by each individual may not be large. (Gichira and Dickson, 1991)

The third type of business organization is the co-operative societies, which are formed by people coming together with the intention of benefiting from this organization. These co-operatives employ workers to produce the various products for export, or the individual members may do the actual production.

All the members of the co-operative have an equal say in the running of the co-operative. There are various types of co-operatives, they include:

Marketing and Produce Co-operatives, which are formed by members so that they sell their produce to different export markets.

Savings and Credit Co-operatives. Members set aside money, which can be borrowed by the members who can use the funds to establish MSEs that engage in exporting activities.

The fourth and final type of business organization is the Private Company, which is formed by two or more people who have come together to own an MSE that engages in export activities. Each of the owners of the business contributes towards the business, which is owned as share capital.

The advantages of this type of business organization are that even though the original owner dies, the business will continue. Also it is easier to raise capital and the personal property of the business owners cannot be affected in the event of business failure.

The disadvantage of running companies is that a lot of resources are required to start such an organization. Also it requires a lot of record keeping

## 2.2.1 MSE entrepreneurs Profiles

### Age of Entrepreneurs

As reflected in the national baseline survey of 1999, MSEs, which operate in the domestic market and in exporting activities, the national mean age of entrepreneurs was 35 years. Moreover male entrepreneurs were slightly older than their female counterparts at 36 and 33 years old respectively. When further analysis is done the age factor analyzed by age groups, it is observed that 83% of the entrepreneurs are in the age bracket of 16 to 45 years.

Analysis of MSEs engaged in export activities at the Kenya Industrial Estates, educational firms and tours and travel agencies, the survey results showed that 87% of the enterprises that engaged in exporting activities, were owned by entrepreneurs aged between 41 to 50 years. Moreover 13% were owned by entrepreneurs aged 51 and above. This survey results show a slight semblance with those of the national baseline survey as the mean age of entrepreneurs was 35 years, which illustrates that middle aged people are the ones who usually engage in business activities.

There was gender imbalance in reference to ownership of MSEs that engage in export activities. According to the survey carried out in this report, there were only 13% of MSEs, engaged in exporting activities, were owned by women. This is in contrast to a gender balance in the National Baseline survey of 1999, whereby 49% of the enterprises were owned by women, while 51% were owned by men.

The formal sector retiring age group, of 56 years and above, do not adversely impact the participation in MSEs activities even though they have received retirement benefits which can be used as start up capital for running a micro and small enterprise.,  
(*Government of Kenya, 1999.*)

## Formal Education

There was an upsurge of educated entrepreneurs in Kenya between 1995 and 1999, who have attained secondary and graduate qualifications. For example in 1995 23.2% of the entrepreneurs had attained secondary education, compared to 33.1% in 1999. In 1999 there was an increase in entrepreneurs who had attained tertiary education, which was 1.8% as compared to 1.2% in 1995, as illustrated in Table 3. This state of affairs has been caused by poor economic performance, which had led to retrenchments and low levels of formal job creation. This has caused many graduates and school leavers to seek alternatives in self-employment.

There were less illiterate entrepreneurs in 1999 than 1995 as 10.6% of the entrepreneurs surveyed had not received any formal education in 1999 as opposed to 20.4% in 1995. Moreover there was an increase in the number of post secondary educated business people in 1999 as 1.8% of those surveyed were engaging in MSE activities, as compared to 1.2% in 1995. ( Table 3)

*Table 3*      **Level Of Education Attained By Entrepreneurs (%)**

<b>Education</b>	<b>1995</b>	<b>1999</b>
None	20.4	10.6
Primary	55.3	54.4
Secondary	23.2	33.1
Higher	1.2	1.8

**Source: National MSE Baseline Survey 1999.**

The level of education that the entrepreneur has attained, has a direct bearing on the performance of his/her MSE. Entrepreneurs with the highest revenue were found in the postgraduate group, while those with the lowest revenue were found among those without education. (Table 4)

**Table 4** Gross Monthly Revenue Returns By Level Of Education (%)

Kshs.	None	Nursery	Primary	Secondary	U/grad	P/grad	Total
Below 2,000	23.2	65.3	19.6	10.1	4.4	—	31.3
2,001-5,000	24.5	12.1	21.5	17.3	4.0	—	24.0
5,001-10,000	21.4	17.1	22.1	22.4	4.4	—	—
10,000-20,000	19.9	—	17.4	20.7	20.6	20.6	20.5
20,001-50,000	4.7	5.6	12.7	17.6	4.1	4.1	3.8
50,000+	6.4	—	6.7	11.9	62.6	80.0	20.5

**Source:** *National MSE Baseline Survey 1999.*

From the survey data, 100% of the business owners who engaged in exporting activities, had attained tertiary education which includes college, graduate and post graduate studies. This indicates that illiterate or low academic qualifications seem to be a hindrance regarding the participation of entrepreneurs in export activities.

## Training

Training of entrepreneurs involves education received outside academic schooling. This includes the terms of management, technical training, marketing and counseling.

This type of training is vital for the successful development of Micro and Small Enterprise development both in the exporting arena and in the domestic market. Unfortunately about 85% of the entrepreneurs surveyed, in the national baseline survey of MSEs, had not received such training. This has a direct effect on the earnings of the entrepreneurs. Those who did not get any type of training experienced lower profits and less business growth as compared to those who undertook some training sessions, *(Government of Kenya, 1999)*

In the survey conducted for the purpose of this research, MSE owners engaging in exporting activities sought business training and counselling from various sources which helped to boost their earnings. Sources of training included the following -: 13% of the enterprises received training from non governmental organisations, 80% received training from consultants, and 6.6% received counsel from business colleagues. Therefore all the enterprises that were surveyed and were engaging in export activities regarded training as a vital component in business survival and growth. This is in comparison to 85% of MSEs that were surveyed in the national baseline survey.

## 2.2.2 Characteristics Of MSEs in Kenya

### **Business Capital**

According to the National Baseline Survey on MSEs of 1999, the mean initial capital used to start a business locally was Kshs. 40,500, while the mean amount of additional capital injected into each business was Kshs 24,500.

The survey also revealed the source of start up capital, was mainly from family or own funds (90.4%). For additional capital, 80% was also gained from family and the entrepreneurs own sources.

The other sources of business capital was 0.6%, which was loaned by banks. This figure points to the fact that accessing bank loans for MSE activities is difficult as banks charge high interest rates of up to 25%. These institutions demand collateral which is prohibitive to the entrepreneurs. Non governmental organizations and co-operatives were not commonly used as sources of capital as only 1.0% of MSE owners used them as a source for business capital. This can be attributed to the policy framework under which they operate. Faulu Kenya, a micro credit organisation, lends capital to a group of ten individuals who should be involved in the running of the enterprise. This deters prospective entrepreneurs as some would prefer to run their own enterprise. Non governmental organisations and Co-operatives, lend the capital with interest rates, which are slightly cheaper than the bank rates.

In the survey conducted for the purpose of this study, 60% of the entrepreneurs acquired the capital to start their enterprises that engaged in export activities from their family and friends, 13% from their own resources, 20% from non governmental organisations and 6% from commercial banks.

## **Business Records and Bank Accounts**

The collection and processing of business records is vital to the growth of Micro and Small Enterprises. Many entrepreneurs do not keep any records. In the baseline survey it was found that 64% of the respondents did not keep any business records, while 77.0% said they did not maintain bank accounts.

The lack of record keeping and an absence of bank accounts has lead MSEs to lack credit worthiness, decrease their efficiency and lower their savings capabilities.

In the survey done for the purpose of this study on export activities, 100% of the respondents had bank accounts and kept business records. This is due to the fact that the customers are located outside the Kenyan border and all transactions are conducted through the banks using letters of credit. This is a sharp contrast compared to the National baseline survey which includes both exporting and non exporting enterprises, whereby 64% of the enterprises did not keep any business records, while 77% did not have any bank accounts.

## **Marketing and Promotion of MSE Products and Services**

In the area of marketing and promotions, the baseline survey of 1999, found that it was minimal despite the fact that these two elements are the driving force in business expansion. Many MSEs, including those that engage in export activities did not undertake marketing practices such as advertising using the electronic media, print media, attend trade exhibitions and print posters, fliers and brochures. Almost half of the MSEs surveyed (49.2%) said that they had not done anything to promote their products and services, while 42.2% indicated that the quality of their services and products as well as customer satisfaction were the main methods of promotion of their goods and services.



Furthermore majority of the MSEs operators did not have a specific source of market information which is very instrumental in the development of these enterprises. 62.7% indicated that they had no specific source of market information while 32.7% indicated that they relied on clientele satisfaction and quality of products as the main ways of expanding their markets, (*Government of Kenya, 1999*).

In the survey that was conducted for the purpose of this research, indicated various modes of marketing used to market their services and products outside the national borders. 33% of the enterprises that engaged in exporting activities used the internet as a marketing tool, by creating web sites and listing their enterprises business names on trade listings.

53% of the enterprises used other local organisations to promote their enterprises in other countries. This includes the Kenya Tourist Board, Computer Society of Kenya and the Horticultural Cooperation Development Authority.

6% of the enterprises marketed themselves through the use of foreign television, newspapers and radio advertisements.

Finally, 6.7% of the enterprises used already established contacts in foreign countries to market their goods.

### **2.3 THE ROLE PLAYED BY MSEs**

The role of MSEs engaging in export activities as well as those that operate in the domestic realm, in the Kenyan economy as perceived by the Government of Kenya in *Sessional Paper No. 2 of 1992 on Micro and Small Enterprise and Jua Kali Development in Kenya* these are:-

Firstly, there is a significant contribution to the economy in terms of output of goods and services. Also there is the creation of jobs at relatively low capital costs, especially in the fast growing service sector. The total number of regular workers consisting of the owner, family members and apprentices is approximately 2.2 million. When part-time and

casual workers were added, the total employment increased to 2.4 million, (*Government of Kenya, 1999*).

The average size of an MSE in terms of workers in Kenya is about 1.8 workers which corresponds well with 1.8 for Botswana and Eritrea, 1.9 for Lesotho and 2.1 for Zimbabwe, (*Government of Kenya, 1999*). In the Kenyan national level about 70% are one person enterprises.

Table 5, outlines the number of workers in MSEs in relation to the rural /Urban distribution. It is interesting to note that in the rural towns and rural areas, there are no MSEs which employ above 15 people. In major towns, there aren't any MSEs employing above 25 people. This illustrates that urban based MSEs are larger in size in reference to the number of employees.

**Table 5 Employment Size Of MSEs**

SIZE (Persons)	Nbi. & MBS	Other major Towns	Rural Towns	Rural areas	Total
1	68.6	73.5	4.4	69.5	70.1
2	16.9	14.1	18.5	18.8	17.9
3-5	11.5	9.3	5.0	8.2	8.7
6-10	1.4	1.9	1.7	3.1	2.6
11-15	0.9	0.8	0.4	0.4	3.8
	0.3	0.4	-	-	0.1
16-25	0.4	-	-	-	0.1
26-50					
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: (CBS, ICE G, K-Rep, 1999).

In the survey conducted for this study, 40% of the MSEs engaging in export activities employed between one to ten employees, 26.7% employed between eleven to twenty persons. 6% employed between twenty- one and thirty people, and 20% employed between 31 and 40 people. Finally 6.7% of the enterprises employed between 41 and 50 people. This is illustrated in Table 15. These figures illustrate the crucial role that MSEs are playing in creating job opportunities.

The second role played by MSEs engaging in export or operating in the domestic realm, in the Kenyan economy is that MSE activities encourages the use of local resources thus leading to more effective use of capital. This is well illustrated in the handicraft sector where indigenous raw materials are utilized such as wood, sisal and leather.

Thirdly, MSE activity increases the participation of indigenous Kenyans in the economic activities of the country. This in turn has helped to increase the income generating potential within the local people.

In the survey conducted, 60% of the enterprises engaging in export activities, were owned by indigenous Kenyans, while 40% were owned by Kenyans of Asian origin.

Fourthly, MSEs develop a pool of skilled and semi-skilled workers as a basis for future industrial expansion. It is envisioned, by the Government of Kenya, that the country will be industrialized by the year 2020, therefore MSEs will provide a pool of semi skilled and skilled workers.

Fifth, MSEs promote special sub contracting arrangements from large enterprises, which creates the distribution of financial resources to the small establishments.

Finally, MSE activity offers excellent opportunities for entrepreneurial and managerial talent to mature, which in turn will foster greater economic development in the country.

## 2.4 PROBLEM FACED BY MSEs IN KENYA

It is unfortunate that many Micro and Small Enterprises including those that engage in exporting activities collapse. According to the 1999 Baseline Survey there was a total of 11,360 enterprises which closed down in 1998, out of these 40.6% were in the manufacturing sector and 42.9% were in the services sector.

It is interesting to note that although the trade sector accounts for almost 70% of the total number of existing MSEs in Kenya, they accounted for only 15% of the collapsed enterprises.

Micro and Small enterprise owners engaging in export face several problems while conducting their businesses. This includes the following -:

The lack of market share in some export sectors is one of the major problems facing MSE development. This is brought about by competition as many enterprises engage in similar activities. This is well depicted in the Kenyan and Japanese basket making industry. The Japanese imitated and modified the Kenyan traditional woven baskets, and the latter were being exported to the US market. Due to mass production and better quality baskets, the Japanese baskets have captured the once fully Kenyan dominated market, (*K-MAP, 2002*).

Access to credit is another major handicap facing MSE development. This includes lack of operating funds, lack of collateral for credit as well as funds for expansion. In Kenya, Interest rates of borrowed money from the commercial banks are exorbitant with some banks charging interest rates of up to 30%. (*Daily Nation August, 2003*). Therefore many MSE owners cannot be able to access the credit.

Acquiring trade licenses is difficult because of bureaucratic procedures. Usually, the government and local authorities issue these licenses after certain lengthy procedures. Therefore licensing is often a burdensome exercise as well as expensive. Moreover stringent health standards and quality assurance standards are also a major challenge to MSEs engaging in export activities especially in the food sector such as horticultural and fishery sub sectors.

The unavailability of skilled labour is another problem faced by MSEs. This aspect is directly linked to the fact that MSE owners cannot be able to afford training for their employees as many of these enterprises cannot afford such expenses. Furthermore, these enterprises do not have the ability to hire skilled labour as they require higher wages which the enterprise owners can ill afford.

Shortage of raw materials is another problem faced by MSE owners, who engage in export activities. This is directly linked to the fact that entrepreneurs cannot afford to buy large volumes of stock, hence the profit margins are lower, as opposed to buying raw materials in bulk, which in turn increase profits.

Poor infrastructure hinders the growth of MSE activities. Poor transport networks usually have a direct effect on the cost of the goods usually making the prices expensive. This is the case in Kenya whereby the road network in some parts of the country is poor and there is also the lack of, or poor railway network. Telecommunication costs are exorbitant and in some instances unreliable. This is true for Kenya whereby internet reliability and telephone services are not guaranteed and is also very costly.

The lack of availability of power supply is another major hindrance to the growth of MSEs engaging in export. Electrification projects especially in the third world are usually concentrated in rural and urban towns, leaving many areas without access to power. The cost of electricity is high in Kenya. Therefore some MSEs cannot be able to engage in certain activities such as welding, manufacturing and automated carpentry. With the high cost of electricity the products exported are usually not very competitive in pricing.

The lack of affordable and secure work sites is another problem facing MSEs development in the export realm. This is closely linked to the access of credit and capital to pay for rent, which is usually viewed as a major overhead. This in turn translates to higher pricing of the goods that are exported. These constraints are well tabulated in Table 6.

**Table 6** Most Severe Constraints Faced by MSE Enterprises in Kenya

<b>Enterprise Category</b>	<b>Rural</b>	<b>Urban</b>	<b>All MSEs</b>
Markets and Competition	38.5	61.5	34.1
Lack of Credit	43.7	56.3	18.4
Poor Roads / Transport	65.6	34.4	7.2
Shortage of Raw materials	49.4	50.6	6.8
Interference from Authorities	19.2	80.8	6.0
Poor Security	40.2	60.0	3.1
Lack of work sites	22.3	77.7	2.5
Lack of Skilled labour	50.5	49.5	0.6
Power Interruptions and Inaccessibility Electricity and Water supply	59.2	40.8	0.5
Other	7.8	9.1	9.1
No Problem	8	11.5	11.7
Total	-	-	100

Source: (CBS, ICE G, K-Rep, 1999).

Additional constraints that were experienced by MSEs engaging in export activities as depicted in the study conducted are -

Poor external trade in Kenya hampered the growth of MSEs engaging in export in 2001. Moreover, there was a remarkable rise in imports while domestic exports increased only marginally which caused a deterioration of trade deficits. The large increase in imports was largely due to a substantial rise in imports of non - food industrial supplies and transport equipment. The significant decline in both export value and volumes of some of the principal commodities illustrates the poor performance of domestic exports. This poor state of affairs is attributed to weak international demand and lower international commodity prices, (*Government of Kenya, 2002*)

The MSE manufacturing sector has suffered a decline due to the poor infrastructure, which has led to high transportation costs. Also telecommunications and energy costs are high as well as other factors like taxation. Therefore the competitiveness of these products have been reduced both in the local and regional markets.

While engaging in export, MSEs face fluctuations in the exchange rates which usually has a negative effect on the enterprise's profits as losses or declined profits may be experienced.

MSEs experience the problem of repatriation of profits from the country that the exports have been delivered to, as they may be constrained or restricted in some countries.

The product that is exported may not be acceptable in the country that the MSE wants to export to, therefore there will be no sales that will be realized by the enterprise.

Political, economic or social instability in the country that is receiving the goods can lead to losses by the MSE. Furthermore the policy of nationalization of enterprises in the



country where the products for export are originating from will also cause huge losses. This policy of nationalization, was effected by the Ethiopian government during Haile Salases's reign as emperor.

The slow payment or non- payment by the foreign customers is another problem faced by MSEs engaging in export trade. This delay in payment usually jeopardizes the running of the enterprise due to cash flow problems. Moreover, there may be a breach of contract, which will be difficult to solve due to the distance between the two countries.

The education sector in Kenya has been affected by the poor economic situation especially at the secondary school level. For example, in the year 2000, 5.9 million children were enrolled in primary schools but only 652,000 were enrolled in secondary schools. As earlier illustrated in table 4, the higher the education level of an entrepreneur, the more income that they earn. The enrollment in secondary schools has been declining as illustrated in Table 7

**Table 7 Enrolment Levels In Educational Institutions**

<b>Educational Level</b>	<b>1996 '0000</b>	<b>1999 '0000</b>	<b>2000 '0000</b>
Enrollment in Primary School	5,597.6	5,7971.6	5,882.7
Enrollment in Secondary School	658.3	638.5	652.3
Enrollment in Colleges	42.9	48.7	49.4
Enrollment in Universities	43.1	33.7	39.7

*Source (CBS, ICEG, K-Rep, 1999)*

Lack of locally available raw materials locally, was another challenge faced by MSEs engaging in export activities, which in essence increased the cost the cost of production of the goods.

The breakage of goods while being transported to overseas countries was another problem that was highlighted especially in enterprises that dealt with ceramic artifacts and computers. Related to this problem of breakage, is the challenge of the high cost of packaging the goods, so as to prevent any breakage.

High insurance cost is another problem faced, as the goods that are being exported should be insured in case of any loss.

The language barrier between the entrepreneur and the client in the foreign country, while transacting business, was also highlighted as a problem by entrepreneurs.

The attainment of high standards of the quality of goods being exported is a major challenge to entrepreneurs, especially for goods destined for the European, American and Far East markets.

The perceived high level of taxation is another challenge faced by entrepreneurs engaging in export activities. This includes import taxes and other non tariffs barriers such as quotas and stringent health and safety guidelines imposed on the goods.

Finally, political and economic instability in Kenya and other African countries, which are the destination of the goods and services that are exported, is a major problem facing MSEs engaging in export activities. For example the political insurgence in the Democratic Republic of Congo (DRC), has hampered the easy facilitation of export activities between some Kenyan enterprises and clients from the DRC due to economic and political instability caused by rebel invasions.

**3.0 INTRODUCTION**

MSEs in Kenya face several challenges, which have been highlighted in Chapter Two. Most of these problems stem out of a poorly structured and implemented policy framework.

The Government of Kenya recognizes the importance of MSEs in the creation of job opportunities, stimulating economic growth, facilitate greater equalization of incomes and economic opportunities especially for women and other special interest groups and also to level the playing field between the big and small businesses. With these advantages of promoting MSEs activities in Kenya, the government has come up with several policy documents including "*A Strategy For Small Enterprises Development in Kenya Towards the Year 2000. (Government of Kenya, 1989), Sessional Paper No. 2 of 1992 on Small Enterprise and Jua Kali Development in Kenya (Government of Kenya, 1992), Sessional Paper No. 2 of 1997 on Industrial Transformation to the year 2020 ( Government of Kenya, 1997) and most recently "A Renewed Policy and Strategy Framework for Micro and Small Enterprises Development in Kenya (Government of Kenya, 1998)*

**3.1 AN ANALYSIS OF POLICIES PERTAINING TO MSES PARTICIPATING IN  
EXPORT ACTIVITIES**

The operations of MSEs have been hampered by a myriad of problems and the government has introduced the Renewed Policy and Strategy Framework for Micro and

Small Enterprise Development in Kenya. This policy draft was compiled in 1998 with the assistance of the International Centre for Economic Growth. (ICEG) and has outlined the following strategies that are applicable to both MSEs that engage in exporting activities and those that rely on the domestic market.

### **3.1.1 The Legal and Regulatory Framework**

The complex legal and regulatory framework, under which MSEs operate have affected negatively the start up, operation and growth of these enterprises. This is because entrepreneurs waste a lot of time and money pursuing business licences, hefty transaction costs due to the ambiguities and complexities in business requirements and restrictions on business opportunities arising from inhibitive by laws.

#### ***Trade licensing***

Trade licensing affects negatively on the growth and development of MSEs in Kenya. Initially, licensing in Kenya was introduced to control business activities as well as raise revenue for the government, but nowadays local authorities who are charged with this responsibility of licensing use it as a means of generating revenue. This has created a restrictive barrier, as these licenses are expensive. Furthermore, there is considerable multiplicity of licensing between the Central government and the Local government. The procedure of acquiring a licence is very lengthy and cumbersome which further elicits the propagation of corruption.

In order to address the above problems, the government came up with a policy paper '*Sessional Paper No. 2 of 1992*' which recommended that the relevant government ministries together with the Attorney General's office review laws pertaining licencing and to determine how they have impacted MSEs directly and indirectly.

This policy has been implemented through the creation of the Deregulation Section (DS) within the Ministry of Planning and National Development in 1996 to review the legal

and regulatory framework within which MSEs operate in. Out of this review, the DS identified 13 Acts of Parliament and 13 by-laws relating to Trade licensing that required to be amended.

The Trade Licensing Act (Cap 497) was amended by the 1997 Finance Act to discontinue the collection of trade licensing fees with effect from 1<sup>st</sup> January 1998.

- **Registration of Business Names Act**

The registration of businesses is often viewed as a cumbersome, bureaucratic and costly process. The reason being that a prospective business owner must write a letter to the Registrar of Companies, proposing three names that he intends to register. Then a search is conducted to verify whether the business name chosen has already been taken up by another party. There is a fee levied for this search, which takes a minimum of two weeks. Then two forms have to be filled out and a fee is also imposed. Furthermore readily available information about the registration of businesses is lacking.

In order to solve the problem of registration of businesses being cumbersome, the application forms have been simplified and reduced from four to one by the registrar of companies in the year 2000.

- **Security of Tenure**

Many of the MSE operations are carried out in rented premises hence hampering the expansion of MSEs in Kenya as the absence of legal titles contributes to the lack of access to credit. There is also perpetual harassment of the entrepreneurs by the local authorities. Majority of MSEs (66%) rent their business premises and only 11.2% have

their own premises / workplace with title deeds. The others operate without paying for their workplace, as they are invaders or squatters, (*Government of Kenya, 1998*).

Currently, ownership arrangements are not clearly defined, as the Ministry of Lands cannot issue titles to MSE Associations.

Improvement should be made by the government, by ensuring the efficiency of the registration of property rights and simplification of tax structures.

### **Labour Laws**

Labour laws are rigid in relation to MSEs, which operate in relatively volatile market situations. This includes recruitment and dismissal regulations, restrictions on employment of part time and temporary workers and restrictions on pay rates, hinder the flexibility under which MSEs operate in as they have to be able to react to unexpected changes in the market.

Therefore, it is recommended that a review of all employment related regulations by the Attorney General's office, in collaboration with the Ministry of Planning and National Development should be carried out.

### **3.1.2 Credit and Finance**

The lack of access to credit facilities is a major hindrance to the development of MSEs in Kenya. As highlighted in Sessional Paper No. 2 of 1992, outlined a number of factors, which constrained access to credit by MSEs owners. These included the lack of experience by the borrowers with credit institutions. Moreover the reluctance of large

and formal financial institutions to lend to MSEs. Stringent collateral requirements, low volume of funds for loans, high interest rates and high administrative overheads which is relatively high in comparison to the size of loans, hampers the accessing of loans.

The Sessional Paper No. 2 recommended the following strategies and programmes so as to rectify the problem of lack of access to funds for MSEs which are:

- The government has to put legislation for the deregulation of interest rates.
- To increase loan funds by establishing credit guarantee schemes and special credit programmes.
- Training of bank officers so as to reorient them to lending to MSEs as well as training them in appraisal and supervision. Also the bank officers are to be reoriented to cash flow lending as opposed to collateral based lending.
- Revision of the Industrial Training Act so as to accommodate the use of funds by commercial banks and Development Financial institutions for training their MSE clients.
- Establishment of an export credit guarantee mechanism.
- Establishment of a venture capital institution.
- Creation of a forum through which the Central Bank and Development Financial Institutions (DFIs) debate and recommend appropriate changes in banking regulations.
- Introduction of appropriate courses in MSE development.

- The government is to undertake special studies to investigate the structure of risks associated with lending to the small enterprise sector.

The provisions in the Sessional Paper do not adequately meet the demand for credit by the MSEs sector mainly due to high interest rates levied on borrowed money, stringent collateral requirements, low volumes of loanable funds and inadequate business support services.

In order to eliminate these problems of lack of access by MSEs to credit, the 1998 Renewed Policy and Strategy Framework for MSE Development in Kenya, outlines the following stipulation.

The regulation of Micro finance Institutions are important to MSEs. Existing commercial banking regulations are designed for a loan portfolio with borrowers whose characteristics are substantially different from those of a typical micro finance institution. Moreover a microfinance portfolio consists of many small, unsecured short - term loans which makes the methodology of assessment of individual borrowers impossible to implement.

On the other hand, conventional bank regulatory and supervising practise focus on risks and are designed to assess the reliability of collateral and the financial stability of the borrower.

Therefore in order to rectify the situation, the Central Bank (CBK) should develop standards and reviewing supervision procedures within the Banking Act in order to provide for a new legislation to regulate micro finance institutions.

In addition to the CBK developing standards a self-regulating body of the MSE sector can be created. It should comprise or representatives from the stakeholders including micro finance institutions, donors, commercial banks and government departments.



This body is to be charged with the responsibility of designing supervisory standards tailored for MSEs.

A major problem facing Micro-finance Institutions (MFIs) is that they are prevented from accepting deposits by banking laws. However, deposit mobilization is as important to MSEs as are credit services. Furthermore mobilizing deposits is important to the viability of institutions working with MSEs.

Furthermore the government should allow commercial banks to develop micro enterprise programmes. Moreover in order to provide accessibility to credit facilities, the Ministry of Finance in collaboration with the CBK should consider the Acts governing any saving institutions with a perceived positive orientation to MSEs sector such as the Kenya Post Office Savings Bank and Co-operatives which have nationwide branches.

### **3.1.3 Physical Infrastructure**

MSEs activities are usually hampered by the following physical infrastructure problems, which the draft policy on MSEs of 1998 seeks to resolve. These includes:

- The insecurity of tenure to worksites and inadequate legally demarcated land.
- Limited access to running water and sewer facilities. This especially affects the manufacturing, catering and food processing sectors.
- Poor state of Kenyan roads hence resulting in high transport cost.
- Lack of physical infrastructure such as electricity and telephone connections.

The draft policy document of 1998 regarding the promotion of MSEs in Kenya, recommends that in order to improve access to land and workspace for MSEs the Temporary Occupation Licences (TOLs) should be popularized and that MSEs

association should adopt the Community Land Trust model whereby an organization will be created and can hold land in trust for the benefit of the community.

The Community Land Trust would be a useful alternative to private requisition of land by individuals.

The limited access to water can be rectified if the local authorities consider privatizing the maintenance and billing of water distribution. It is unfortunate that about 30% of the total volume of water produced per day is lost arising from illegal connections and poor maintenance.

To curb the problem of poor roads, the Strategy Paper recommends that small scale construction firms should be incorporated in road maintenance and rehabilitation. Furthermore in the realm of electricity supply to MSEs, the Ministry of Energy should accelerate the implementation of the Rural Electrification Programme based on the recommendations of the Rural Electrification Master plan.

The management of waste disposal is vital especially in 'Jua Kali' sites and other areas with the concentration of MSEs activity. The privatization of public toilets will make these essential public utilities more user friendly.

#### **3.1.4 Entrepreneurship Training and Business Development Services**

Entrepreneurship Training can be defined as the process of inculcating creativity, innovation and drive to potential entrepreneurs to take business risks and to gain self-confidence to establish businesses. On the other hand Business Development Services (BDS) can be defined as auxiliary services provided to MSEs, entrepreneurs to improve and promote the performance of their businesses. This includes counseling,

mentoring, advocacy, consultancy, advice, information, facilitating networks and sub-contracting. (Government of Kenya, 1999).

Although there has been an increasing number of players involved in the provision of skills training for example the Ministry of Research and Technology (MRT), Jomo Kenyatta University of Agriculture (JKUAT), Kenya Management Assistance Programme (K-MAP) and a host of other institutions, these have not been guided by a coherent training policy.

Therefore the draft Policy Strategy of 1998 recommends that a coherent training policy be put in place. Therefore the Department of MSE Development should be created, and it should collaborate with the proposed Small Enterprises Development Authority (SEDA) so as to come up with comprehensive skills training for MSEs.

Business linkages for MSEs were recommended in the 1992 Sessional Paper on MSE development and it was implemented by the Ministry of Commerce and Industry in collaboration with K-MAP. They established the Kenya Sub-contacting and Partnership Exchange Programme to facilitate market/supplier linkages between large companies and MSEs. Unfortunately the initiative collapsed, because it was not self-sustaining. This was caused because MSEs were providing poor quality products, exorbitant pricing and failure to honour agreements. Furthermore there was lack of adequate incentives for the large enterprises to collaborate with MSEs.

To enhance MSEs access to export markets, it is recommended that the Ministry of Trade, NGOs and private sector collaborate and develop a programme to facilitate MSEs to improve their products, access to information on international market opportunities and improve their marketing strategies. This has already been implemented as the Export Promotion Council in collaboration with the Department of External Trade provide MSEs with market information.

It is recommended that the Ministry of Finance designs and implements guidelines for the procurement of MSEs products and services.

### **3.1.5 Access To Market**

Lack of access to markets for MSEs products and services is an obstacle to growth, which the draft policy on MSEs of 1998 seeks to resolve. The key factors that negatively affects MSE expansion into local and international markets include poor product quality, poor packaging, lack of market information and lack of effective delivery. These problems are addressed in the Policy Strategy for MSEs development of 1998, as indicated below.

- **Product Quality**

High product quality is essential for products manufactured by MSEs to successfully penetrate the competitive export market. Improvement in product design, product development and quality control is essential.

To achieve this the Policy Strategy for MSE development of 1998, recommends that the Kenya Bureau of Standards (KBS) came up with a programme to assist the MSEs exporters to address quality related issues and to publicize International standards Organization (ISO) 9000; so that the organization gives quality assurance to MSEs.

- **Packaging**

High quality packaging is vital for the marketing and promotion of goods. Appropriate packaging is crucial for the preservation of food products.

Poor packaging does not create a good brand image and therefore consumers do not develop brand loyalty.

The 1992 *Sessional Paper No. 2* recommended that the Ministry of Trade in collaboration with the relevant organizations develop a training programme aimed at improving the packaging of MSE products.

- **Market Information**

Although a few tangible initiatives have taken place, the problem of lack of market information has persisted in the country. Therefore in order to provide market information for MSE products, supermarkets should be established in all major urban centres which should be modelled like the Kenya Gatsby Charitable Trust 'Soko'.

The Export Promotion Council (EPC) which is charged with the promotion of Kenyan goods abroad has a department that addresses the development of export markets for MSEs. Unfortunately this is not enough and new programmes should be considered which includes special export financing schemes, exhibition facilities which at the moment only cater for five MSEs per trade mission and export credit guarantee schemes.

- **Sub-contracting**

*Sessional Paper No. 2 of 1992*, highlighted the need to enhance the collaboration between large enterprises and small enterprises so as to enhance sub-contracting schemes.

Currently, private initiatives in the area of sub contracting include companies such as Coca Cola, BAT, TUZO and Farmers Choice which have developed various marketing outlets for the MSEs.

In order to expand these business linkages between the large and small scale enterprises, the Draft Policy Strategy Paper of 1998 recommends that the Kenya National Chambers of Commerce and Industry provides trade information in the form of databases of small businesses supplying goods and services to the export market.

- **Public Procurement**

The public sector market should be made available to MSE products. MSE market opportunities through the public procurement system is hampered by a lack of information between the public sector and the MSEs. Also the tendering system is complicated.

The Draft Policy Framework of 1998 recommended that a simplified tendering system should be put into place and also create procurement quotas dedicated to MSEs so as to give them a chance to access this vast market.

### **3.1.6 Technology Development**

In order to successfully promote MSE development in Kenya, the following policy issues should be addressed by the government and other stakeholders. Increasing technological research, disseminating technological information effectively, commercialization of technology and standardization and quality control.

Furthermore the government should establish an innovation centre and also offer extension services to MSEs.

- **Technological Research and Diffusion**

The Kenya Industrial Research Development Institute (KIRDI) mandate was to modify and adapt foreign technologies to meet local demands. This responsibility to KIRDI was given in the *Sessional Paper NO. 2* of 1992. Forty -one technical training institute have been created to address this issue of technology. Some major constraints have been found in the implementation of this policy which include:-

- No linkage between the MSEs and the technical research bodies for example AproTec.
- There is also a lack of awareness of the technical and scientific support.
- Technological research carried out in the universities does not meet the needs of MSEs.

Therefore to improve technological research and diffusion, it has been recommended that NGOs such as AproTec and Kenya Gatsby Trust support programmes through the proposed Local Enterprise Centres. (LECs)

- **Technological Information**

The draft Policy Strategy Paper of 1998, recommends that there is an urgent need to establish information networks between the MSE operators and the technology experts.

Secondly, the government should post properly trained MSE Extension officers to all districts as a way of providing technological information.

- **Commercialization of Technology.**

Kenya has adequate technological expertise to change technology within MSEs significantly. Therefore the government should establish liaison offices which should act as intermediaries between researchers and users of research findings.

- **Innovation and Incubation Centres**

Studies have indicated that MSE products have the characteristics of being the same in design, use and quality resulting in massive reproduction of similar products.

In order to foster innovation, support institutions have been created for example the Kenya Industrial Property Office (KIPO) who have initiated an award scheme for the best innovative processes and product from the MSE sector.

In order to further boost innovation in the MSE sector it is recommended that the government should set up a programme to establish entrepreneurs parks with all the utilities, transportation and communication system like the Export Processing Zone (EPZ).

### **3.2 CONCLUSION**

The renewed Policy Strategy Framework for MSE development in Kenya of 1998 is articulated well. This also applies to the Sessional Paper No. 2 of 1992 on Small Enterprise and Jua Kali Development in Kenya and also Sessional Paper No. 2 of 1992 on Industrial Transformation to the year 2020.



Many of the recommendations highlighted in these policy documents, have not been implemented by the government. However the non governmental sector is trying to foster the development of MSEs engaging in export activities. Notably the Kenya Gatsby Charitable Trust, AproTec, Jitegemee Cottage Trust and K-Rep Holdings Ltd have contributed positively.

The Export Promotion council, which was founded by the government is also helping MSEs access international markets by financing the hiring of space in international trade fairs. Only 180 MSEs owners can be facilitated to participate in these trade fairs every year.

If all the above stated policies are implemented, MSE development in the realm of exporting, would accelerate, hence fostering economic development in Kenya.

## **CHAPTER FOUR: PARTICIPATION OF MSEs IN EXPORT ACTIVITIES: AN OVERVIEW OF THE SURVEY DATA**

### **4.0 BACKGROUND**

As highlighted earlier in this study, data gathered from the national baseline survey in Kenya, there are 1.3 million MSEs registered in Kenya, (*Government of Kenya, 1999*). The survey does not categorize the data according to the size of the firms when tabulating the export earnings and volumes of goods. This also applies to the Economic Surveys, which are published by the government of Kenya and surveys done by the Export Promotion Council.

This has prompted the researcher to carry out a survey on MSEs that engage in exporting activities.

A survey of fifty firms was carried out in Nairobi, which was arrived at by administering the stratified random sampling technique from four sectors: education, tourism, manufacturing/wholesaling and consultancy service sectors. These sectors were chosen because of their likelihood to engage in export activities.

The sample in the educational sector was arrived by selecting every 10<sup>th</sup> college listed in the Kenya Educational Directory of 2001. The total number of colleges listed in this directory was 210. Therefore the sample representing the educational sector was twenty-one colleges. They all duly completed the questioner. This constituted 42% of the sample. Colleges do engage in exporting activities as foreign students consume their educational services.

In the manufacturing sector, the Kenya Industrial Estates ( KIE) was identified as an appropriate population from where to draw a representative sample of MSEs engaging in export. In a population of thirty firms, every 2<sup>nd</sup> firm in a list provided by the KIE officials, constituted part of the sample and they duly completed the questioner presented to them This sector provided 30% of the sample.

The sample from the tourism sector was derived from a population of 151 tour firms. For every 15<sup>th</sup> tour firm in the list provided by the Kenya Tourism Board, constituted inclusion into the sample, which totaled to ten tour firms that filled the questioners.

The four consultants who are part of the sample were drawn from a population of 144 consultants listed in the Contacts directory. In order to be part of the sample, the 36<sup>th</sup> consultant was included in the sample and they duly filled in the questioners.

In the sample of fifty MSEs, only 30% (15 firms) engaged in exporting activities and the study analysis focused on those 15 firms that engaged in export activities. This includes colleges, who have admitted foreign students. Tour companies that give tour- guiding services to foreigners as well as enterprises based at the KIE sold their commodities and services outside the Kenyan border. The sample included consultants who provided their expertise to different countries.

**Table 8: Structure of the survey sample**

	<b>Number</b>	<b>%</b>
Educational Sector	21	42
Manufacturing/Wholesaling sector	15	30
Tourism sector	10	20
Consultancy	4	8
<b>TOTAL</b>	<b>50</b>	<b>100</b>

#### **4.1 CHARACTERISTICS OF THE SURVEY OF MSEs ENGAGING IN EXPORT ACTIVITIES**

##### **4.1.1 OWNERSHIP OF BUSINESSES ENGAGING IN EXPORT**

There were nine firms that were owned by indigenous Kenyans, two firms owned by Kenyans of European origin and four firms owned by Kenyans of Asian origin. There were no MSEs owned by foreigners, government and joint ventures between foreigners and local people. This illustrates that MSEs that engage in exporting activities are owned wholly by Kenyans. These findings tally with the national baseline survey on MSEs of 1998, which depicts that 100% of the MSEs were owned by Kenyans, (Government of Kenya, 1999)

**Table 9 Ownership of the Businesses**

	<b>Number</b>	<b>%</b>
Indigenous Kenyan	9	60
Kenyan of European origin	2	13.3
Kenyan of Asian origin	4	26.7
Wholly foreign	0	0
Government owned	0	0
Joint foreign and locally owned	0	0
<b>TOTAL</b>	<b>15</b>	<b>100</b>

*Source: Survey Data*

#### **4.1.2 AGE OF THE ENTREPRENEURS**

The survey indicated that thirteen of the firms were owned by entrepreneurs aged between 41 to 50 years of age. The remaining two firms were owned by entrepreneurs aged 51 and above. There were no business owners aged between 15 – 20, 21 – 30 and 31 – 40 years in the survey. This is a sharp contrast to the national baseline survey that revealed that the national mean age of entrepreneurs was 35 years, (Government of Kenya, 1999).

Therefore one can conclude that older persons are the ones who participate in exporting activities as opposed to younger entrepreneurs as they seem to have more experience in running more complex businesses.

**Table 10 Age of the main business owner**

	<b>Number</b>	<b>%</b>
15 – 20 years	0	0
21 - 31 years	0	0
31 – 40 years	0	0
41 –50 years	13	86.7
51 + years	2	13.3
<b>Total</b>	<b>15</b>	<b>100</b>

*Source: Survey Data*

#### **4.1.3 GENDER**

There was gender imbalance regarding the ownership of the enterprises. There were only two enterprises that were owned by women, while the other 13 enterprises, were owned by men. This is in sharp contrast to the 1999 baseline survey on MSEs, which revealed that there was a gender balance in the ownership of the 1.3 million enterprises in Kenya which stood at 49% women and 51% men, participated in MSE activities.

**Table 11 Gender of the Business Owner**

	<b>Number</b>	<b>%</b>
Male	13	86.7
Female	2	13.3
<b>TOTAL</b>	<b>15</b>	<b>100</b>

*Source: Survey Data*

#### 4.1.4 EDUCATION

The educational background of all the business owners was up to tertiary level. This includes college, undergraduate and post graduate studies. This is a sharp contrast to the National Baseline survey of 1999, whereby only 1.8% of the entrepreneurs had attained tertiary education (Table 4). There is a direct bearing between higher education levels and higher profit margins. This is well depicted in the National Baseline Survey whereby 80% of entrepreneurs who earned over Ksh 50,000 were in this category as depicted in Table 4.

Therefore one can conclude from the survey data that tertiary educated entrepreneurs have the skills needed to engage in export activities which are deemed to be more difficult to engage in as opposed to businesses that deal with the local markets.

**Table 12: Educational Background of the Business Owner**

	Number	%
None	0	0
Primary	0	0
Secondary	0	0
Tertiary (College, Undergraduate, Post graduate)	15	100
TOTAL	15	100

*Source: Survey Data*

#### 4.1.5 NATURE OF BUSINESS ACTIVITIES

The survey data indicated that the MSEs that were engaging in export activities engaged in various activities as tabulated in the table below.

**Table 13: Nature of Business Activity**

	<b>Number</b>	<b>%</b>
Retail	0	0
Service Provision	5	33.3
Manufacturing	7	46.7
Wholesaling	3	20
TOTAL	15	100

*Source: Survey Data*

Comparison of the business activities that MSEs engage in the national baseline survey of 1999, indicates that 20% of the firms engaged in manufacturing, 60.6% engaged in Commerce/Trade (wholesaling and retailing) and 12.5% engaged in service provision, (*Government of Kenya, 1999*). This is a direct reversal in relation to the survey data carried out amongst MSEs that engage in export activities. 46% engaged in manufacturing, while 33% engaged in service provision. 20% of MSEs in the survey were engaged in wholesaling.



The data in the survey reveals that MSEs that engage in exporting activities have the capacity to engage in more complex business activities such as service provision and manufacturing. This is in contrast to the MSEs that were surveyed in the National Baseline survey, that included both categories of MSEs - those that engage in exporting activities and those that do not engage in exporting activities. 60% of the MSEs in the latter survey, engaged in retailing and wholesaling, as these activities are fairly less complex to engage in.

The sampled enterprises engaged in various business activities. This includes wholesaling horticultural and floricultural products, handicrafts, pharmaceutical products, computer equipment, tour guiding, educational services, and consultancy services in engineering and building evaluation.

#### **4.1.6 FINANCING OF THE ENTERPRISES**

The respondents in the sample financed their enterprises using various sources. This includes funding from friends and family, being the largest source of financing as it constitutes 60% of the sample. The reasons for acquiring this type of funding is that the money will not be charged any interest rates and also there are no stringent rules to adhere to such as having enough security. This is in sharp contrast to business owners borrowing money from commercial banks, which charge exorbitant interest rates of up to 24 %, hence not an attractive source of financing a business. That is why only 6% of the respondents had acquired their funding from commercial banks.

Non governmental organisations and co-operatives were another source of funding, whereby 20% of the respondents acquired the funding that they required to engage in export activities. 13% of the respondents of the survey acquired the capital to start their enterprises from their own resources.

This survey data compliments the results of the National Base line survey of 1999, (*Government of Kenya, 1999*), which indicates that 90.4% of the respondents acquired their start up capital from family sources, 0.6% obtained loans from banks, while 1% obtained the capital from Non governmental organizations and Co-operatives. 8% used their own resources as start up capital. This is illustrated in Table 14.

**Table 14 Sources of financing for Businesses**

	<b>Number</b>	<b>%</b>
Own resources	2	13.3
Family and friends	9	60
Commercial banks	1	6.7
Non governmental organisations and co- operatives	3	20
<b>TOTAL</b>	<b>15</b>	<b>100</b>

Source: Survey Data

#### **4.1.7 INITIAL CAPITAL BASE**

The initial amount of capital invested by the 15 enterprises engaging in export activities, ranged between Ksh 95,000 and Ksh 1.8 million. This is much higher than the average mean initial capital of Ksh 40,500 that was reflected in the National Baseline Survey of 1999. This points to the fact that MSEs engaging in exporting activities require more capital than those operating in the domestic market.

**Table 15 Initial Capital Used by MSEs engaging in Export**

KSH	NO OF ENTERPRISES	%
Below 100,000	1	6.7
101,000-500,000	10	66.7
501,000-1,000,000	2	13.3
1,000,001-2,000,000	2	13.3
<b>TOTAL</b>	<b>15</b>	<b>100</b>

Source: Survey Data

#### **4.1.8 EMPLOYMENT**

Regarding the employment of people, 14 of the firms hired both full time and part-time employees, who ranged in number from 5 to 49. Only one firm employed full time workers. Therefore in this study both part-time and fulltime employees have been grouped together when tabulating the number of employees.

The survey data illustrates that 40% of the firms employed between 1-10 people while 99.3% of the MSEs surveyed in the national baseline survey employed one to ten persons. 0.3% of the MSEs surveyed in the national baseline survey employed between 11 to 15 persons. Another 0.3% employed 16 to 25 persons, while 0.1% employed between 26 to 50 persons.

These results have a bearing on the initial capital base and the turnover of the businesses. MSEs that engage in export have a higher initial capital investment as depicted in Table

16

**Table 16: Number of Employees in MSEs**

EMPLOYEE NUMBERS	NUMBER OF ENTERPRISES	%
1-10	6	40
11-20	4	26.7
21-30	1	6.7
31-40	3	20
41-50	1	6.7

*Source: Survey Data*

#### **4.1.9 MAIN EXPORT DESTINATIONS**

All the fifteen enterprises indicated that they ventured into exporting for the sole purpose of increasing their profits. The enterprises exported their services and products to various destinations as outlined in Table 17.

**Table 17: Destinations for the Export of Products and Services**

DESTINATION	NO OF ENTERPRISES	%
East African Community	0	0
COMESA	10	66.7
European Union	5	33.3
North America	0	0
Asia	0	0
<b>TOTAL</b>	<b>15</b>	<b>100</b>

*Source: Survey data*

The European Union market has attracted 33.3% of the MSEs in the survey. This includes tour services, horticultural, floricultural and handicraft products.

On the other hand the COMESA region has attracted 66.6% of the enterprises in the educational sector, pharmaceutical and the computer industry.

#### **4.1.10 SOURCES OF CONTACTS FOR ESTABLISHING TRADING PARTNERS**

The enterprises in the survey established trading partners in the COMESA and European Union through various sources. The survey data indicates that the enterprises used more than one source for attaining trading partners. The sources that were identified by the researcher were -:

The internet has become one of the most cost effective and efficient way of gaining recent information about trade issues from various countries. 73.3% of the sample used this channel to establish new trading partners.

Personal contacts were also used by the enterprises as a means of establishing trading partners. 77.3% of the enterprises used this mode.

The sample also established links with government agencies, which helped the entrepreneurs to identify potential trading partners. These agencies include the Kenya Tourism Board, the Kenya Chamber of Commerce and Industry and the Export Promotion Council.

Enterprises in the sample collaborated with a society - The Computer Society of Kenya and a Cooperative - The Horticultural Co – operation Development Authority in order to establish contacts.

Advertising through the media in foreign countries was used by the sample, as a channel of creating new business contacts. This included buying of air -time on television, radio and the print media in foreign countries.

Finally, embassies were cited as a channel for establishing business partners. This includes Kenyan embassies based in foreign countries, as well as foreign embassies based in Kenya. This is illustrated in Table 18.

**Table 18: Sources of Contacts for establishing trading partners**

Source	manufacturing	service provision	wholesaling
Internet	5	2	4
Kenya Tourism Board	0	2	0
Kenya Chamber of Commerce and industry	1	0	2
Export Promotion Council	3	1	1
Computer Society of Kenya	1	0	0
Horticultural Co-operation	3	0	0
Development Authority			
Embassies	2	1	3
Media	3	1	4
Personal contacts	5	4	2

*Source: Survey data*

#### **4.1.11 CHALLENGES FACED BY ENTERPRISES WHEN PARTICIPATING IN EXPORT ACTIVITIES**

The challenges highlighted by the exporters while engaging in their business activities included the following -:

Lack of availability of raw materials, was highlighted as a challenge by business owners in the manufacturing sector. All of the enterprises, which were seven in number, import raw materials from various countries. The actual sourcing of the raw materials was a challenge, as pricing and quality considerations had to be made.

Identifying genuine contacts and trading partners was another challenge that was identified. The internet being a channel of establishing new trading partners, is not a sure proof of honest trade inquiries. Moreover lack of channels for marketing was identified as a challenge, more so identifying the appropriate channel to use.

Political and economic instability in Africa including Kenya, were factors deemed by the enterprises as challenges. Many African countries are suffering from civil strife and elections usually affects the political stability of these nations. Moreover the economy of these nations are usually affected by the political instability hence enterprises are not able to operate.

Poor infrastructure was another challenge that was identified. In many African countries including Kenya, the road and railway network is dilapidated hence inconvenient and expensive when transporting raw materials and finished products. The poor state of the road network also has a direct bearing to the breakage of products begin transported, hence having a direct negative impact on the profit margins. Furthermore the telecommunications sector is also not reliable and is very costly for example internet access and telephone services.

High insurance costs were also highlighted as a challenge as exporters are required to insure their goods in case of damages or losses incurred while being transported.

High taxation was also viewed as a challenge. Business owners indicated that the taxes were high and numerous, hence affecting the overall price of the products that were to be exported. This in effect has lowered the competitiveness of the product.

Competition is also identified as a challenge by enterprises engaging in export activities. Competition is closely linked to the high standards set for products that can be exported especially to the European market. Kenyan firms are experiencing challenges when trying to abide with the standards set in the production, processing and packaging of products, destined for the European Union especially in the horticulture sector.

Competition is also linked to the challenges of poor infrastructure, high insurance costs and high taxation because the pricing of the products rises.

Access to affordable credit is another challenge cited as commercial banks levied high interest rates of up to 25% with strict guidelines such as stringent regulations pertaining to security. This was the case when the data was been collected in the year 2000. It is important to note that the interest rates charged by banks have now decreased to as low as 14% and in some banks there is no security that is required.

#### 4.1.12 BUSINESS COUNSELING

Despite the challenges highlighted above, all the enterprise owners indicated that their enterprises were profitable. Profitability of the enterprises has a direct bearing on business counselling. All the respondents indicated that they received business counselling from various sources.

**Table 19: Counselling Services sought by Business owners**

SOURCE OF COUNSELING	NO OF ENTERPRISES	%
NGOS	2	13.3
Consultants	12	80
Friends	0	0
Business colleagues	1	6.7
<b>TOTAL</b>	<b>15</b>	<b>100</b>

*Source: Survey data*



#### 4.1.13 INCENTIVES TO ENHANCE EXPORTING ACTIVITIES

The business owners highlighted various incentives that the government should give, so as to promote exporting activities. These were:-

Availing cheaper credit to the entrepreneurs, so that they can be able to expand their operations and also improve their production quality and capacity.

The Kenya government, through the Ministry of Trade and the Export Promotion Council, market and establish contacts with potential customers and clients in foreign countries for the enterprises.

Lowering of telecommunication costs is another incentive that the entrepreneurs highlighted, as high telephone bills makes the cost of engaging in exporting activities high. The reliability of the *jumbo net*, which is part of Telkom, the main internet connector to all the internet service providers, should be enhanced.

Enhancing the infrastructure especially the road and railway network within Kenya will aid in transporting raw materials from other parts of the country or from the port of Mombasa. This will lower the cost of transportation, as good roads will not cause vehicles to break down often. Furthermore fresh produce will be transported quickly to airports, ready for export.

The reduction of import taxes was highlighted as an incentive for entrepreneurs who had to import raw materials, which in effect will lower the cost of producing the goods.

## **4.2 EXPORT OPPORTUNITIES FOR MSEs**

There are opportunities for Kenyan businesses as several trade agreements have been entered into by the Kenyan government such as the Common Market for Eastern and Central Africa (COMESA) which has twenty one (21) member states which have a total 380 million people, (COMESA, 2001).

The African Growth and Opportunity Act (AGOA) is another treaty which has created a vast market in North America, whose population stands at approximately 400 million inhabitants.

The revival of the East African Community has also created vast opportunities in terms of market accessibility for Kenyan commodities. The total population of the three states – Kenya, Uganda and Tanzanian, stands at 80 million inhabitants.

Despite these opportunities of engaging in export activities, only 30% of the MSEs that were surveyed engaged in export related activities.

### **4.2.1. Common Market for Eastern and Central Africa (COMESA)**

COMESA is an organization of free independent sovereign states which have agreed to co-operate in developing their natural and human resources for the good of all their people, (COMESA, 2001). The organization was established on 8<sup>th</sup> December 1994 to replace the Preferential Trade Area (PTA) which had been in existence since December 1981.

The main motive for the establishment of COMESA was the realization that individual country's efforts to attain economic recovery and sustainable growth had yielded minimal results as production structures had not been maintained, export of primary commodities had continued to dominate the export sector and the income generation of member states had been adversely affected by the Structural Adjustment Programmes (SAPs) and lack of investment opportunities.

COMESA offers very extensive benefits and advantages for its member states as well as the business community (COMESA (2001))

Firstly, it provides a wider harmonized and more competitive market. This is perhaps the largest single market in the developing world, apart from South East Asia. COMESA has a total population of 380 million and has a Gross Domestic Product (GDP) of US\$ 170 billion.

Secondly, COMESA offers greater competitiveness for the business community. These firms will have an opportunity to make higher quality goods at a price that the population can afford.

Thirdly, COMESA is trying to promote increased agricultural promotion and food security by promoting the processing of food crops so as to increase their values and shelf life.

Fourthly, a more harmonized monetary, banking and financial policies are benefits enjoyed by COMESA member countries. The setting of a monetary and financial infrastructure will create the necessary macro economic environment. The organization is also working on a new unit of account, which will be the Eastern and Southern Africa Currency (ESACU). The establishment of this monetary infrastructure will create the necessary macro-economic environment that facilitates the economic integration process.

Fifthly, in the area of natural resources, the COMESA region is one of the richest. Of the total surface area estimated at more than 12.89 million km<sup>2</sup>, 60% is endowed with rivers and lakes, which would jointly be exploited for water transport, hydro-electric power, irrigation and fisheries.

Furthermore, more than 90% of the potentially arable land is yet to be exploited, while 95% of the water is not being exploited for economic gain. The hydro electric potential, of the COMESA region is estimated at 700 billion kilowatts, of which 96% remains unexploited.

Finally, in terms of mineral potential, the COMESA region produces a significant proportion of the world's gold, diamond, platinum, chrome and manganese. It is estimated that the COMESA region contains 300 billion metric tonnes of phosphates and more than 105 billion tonnes of iron ore and large quantities of uranium nickel, copper and cobalt. This large potential awaits economic exploitation.

### **STRUCTURE OF INTRA- COMESA TRADE**

Intra COMESA export trade was dominated by exports of foods and manufactures in the year 2000. Intra COMESA trade in 2000 was estimated at US\$ 3.05 billion which represented an increase in comparison with the 1999 figures of US\$ 2.90 billion.

**Table 20 Trends In Intra COMESA Trade**

<b>Billions US\$</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Exports	1.73	1.80	1.63	1.60
Imports	1.46	1.51	1.27	1.45
Total	3.19	3.31	2.90	3.05

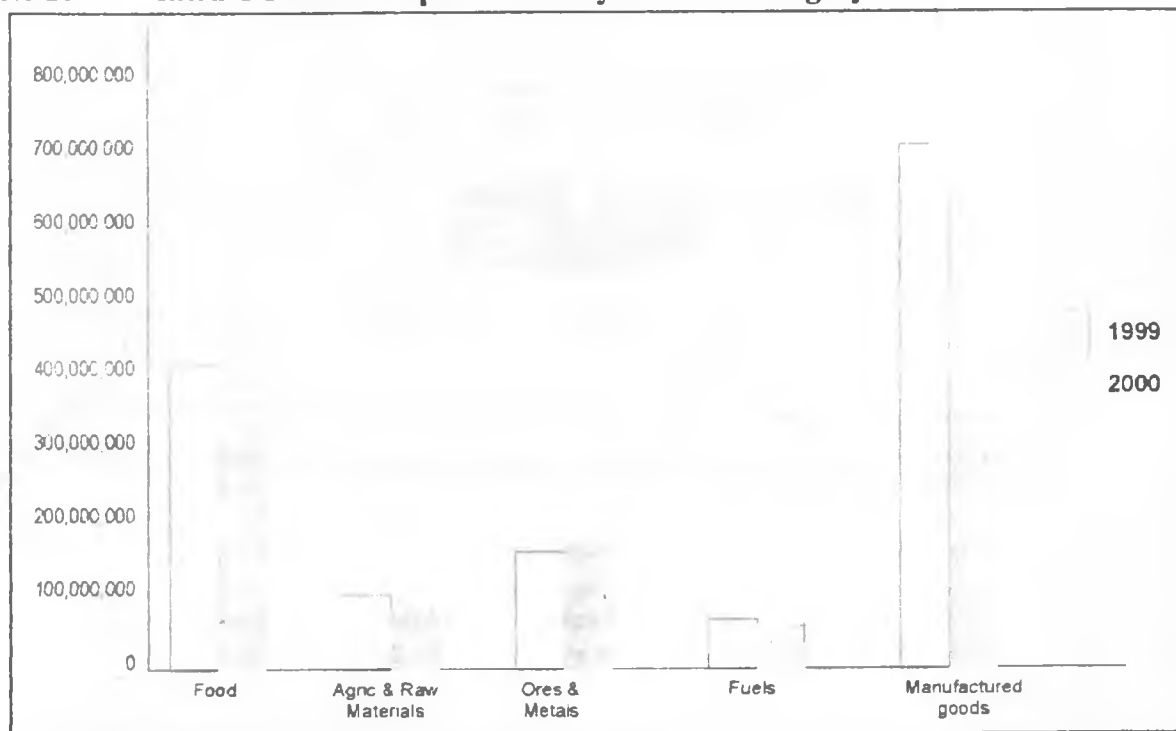
**Source:** *Patterns in COMESA Trade: External Trade Statistics Bulletin, Dec. 2001)*

Furthermore, Intra COMESA Export Trade was dominated by exports of foods and manufactured products which accounted for over US\$ 1 billion of Intra COMESA export

trade for the year 2000. Moreover fuels and agricultural raw materials had a significant input on the export trade. These figures incorporate MSEs participation in the intra COMESA trade, as the data does not categorize large, medium and micro and small enterprises.

It is interesting to note that Intra COMESA Imports have a similar distribution as Intra COMESA Trade as depicted t in Tables 21 and 22.

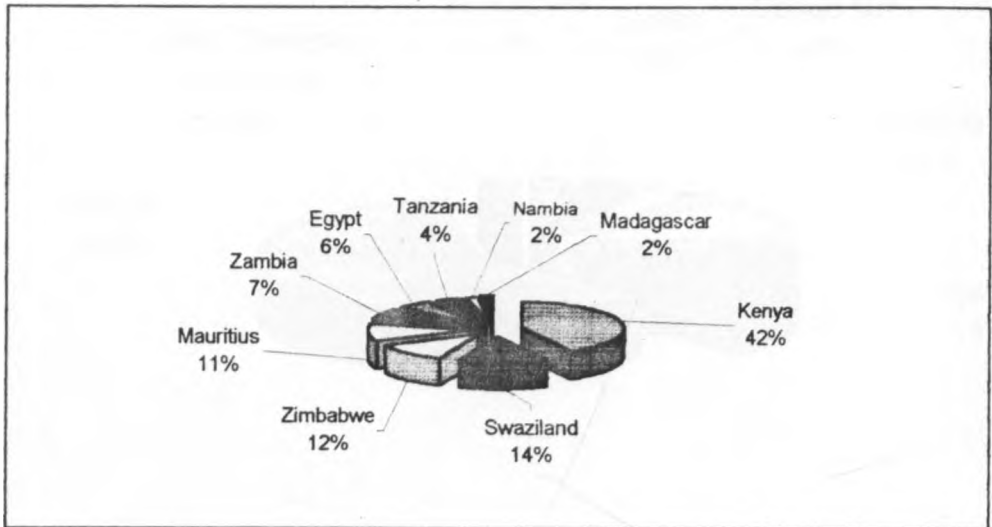
**Table 21 Intra COMESA Export Trade By Product Category**



**Source: Patterns in COMESA TRADE: External Trade Statistics Bulletin, Dec, 2001**

Furthermore, Kenya lead in the Intra COMESA export of manufactured goods as her market share was 42%, followed by Swaziland 14% and Zimbabwe 12%. Kenya also dominated in the export of fuel, which was 60%.

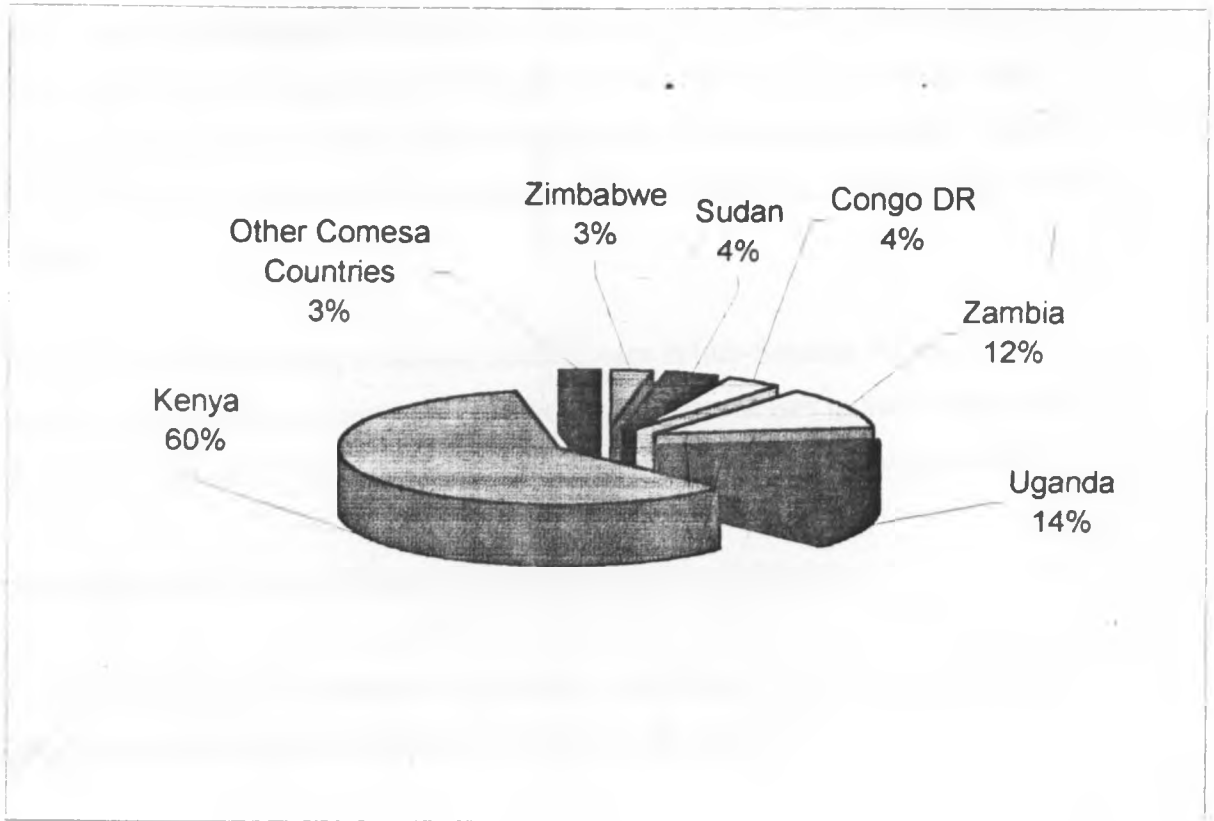
**Figure 22** Intra COMESA Manufactured Goods Export Shares, 2000



*Source: Patterns in COMESA Trade: External Trade Statistics Bulletin, Dec.*

2001

**Figure 22** Intra COMESA Fuel Export Shares, 2000



According to the survey data 66.7% of the enterprises exported their services and products to the COMESA region. These included enterprises in the educational, pharmaceutical and the computer industry, therefore the COMESA region is a vast opportunity for MSEs to engage in export activities.

#### 4.2.2 The African Growth and Opportunity Act (AGOA)

AGOA came into force in May 18, 2000 when President Bill Clinton signed into Law the historic Trade Development Act of 2000, containing the AGOA. This led to the promotion of trade and investment between the United States of America and Sub-Saharan countries, by providing eligible countries with liberal access to the US market. These products were to have duty free access, and quota free access to the trillion dollar US market.

The Act aimed at promoting economic development in Sub-Saharan Africa as well as create the access and opportunity for US investors and businesses in Sub-Saharan Africa, (*Office of the United States Trade Representative and the Trade Partnership, 2000*).

The benefits of the Act for African countries includes the following:

The Act strengthens US relations with African countries and provides incentives for African countries to achieve political and economic growth.

Kenya's exports to the United States under the AGOA trade scheme nearly doubled during the first five months of 2003 in comparison to the same period a year earlier. Signs of a boom in Kenya's sales to the US market are contained in a new set of figures published by the US International Trade Commission (2003). From January to May of 2003, Kenya shipped \$76.4 million worth of goods to the US through AGOA. The figure for the corresponding portion of 2002 was \$38.5 million.

Kenya's exports to the US in less than half of the year 2003 has already surpassed the \$59 million total for all of 2001 which was the first full year of operation for the Africa Growth and Opportunity Act.



The current trend also puts Kenyan traders on course for greatly exceeding the \$129 million in AGOA eligible goods they sold to the United States in 2002. An economic expansion now under way in the US suggests that Kenyan firms will profit from a rising demand for imports in the world's largest market.

An estimated 180,000 Kenyans have so far found jobs as a result of AGOA. Some 30,000 Kenyans hold jobs directly related to AGOA while another 150,000 work in industries that support manufacturing for export under AGOA, Assistant Secretary of State for African Affairs Walter Kansteiner said at a conference in June 2003.

Textiles and clothing account for most of the exports under the trade scheme. Despite this surge, products from Kenya still account for one per cent of all AGOA-related exports from eligible countries in sub-Saharan Africa thereby creating vast opportunities for MSEs. Moreover there are over 6,000 items under the Generalized System of Preferences (GSP) that can enter the large US market from Kenya.

The US government statistics show that energy-related products, mainly from Nigeria and Gabon, represent more than 75 per cent of total AGOA exports from the sub-Saharan region since 2001. In addition to Nigeria and Gabon, the other leading exporters include South Africa, Republic of Congo, and Lesotho. Kenya ranks sixth among African countries in the volume of AGOA exports to the US. (International Trade Commission, 2003)

African countries are offered duty- free and quota free US market access for essentially all products. The Act establishes a US Sub-Saharan Africa Trade and Economic Co-operation Forum to facilitate regular trade and investment policy discussions.

AGOA promotes the use of technical assistance to strengthen economic reforms and development, including assistance to strengthen relationship between US firms and firms in Sub-Saharan Africa. Currently there are thirty four Sub-Saharan countries which are eligible to participate in this Act.

MSEs have the potential of participating in this large market. For example in 2004 a honey processing enterprises known as Green Acres has began exporting honey to the United States of America. This MSE has not yet exploited the AGOA Act as the company has not yet reached the required capacity. Fortunately, the enterprise is growing and will soon meet the quantities needed so as to trade under the Act. Currently the enterprise is selling the honey to supermarkets.

#### **4.2.3 The East African Community (EAC)**

The EAC is an intergovernmental organization, which was established to promote regional integration and development among the Republics on Kenya, Uganda and the United Republic of Tanzania. The EAC Treaty was signed on 30<sup>th</sup> November 1999 and a vast market was created – 80 million people inhabit the three countries.

In contrast to the former EAC, which centered on joint ownership and management of common services, the new EAC emphasizes on the promotion of economic co-operation amongst the partner states. In order to achieve this goal the EAC had put the following measures in place:

The harmonization of policies, for the purpose of promoting cross border trade, investment and movement of people. This action will spur economic growth amongst the three member countries.

Finally, the EAC will strive to develop the infrastructure within the three member states so as to foster easier mobility for the goods as well as for services.

Currently the EAC is working to create the East African Community Customs Union so as to regularize and standardize customs procedures amongst the three member states.

According to the survey data none of the enterprises that were engaging in export activities, exported their goods or services to the EAC, but there are many business transactions that are conducted between the Kenya –Uganda border as well as the Kenya-Tanzania border. Small stall owners in the central business district in Nairobi, buy clothing and fashion accessories from Kampala, while other traders buy tie and dye fabrics from Arusha, and then sell them in Nairobi. Therefore there are opportunities in the EAC.

#### **4.2.4 The African, Caribbean and Pacific – European Union Agreement: - COTONOU Agreement. (ACP – EU Agreement)**

The COTONOU Agreement was signed in the year 2000 and was preceded by the Lome IV Convention. The agreement has created large markets within the European Union which Kenya can participate in. The products in this agreement which African, Caribbean and Pacific countries can supply the European Union include sugar, beef and veal, wood products and bananas.

MSEs usually participate as extractive enterprises as they grow foodstuff or rear animals, which are processed before being exported under this trade agreement. For example sugarcane farmers produce the cane needed to process sugar, which is then exported to the European Union.

As reflected in the survey data 33.3% of the enterprises exported their services and products to the European Union. This includes four firms, horticultural firms, floricultural firms and enterprises dealing with handicrafts. Therefore there are opportunities for MSEs to participate in the European Union.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0 SUMMARY**

Micro and Small Enterprise activities had their beginning during the pre-colonial era in Kenya, whereby barter trade used to take place. With the advent of colonialization, Europeans were the chief players in running large enterprises, while the Asians begun operating MSEs, which later evolved into medium and large -scale enterprises.

However when Kenya gained her independence, there was an increase in the number of Africans engaging in MSE activities. By 1999 there were 1.3 million of these enterprises.

Globalization has brought about the expansion of business activities in Kenya. With the launch of the AGOA Act, by the American government, a vast and richly endowed market was created for Kenyan goods especially in the textile sector. This means that Kenyan enterprises can now access the American market more easily.

The inception of COMESA has bought together twenty one African countries together to trade in this preferential area. This new market

incorporating countries from Eastern and Southern African including Egypt, has enabled Kenyan enterprises market their goods to 380 million people. Currently Kenya dominates the manufacturing sector as she commands about 60% of the total COMESA market.

The East African Community is another vast market comprising of over 80 million inhabitants in Tanzania, Uganda and Kenya. This vast market is already being exploited as most products manufactured in Kenya get access to these markets.

Kenyan enterprises have access to the European Union through the ACP-EU Agreement. Currently some Kenyan enterprises are exploiting this vast market especially in the export of fresh products.

In the survey that was conducted regarding MSEs that engage in export activities, the following two distinguished characteristics were highlighted -:

Firstly, business owners of enterprises that engage in export have all attained tertiary education. This is in direct contrast with the low education levels attained by business owners who operate in the domestic market as highlighted in the national baseline survey on MSEs.

Secondly, the initial capital base of MSEs participating in exporting was higher than those enterprises that operate in the domestic market. Export oriented MSEs initial capital base is between Ksh 95,000 and Ksh 1.8

million, as compared to the average mean of Ksh 40,500 that is reflected in the national baseline survey.

At this juncture, it is important to realize that even though these vast opportunities exist for export for Kenyan enterprises, it is usually the medium and large enterprises that exploit them. MSEs in Kenya face various challenges which force them to operate only within the domestic market. These challenges are:-

Many MSEs owners do not have various options regarding the access to credit facilities. The study shows that most entrepreneurs access credit from their family members and friends to start their enterprises or re-invest into their enterprises. These resources are usually inadequate and cannot be able to bring back enough returns. Therefore additional capital is required when engaging in exporting in order to transport, package and market the products in the foreign lands.

Physical infrastructure in Kenya is not up to standard as many roads are poorly maintained, thereby resulting in high transport charges. If the products are perishable such as smoked fish, losses are usually incurred due to the poor road network in some parts of the country.

MSEs face the challenge of identifying genuine contacts and trading partners. The internet being a channel of establishing new trading partners, is not a sure proof of establishing honest trade inquiries.

High insurance premiums, taxes and telecommunication costs have affected the product price competitiveness, hence hampering sales growth in the export markets.

The access of raw materials is highlighted as a challenge by business owners in the manufacturing sector. These enterprises import raw materials from various countries, and pricing and quality considerations have to be thoroughly accessed.

Finally, political and economic instability in Africa, including Kenya, affects the business environment in which MSEs participating in export operate in.

## **5.1 CONCLUSIONS**

There are three main conclusions that are derived from this study.

Firstly, most MSE owners operating in the export markets accessed credit and financial resources from their family and friends. This is well tabulated



in the survey data, whereby 60% of the entrepreneurs accessed credit from family and friends, as opposed to 6.7% and 20% of the MSE owners acquired credit from Commercial banks and Non governmental organizations respectively.

Secondly, non governmental organizations and micro finance institutions, haven't played a crucial role in the promotion of MSEs export activities. As illustrated in the survey data, only 8% of the enterprises surveyed acquired their capital from Non governmental organizations and micro finance institutions. Only 13% of the enterprises surveyed sought business counseling services from non governmental institutions. There wasn't any MES that established their contacts for trading, through non governmental organizations.

Thirdly, existing government policies haven't been well implemented. According to the survey data the following challenges which stem from lack of proper implementation and formulation of government policies were highlighted.

- Poor infrastructure
- High taxation
- High telecommunications cost

- Political and economic instability in Kenya
- Competition
- Difficulty in establishing genuine contacts for trading

## 5.2 RECOMMENDATIONS

The following recommendations have been proposed for the improvement of the participation of MSEs in export activities.

First credit facilities should be made easily available to MSEs owners so as to increase the number of enterprises engaging in exporting activities. Commercial Banks should shift from lending money on the basis of collateral, to lending money on cash flow basis. Specialized export- credit institutions should be created to meet the financial needs of MSEs participating in export activities.

Secondly, the government of Kenya should improve the road network in Kenya. This in turn will reduce the high transportation costs incurred by business owners who transport their goods by road to Uganda, Burundi and Rwanda.

Thirdly, the government of Kenya should reduce import tax levied on raw materials, so that Kenyan products can be competitive in pricing in the export market. Indirect taxation should be reduced so that price competitiveness can be achieved. This includes the 16% value added tax and the fuel levy, which increases the cost of production.

Fourth, telecommunication costs should also be lowered so that affordable communications within and outside Kenya can be achieved.

Fifth, insurance premiums should also be reduced so that pricing of the goods for export would be competitive. Premium reduction can be achieved. The Commissioner of Insurance works together with the insurance companies to chart out lower rates for insurance covers for export goods.

Sixth, political stability and economic growth should be achieved by the government of Kenya, so that more MSEs would engage in exporting activities. This includes creating a cohesive cabinet and government and improving the economic growth rate from the present 1.8% posted in early 2004 to at least 4%.

Seventh, the Export Promotion Council should create public awareness of its existence and the services they offer through the media and holding of workshops targeting the MSE owners. The EPC should make the access of business counselling more accessible to MSE owners. The EPC should

disseminate market information of various countries and also have a database of foreign contacts and trading partners. These will help ease the problem that business owners face of identifying genuine trading partners from foreign countries. Services provided by the EPC are subsidized by the government, therefore they are provided at a negligible fee.

Finally, Non governmental organisations working with MSEs and micro finance institutions should create awareness about their existence amongst MSEs owners and the general public who may want to engage in exporting activities. They should provide information about their business counseling services and credit facilities. This can be done through using the media and holding workshops targeting the MSE owners.

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# QUESTIONNAIRE

This questionnaire has been formulated for the purpose of studying the participation of Micro and Small Enterprises in Export. Your co-operation in answering these questions will be highly appreciated.

**INSTRUCTIONS:** *Please print the appropriate answer in block text.*

## SECTION A.      **General Information**

1. Registered Name of Business: \_\_\_\_\_
2. Year of inception of Business: \_\_\_\_\_
3. Ownership of the Business:
  - Indigenous Kenyan
  - Kenyans of European origin
  - Kenyans of Asian origin
  - Wholly foreign.
  - Government owned
  - Joint foreign and local
  - Others (Specify)
4. Age of Main business owner
  - 15 – 20 Years
  - 21 – 30 Years
  - 31 – 40 Years
  - 41 – 50 Years
  - 51 +    Years
5. Gender of the main business owner.
  - Male
  - Female
6. Education background of main business owner.
  - None
  - Primary
  - Secondary
  - Tertiary

7. Nature of business Activity:
- Retail
- Service provision
- Manufacturing
- Wholesaling
8. Initial amount of capital invested Kshs. \_\_\_\_\_
9. How did you acquire the capital to start the enterprise? Tick the appropriate response.
- Own resources
- Family and friends
- Commercial banks
- Non governmental organization and co-operatives
- Others (Specify)
10. How many employees do you employ in your enterprises?
- Part – Time \_\_\_\_\_
- Full – Time \_\_\_\_\_

11. Does your enterprise engage in export activities? If No Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION B: EXPORT CHARACTERISTICS**

12. When did your enterprise start engaging in export activities? \_\_\_\_\_
13. What motivated you to venture into exporting? \_\_\_\_\_
- \_\_\_\_\_
14. What products or services do you export? \_\_\_\_\_
- \_\_\_\_\_
15. Where do you mainly export?
- East African community
- COMESA
- European Union
- North America
- Asia
- Others (Specific) \_\_\_\_\_

16. What volume of products / Services do you export per year? (Specify in trans of pieces, tonnes, kilogrammes etc).
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
17. How do you establish your trading partners? \_\_\_\_\_
- \_\_\_\_\_
18. What mode of transporting the products do you use? \_\_\_\_\_
- \_\_\_\_\_
19. What challenges do you encounter in your export business? List them in the order of importance.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
20. What Association do you belong to that helps you to engage in Export activities?
- \_\_\_\_\_
- \_\_\_\_\_
21. Is the business profitable? \_\_\_\_\_
22. In order to meet client requirements what challenges do you encounter?
- \_\_\_\_\_
- \_\_\_\_\_
23. Do you get business counseling? If yes, indicate from where, by ticking the appropriate answer.
- |                     |                          |
|---------------------|--------------------------|
| NGO'S               | <input type="checkbox"/> |
| Consultants         | <input type="checkbox"/> |
| Friends             | <input type="checkbox"/> |
| Business Colleagues | <input type="checkbox"/> |
| Others              | <input type="checkbox"/> |
24. What incentives would you like the government to provide in order to enhance your exporting activities? \_\_\_\_\_
- \_\_\_\_\_

**Thank you for taking your time to fill in the questionnaire.**

16. What volume of products / Services do you export per year? (Specify in trans of pieces, tonnes, kilogrammes etc).
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
17. How do you establish your trading partners? \_\_\_\_\_
- \_\_\_\_\_
18. What mode of transporting the products do you use? \_\_\_\_\_
- \_\_\_\_\_
19. What challenges do you encounter in your export business? List them in the order of importance.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
20. What Association do you belong to that helps you to engage in Export activities?
- \_\_\_\_\_
- \_\_\_\_\_
21. Is the business profitable? \_\_\_\_\_
22. In order to meet client requirements what challenges do you encounter?
- \_\_\_\_\_
- \_\_\_\_\_
23. Do you get business counseling? If yes, indicate from where, by ticking the appropriate answer.
- |                     |                          |
|---------------------|--------------------------|
| NGO'S               | <input type="checkbox"/> |
| Consultants         | <input type="checkbox"/> |
| Friends             | <input type="checkbox"/> |
| Business Colleagues | <input type="checkbox"/> |
| Others              | <input type="checkbox"/> |
24. What incentives would you like the government to provide in order to enhance your exporting activities? \_\_\_\_\_
- \_\_\_\_\_

**Thank you for taking your time to fill in the questionnaire.**