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PEASANT FARMERS AND DEVELOPMENT:
A CASE STUDY FROM KENYA

by

James Walter Carrie, B.A.

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A thesis submitted to the Faculty of
Graduate Studies and Research in partial
fulfilment of the requirements for the degree of
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in International Affairs

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ABSTRACT

The thesis presents arguments in support of meeting the needs and developing the potential of peasant farmers. The economic and social environments of the peasant farmer are considered, and factors affecting economic rationality and responsiveness to innovation discussed. To understand the spatial dimension, regional planning theory is reviewed and an argument presented for development centres as a key to peasant farmer development. Development trends in Kenya are examined to establish the context for the case study of Muranga District. Basic inequities in Kenya and contributing processes are identified. Special consideration is given to spatial planning and to two aspects of rural administration, planning and extension. Muranga District is presented as a district well integrated into the Kenyan socio-economic mainstream. Original statistical analyses are presented to document the income inequities in the district. A greater emphasis on area specific planning and more local participation in development are seen as central to the improvement of life for peasant farmers.
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CHAPTER I

INTRODUCTION

The following statement was adopted by the General Assembly of the United Nations at its twenty-fifth session as part of its endorsement of the Second Development Decade:

As the ultimate purpose of development is to provide increasing opportunities to all people for a better life, it is essential to bring about a more equitable distribution of income and wealth for promoting both social justice and efficiency of production, to raise substantially the level of employment, to achieve a greater degree of income security and to expand and improve facilities for education, health, nutrition, housing and social welfare and to safeguard the environment. Thus qualitative and structural changes in the society must go hand in hand with rapid economic growth, and existing disparities--regional, social, sectoral--should be substantially reduced.1

Such declarations of intent reflect the humane attitudes of members of international fora. The challenge which must be met is to develop policies and plans which are capable of directing change according to the standards established.

This paper will seek to identify a feasible approach to meeting the needs of a very important and numerous part of developing countries, the peasant farmers. Often neglected within planning documents to a degree not warranted by their numbers, contributions to social development and economic potential, peasant farmers represent an area of study which is significant in terms of national economic and social calculations and decisions, and for reasons of furthering the just development
of the impoverished peoples of this earth. The need for area specificity and the value of local participation in rural development planning will be considered.

The Concept of Development

The concept of development used in this paper will not be limited strictly to the processes associated with economic growth, modern institution building or the increased flow of goods and services. Although these may be thought to be essential, they should not be given precedence over the broader goal of development which is the "full realization of human capabilities." Denis Goulet has written that "authentic development" seeks to provide social systems in which men and women:

... free themselves from every servitude imposed by nature or by oppressive systems, they achieve wisdom in their mastery over nature and over their own wants, they create new webs of solidarity based not on domination but on reciprocity among themselves, they achieve a rich symbiosis between contemplation and transforming action, between efficiency and free expression. This approach emphasizes the priority of meeting human needs and fulfilling human desires.

An implicit assumption which lies at the root of these thoughts is that of the relative nature of the concepts of poverty and "well-being." It has long been thought that the notion of a man's well-being cannot be reduced to a single absolute measure such as national income per capita or disposable income per family. Thomas Carlyle, writing in 1839, considered that wages and the amount of bread wages could buy were partial indicators of the well-being of man. He wrote that:
Can the labourer, by thrift and industry, hope to rise to mastership; or is such hope cut off from him? How is he related to his employer—by bonds of friendliness and mutual help, or by hostility, opposition and chains of mutual necessity alone? ... With hunger pleading on him, his contentment is likely to be small! But even with abundance, his discontent, his real misery may be great. The labourer's feelings, his notion of being justly dealt with or unjustly; his wholesome composure, frugality, prosperity in the one case, his acid unrest, recklessness, gin-drinking and gradual ruin in the other—how shall figures of arithmetic represent all this?²

Moreover, it is important to realize that necessities ought to include more than what are universally recognized as essentials, such as food, water, clothing and shelter. In his arguments for the relative nature of poverty, Keith Griffin quotes this idea of Adam Smith:

> By necessities I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it decent for creditable people, even the lowest order, to be without.⁶

Thus it may be concluded that:

If "custom" determines "necessities," and if poverty is defined in relative terms, then it will not be possible to reduce poverty and increase well-being merely by raising the average level of income.⁷

That is to say, development strategies must be designed to increase the levels of equality of access to goods and services within a country so that all may experience equitable development. The challenge is to establish such principles and enforce their operation in the context of a growth situation without biasing the distribution of benefits to one sector.⁸

This perspective may seem to be overly idealistic and somewhat misplaced with regard to the poorer nations where such basic needs as food, water and personal safety are so visible among large segments of
the population. Indeed, the realization of such standards of "authentic" and equitable development is difficult to envisage, whether one is considering life in Ottawa, Canada, or in a village in Kenya. There is a need, however, for value guidelines. There seems to be a common understanding that poverty is not the way of life intended for mankind and that something should be done to correct this wrong. There is not, however, always a common understanding that how one attempts to solve a problem can have a serious impact on the outcome, and that certain approaches are more desirable than others.

A prime example of this issue has been the reconsideration of the role assigned to industry as the leading sector in the development of the new, poorer states. The establishment of industrial enclaves has not resulted in the spread of economic benefits to the majority of the population, and advances in Gross National Products have not necessarily been indicative of significant changes in the lives of the mass of populations. As Friedmann and Douglass have observed:

In accordance with this strategy, the rapid expansion of a large-scale, corporate manufacturing sector was expected to bring bountiful benefits to the nation: a basis for further growth and capital accumulation, full employment, higher levels of living for the entire population, increased national autonomy, a breakthrough into "modernity." Unfortunately, these benefits have not been achieved on the scale or in the time period expected, and most developing countries have been forced to struggle with such continuing adverse conditions as:

... hyperurbanization, increasing rural densities, a spatial structure of dominant core and dependent periphery, widespread urban unemployment and underemployment, rising income inequalities, persistent and growing food shortages, and deteriorating material conditions in the countryside.

Other analysts of development have made similar critiques of past
development practices and have reached similar pessimistic conclusions about the results achieved. Commenting on the past history of development plans, D.G.R. Belshaw has summarized that:

Practices under attack include the use of estimates of G.D.P. per capita as the primary measure of development; the neglect of income distribution effects; the failure to restructure the adoption of labour-saving technology; failure to counter the "urban-bias" which arises from multiple public investment, product and factor pricing and exchange rate decisions; and a relative neglect of the growth potential of the small-scale agricultural sector.13

Keith Griffin, in his review of changing ideas about development strategies, has combined an acknowledgment of the achievements of the past decade or so with a declaration of a dark cloud above the development horizon.

In the Third World as a whole the rate of growth in the last quarter or so has been unprecedented. Never before have so many poor countries, containing such a large proportion of those who are inadequately fed, clothed and housed, enjoyed such a period of rapid and sustained expansion of output. Yet despite this growth of production the problems of widespread poverty seemed to have remained as great as ever. The rise in aggregate production does not seem to have been matched by a corresponding rise in the income of the poor.14

With reference to Africa, Griffin concluded that poverty is increasing in many parts of the continent. In Chad, Niger, Senegal, Somalia, Sudan and Upper Volta, average incomes fell between 1960 and 1973, and in Ethiopia, Zaire and Zambia, where average incomes were thought to have increased, it was considered probable that those of the poor actually declined.15

This is not to imply that the concern about poverty has only surfaced in the last decade. In a chapter of the significant World Bank monograph, *Redistribution with Growth*, Montek Ahluwalia has written that:
The fact of poverty is not new: it was always self-evident to those familiar with economic realities. What is new is the suspicion that economic growth by itself may not solve or even alleviate the problem with any "reasonable" time period. Indeed it is often argued that the mechanisms which promote economic growth also promote economic concentration, and a worsening of the relative and perhaps even absolute position of the lower-income groups. This pessimistic view has led to some questioning of growth-oriented development strategies which assume that the poverty problem could be solved without much difficulty if growth could be accelerated.16

It may thus be concluded that the achievement of development for all is not going to be accomplished within the near future by following strategies of encouraging rapid industrial growth. For some countries the alternative has been "revolutionary socialism," while for others it has been to continue to promise more for all, sometime in the future, and to continue with urban industrial-oriented planning of a capitalist nature. A more balanced strategy is to focus the allocation of resources and human energies on the rural and urban sectors within a mixed ideological framework of state control and private enterprise.

A Focus on Rural Development

The concern for the rural sector reflects the fact that it is not possible, according to political, economic or social criteria, to postpone the resolution of the rural problems, including those of nutrition and health, education, employment, and social development. In the post-independence years, attempts have been made in underdeveloped countries to achieve higher levels of economic and social development for all and, in theory, the needs of all the people have been considered and planned for. However, in too many cases, the primary beneficiaries within the new states have been a small percentage of
the people, including the politicians, senior administrators and business
and agricultural leaders, who have been able to take advantage of the
emphasis on Western models of development. Those who have been purposely
or inadvertently ignored are the poor, and primarily the rural poor
who are located away from the major centres of commerce and decision-
making, and are often the targets of poorly planned agricultural
development schemes. In comments regarding the challenge of rural
development, Robert McNamara has provided an indication of the immensity
of the rural problems:

Of the 2,000 million people in the World Bank's developing
member countries, roughly 1,500 million live on the land,
and nearly half of these are entrapped in what can only be
described as absolute poverty.
The number of the absolute poor increases and their
enforced degradation deepens with every passing year,
despite more than two decades of extraordinary worldwide
economic growth.17

There is a great need, therefore, to examine the levels of
rural welfare that exist within a country, and to focus more energy and
resources on improving the condition of the impoverished. Guidelines
to the quality of rural welfare include:

1. the physical levels of living of rural families.
2. the group amenities and activities of rural villages.
3. the opportunities for enjoyable involvement and participa-
   tion in family and community affairs.
4. the legal arrangements governing the rights of men and
   families with respect to the use of the land.18

Although rural development can mean many things to many people,
it is possible to identify certain basic features of a commonly shared
understanding. As noted by the Committee on Human Environment in
Kenya, rural development may be identified as:
... a series of quantitative and qualitative changes occurring among a given rural population and whose converging effects indicate in time a rise in the standard of living and favourable changes in the way of life.19

More pointedly, rural development may be defined as a process:

... improving the living standards of the mass of the low-income population residing in rural areas and making the process of their development self-sustaining.20

For the purposes of this paper, the three important features of rural development outlined by Uma Lele are of significance since they provide a basic framework for the focus on the development needs of peasant farmers. These features are:

1. Improving the living standards of the subsistence population involves mobilization and allocation of resources so as to reach a desirable balance over time between the welfare and production services available to the subsistence rural sector.

2. Mass participation requires that resources be allocated to low-income regions and classes and that the productive and social services actually reach them.

3. Making the process self-sustaining requires development of the appropriate skills and implementing capacity and the presence of institutions at the local, regional, and national levels to ensure the effective use of existing resources and to foster the mobilization of additional financial and human resources for continued development of the subsistence sector. Self-sustenance thus means involving, as distinct from simply reaching, the subsistence population through development programs.21

It should be noted here that most rural development projects implemented to date have not achieved the successes hoped for.

D.G.R. Belshaw has observed that:

... such projects rarely develop a wider national impact—their effects are restricted to small enclaves whilst the broad mass of rural people remain unreached by comprehensive, nation-wide rural development programmes.22

This failure, according to V. W. Ruttan, is attributable to:

... the inherent difficulties of establishing and maintaining the necessary multi-sectoral co-ordination which requires unusually large inputs of high-level manpower; these are available for only a few projects in any one country.23
The problem of replicability is serious and can be rooted in the lack of transferable rural development planning technologies and in conflicts within the public sector among entrenched sectoral ministries. The complete resolution of such difficulties will require further research efforts and a political and administrative commitment to decentralized, multi-sectoral planning. This element of the devolution of responsibility to lower levels, such as the administrative district, is proposed as being a key factor for rural development success and must be given careful consideration.

Regardless of the success or lack of success to date, there are important reasons for continuing to argue for rural development. There are obvious humanitarian reasons for arguing for the need for increased and improved programs of rural development. The previously mentioned quote of Robert McNamara is one indication of the needs that exist. Besides this type of appeal there are pragmatic reasons for giving increased preference to rural development. To date, the industrial stimulus to overall economic growth has been weakened in too many countries by the weak linkages to domestic resources and rural demand. Industrial development has emphasized the use of capital intensive technology and imported inputs and has focussed on a small, urban-dominated market. To stimulate the industrial sector of one's economy, it has been strongly recommended that special attention be paid to developing the ties between the rural-agricultural sector and the predominantly urban-industrial sector. Uma Lele has argued that:

In the absence of development of the subsistence rural sector, inadequate effective demand remains a major constraint to development of the manufacturing and service sector, which
otherwise holds considerable potential for increasing employment. Improving living standards of the subsistence rural sector is important, not only as a holding operation until industrialization can advance sufficiently to absorb the rural exodus, but frequently as the only logical way of stimulating overall development.\textsuperscript{24}

The need for increased investment in the rural sector has also been expounded on by D.G.R. Belshaw:

This view is frequently reinforced by: (a) the constraints placed on the industrial growth rate by the level of domestic demand which itself is dominated by the incomes of the rural majority, and (b) the slow growth of formal sector industrial employment resulting from the high capital/labour ratios embodied in the readily available production technology.\textsuperscript{25}

The latter point emphasizes the need for appropriate industrial strategies for the rural areas which can act as sources of employment for those not able to find jobs in the agricultural sector.\textsuperscript{26} The desired overall effect would be to reduce rural-urban migration and improve rural living conditions by stimulating the economic potential, in agriculture and in industry, of the rural sector.

Finally, Johnston and Kilby illustrate the relationship between agricultural development and structural transformation. When the agricultural sector is the main economic sector, accounting for perhaps fifty percent or more of the "labour force, then a limit is set \ldots on the volume of commodity flows from agriculture to other sectors which sets a ceiling on the rate at which farm output can be expanded."\textsuperscript{27} At the same time the constrained purchasing power of farmers acts as a brake on the possible rates of expansion for other sectors.\textsuperscript{28}

More balanced models of development have been advanced in an effort to advance the development of the rural-agricultural sector along with the urban-industrial. The emphasis here is on studying
the complementarities and linkages which exist between these sectors in an attempt to convince policy makers of the basic interrelationships that exist between agricultural productivity, internal demand and industrial productivity. Related emphases include those of reducing existing inequalities in living standards between the rural and urban areas and, within these areas, between the upper and lower levels of income distribution, and of considering the investment of national resources in small scale, appropriate technology schemes. Balanced models of development must be rooted in a concern for people as subjects and not as objects of policy considerations if equity and justice are to be achieved.

With our priorities established we can then identify those economic policies and techniques that will further our objectives at the most appropriate levels of efficiency. This is not to deny the usefulness of economically rational models; but it is to argue for their development and use according to a socially based set of value preferences. Nor is the significant contribution of technology to development to be underestimated. The concern here is not for limiting the usage of technology, arguing perhaps for letting things "happen naturally," but for innovating or adapting the most appropriate technology according to such standards as accessibility, ecological issues, and local need. Often the technologies designed to further rural development are controlled by those richer farmers that can afford them; are not compatible with local ecological variations; or are designed to advance cash crop production when it is increased food production that is needed most urgently.
The Politics of Development

In these preliminary remarks on development it is important to acknowledge the political aspects of our study. In this paper there will be some emphasis placed on certain changes that are thought to be needed if situations of rural poverty are to be rectified. Such an analysis implies a shifting of the distribution of economic resources and of political power, since the two factors are interrelated. Hence it will be necessary to examine how the present allocation of resources is made, who controls that process, what is the probability that significant changes can be made. For the national elites of many developing nations have, like their Western predecessors, the prerogatives of wealth, education, and technical knowledge which they use to their advantage in an attempt to control the political, social and economic futures of their nations. Michael Lipton has argued similarly in the context of the conflict between urban and rural interests:

The rural sector contains most of the poverty, and most of the low-cost sources of potential advance; but the urban sector contains most of the articulateness, organization and power. So the urban classes have been able to "win" most of the rounds of the struggle with the countryside; but in so doing they have made the development process needlessly slow and unfair.

Theories of "underdevelopment" and "dependency" provide useful sources of insight into the problems faced by developing countries. Concepts of domination, disarticulation and impoverishment have been forcefully brought to the attention of students of development by these theorists. Colin Leys, for example, has articulated the implications
of the continuing process of underdevelopment for the people of the
former colonies when he writes that:

It [the underdevelopment process under neo-colonialism] meant a continuation of the structure of exploitation and
domination established by colonial rule, which for the vast
majority of the population meant a continuing prospect of
hard, unproductive labour mainly for the benefit of others,
accompanied by growing inequality, insecurity, social
inferiority and virtually complete absence of political
rights.\textsuperscript{34}

Also, the external orientation of the underdeveloped nations and the
continued institutionalization of exploitive relationships between
the centre and the periphery, nationally and internationally, have been
advanced as basic obstacles to the achievement of more equitable
distributions of resources.

The prevalence of continuing exploitive relationships, as
advanced by theorists of underdevelopment and dependency, would seemingly
negate the possibility of effective, equitable and just approaches
to national development without the occurrence first of radical changes
in class structures. To quote Wahidul Haque et al.:

In the face of such deep-rooted and powerful resistance... small efforts are bound to fail. Evidence is clear from
history that gradualist and piecemeal efforts at social
change, even if genuinely motivated, backslide into the hands
of the vested interests. There must be a critical minimum
effort to gain ground at all. The greater the resistance,
the greater must be the very important first "thrust".
This indeed is the logical substance of the "revolutionary"
as distinguished from the "reformist" approach.\textsuperscript{35}

and Colin Leys:

It is artificial to point to the existence of theoretical
alternatives without recognizing that the status quo is
underwritten by the social classes which underdevelopment has
created and brought to power in the periphery countries.\textsuperscript{36}

There is an element of pessimistic realism in statements such as
these which seems to be supported by historical experiences in developing countries. The attractiveness of the alternative, that of radical change, has also benefited from the significant changes that have occurred in the People's Republic of China and in Cuba. The preference here, however, is to suggest that the "laws of historical development" are not inevitable and to argue that although the presence of vested interests creates substantial roadblocks to equitable development strategies, they do not make the road impassible, and that there is a need to consider each country as a case in itself, complete with its own potentials and possibilities for change.

This is not to imply that one can be overly optimistic about the future. The evolutionary process offers no guarantee that the repressive and self-serving regimes of today will become the enlightened regimes of tomorrow. What can be offered here is the hope that cumulative incremental change can occur within an economy on the basis of the recognition by central authorities of the need for increased equity. What is also proposed here is the hope that the combination of analytical study and humanitarian appeal, by combining the revelation of inequities and the possibility of change with the call to reformation, will support the development of more reasonable forms of social and economic policy according to standards such as those of "authentic development." This perspective may not bring total satisfaction; but then again it is presented as an indication of what this author presently believes to be feasible and not as a final position on the matter.
The Concept of Peasant Farmer

After a review of the literature on the concept of the peasantry, it became apparent that a simple definition was impossible. Indeed, as one author has indicated, a major pre-definition problem exists that must be handled with care if studies of peasants are to be meaningful:

The term peasant evokes either a distant world of romantic struggles, or of idyllic freedom, or of serfdom and drudgery, depending on the author and the period. It is difficult for even the most learned of scholars to shed the emotive connotation of the term and to describe the world of the peasant as real and not totally unfamiliar.39

Assuming that analysts of the peasantry have been able to maintain a satisfactory degree of objectivity, what are the characteristics of peasants on which to base an acceptable definition? A reasonable definition of the term has been provided by Teodor Shanin. "The peasantry" ought to include the following characteristics:

1. The peasant family farm as the basic unit of multidimensional social organization.
2. Land husbandry as the main means of livelihood directly providing the major part of the consumption needs.
3. Specific traditional culture related to the way of life of small communities.
4. The underdog position - the domination of peasantry by outsiders.40

To supplement this general definition it is necessary to refer to other characteristics which provide insight into the nature of the peasantry. Obviously, the extensive study of peasant societies has revealed many important characteristic features. Here it has been necessary to concentrate on a few relevant areas. These include: the historical origins of the peasantry, the transitional nature of the
peasantry, linkages between the peasantry and other social groups, and the issue of change and stability.

The study of the historical origins of the peasantry has received much attention. A common approach is exemplified in a critique of the Kenyan peasantry by Atieno-Odhiambo who argues that as an analytical category, the peasantry is the creation of colonialism:

At the fundamental level, there was no peasantry as a class in pre-colonial Kenya precisely because they did not live, in the traditional set-up, under economic conditions that separated their mode of life, their interests and their culture from those of other classes [since there were no other classes].

Atieno-Odhiambo proceeds to argue that with the introduction of colonialism, there was exploitation of the peasant sector by the Europeans, and the peasantry was impoverished and made a willing source for the proletarization of towns. Other analysts, including Colin Leys, John Saul, and Roger Woods, do not agree with the idea of the decline of the peasantry, but do frame their discussions of rural change within the context of a confrontation of economic classes. The origins of the peasantry are broadly defined in terms of the clash between the traditional and colonial social systems, and the path of historical development is in the direction of the capitalization of peasant farming.

While the logic of class development will not be incorporated into the definition of peasantry used in this paper, the importance of the transitional nature of the concept of class development is put forward as a key factor. Thus the peasantry is located somewhere on a continuum between "primitive society" and strictly entrepreneurial farming. Primitive society may be defined as a social system in which:
... producers control the means of production, including their own labor, and exchange their own labor and its products for the culturally defined equivalent goods and services of others. and entrepreneurial farming as a system in which the farmer:

... aims at a profit and reinvestment rather than subsistence and consumption and who works his land primarily with hired labour. Obviously, one cannot distinguish membership on a rigid basis between these two categories since the presence of social change prohibits precise categorization. One may establish, however, that the peasantry is a type of cultivator, or:

... "an occupying owner or a tenant of a holding capable, but only just capable, of providing his family with a subsistence income," that is to say "an income large enough to make it unnecessary for the family to depend on regular employment for wages, yet not so large as to permit the family to live wholly on the proceeds of rents or to enable it to work its holding entirely or mainly by hired labour." In terms of the nature of linkages between the peasantry and other social groups, Eric Wolf emphasizes the key factor of interaction between the peasantry and a dominant social group. From his perspective peasants are:

... rural cultivators whose surpluses are transferred to a dominant group of rulers that uses the surpluses both to underwrite its own standard of living and to distribute the remainder to groups in society that do not farm but must be fed for their specific goods and services in turn. Thus the peasantry is not a self-sufficient social system, but a system which is intrinsically related to other sectors. As Leys has noted, a predominant characteristic of the peasantry is a need for towns to sell produce to and for an elite to fulfill various bureaucratic and cultural functions. The nature of the relationship may be interpreted
being exploitative. Wolf has stated precisely that:

... the term peasant denotes no more than an asymmetrical relationship between producers of surplus and controllers. 52

Sidney Mintz, in his article on defining peasantries, agrees with Wolf on the exploitative nature of the linkages between peasant producers and consumers. He observes that the difference between primitive and peasant societies is that:

In primitive society, surpluses are exchanged directly among groups; peasants, however, are rural cultivators whose surpluses are transferred to a dominant group of rulers. 53

The degree of asymmetry will vary from case to case. One must add that certain ameliorating conditions also develop, such as the establishment of patron-client linkages, the sensitivity of politicians and administrators with deep kinship and local ties to the rural sector, and the political power, albeit usually in latent form, that lies within peasant co-operative ventures and the massive size of the rural population. In Kenya, for example, the peasant electoral power has influenced government policy vis-a-vis rural development. Leys, however, is critical of the extent to which peasant influence can control political decisions arrived at in urban environments. He argues convincingly that:

... it is the nature of the symbiosis between a peasantry and an elite that the elite makes periodic concessions of various kinds, only some of which are substantial, offsetting the otherwise steady flow of benefits from the peasantry to the elite. 54

Other inter-group linkages of significance include the relationship between rural producers, whom we identify as peasants, and other rural groups, such as rural squatters and wage-earning agricultural
workers. Membership in these latter groups does not lend itself to rigid classification due to the fluid nature of their relationship with the peasantry. The rate of entry of peasants into the wage-earning or squatter groups, as it is into the urban labour markets, formal and informal, is governed by the capacity of the peasant sector to maintain minimal levels of productivity and adequate employment. Thus while it is possible to agree that squatters and agricultural wage-earners cannot be strictly defined as members of the rural peasantry, it is important to note the strong linkages that exist and the fluid nature of the boundaries among these separate groups.  

One must also consider the issue of socio-economic change in understanding the peasantry. For the external observer there would appear to be sufficient reason, given the powerful influence of custom and tradition, to conclude that the dominant concern of peasant society is for surviving and conserving. As will be noted later with specific regard to the question of rational behaviour in economic and agricultural issues, there is much evidence to suggest that socio-economic change does occur and that peasant societies are interested in and capable of handling it effectively. One need only refer to the study of Sidney Mintz on peasant societies and his conclusion that they are definitely not static. For Mintz, it is the presence of "social manoeuvre," the ability to change or to preserve cultural patterns, that is the critical variable for understanding social development processes. He argues that although traditional culture provides historically-derived patterns of behaviour and sets of values, how these traditional patterns and sets are understood is a product of the differential internal distribution
of power and wealth and status and its interpretation by the members of society.

The fact is that peasantry nowhere form a homogeneous mass or agglomerate, but are always and everywhere typified themselves by internal differentiation among many lines. 57

The particular situation and the nature of its interpretation will be determined by the extent to which social manoeuvre is a real factor, affecting and effecting "... the changing power and economic relationships among individuals, and between sub-classes of the peasantry." 58

To conclude, it is important to note that for some analysts of rural societies the term has decidedly negative connotations:

The word "peasant" denotes, among other things, a degree of rusticity, in comparison with his betters, which we do not feel justified in attributing to the villager. ... 59

To avoid using an apparently value-laden concept, many authors have used the term "small farmer" or "small holder." The preference of this writer, however, is to use the term "peasant." This choice may be faulted for disregarding the connotations of referring to people as "peasants." Also, this usage may be seen to support a traditional academic classification which is broadly employed by scholars of all ideological backgrounds and is lacking in conceptual consistency, and in definitional specificity. The value of using the term "peasant" is that it describes a transitional period in the context of social and cultural change, and there is at least a minimum of agreement on the nature of the processes that occur and of the segment of society that is affected.

At the same time, it is important to provide a point of continuity
with studies on small-scale farming in terms of identifying what is defined as being "small," and using this as an indicator of a conceivable size range for peasant farming. On this point of "smallness" there does not appear to be a standard answer. Indeed, in one study of small farming, the observation was made that:

... it is far easier to understand "in spirit" what is meant by small farmer... than it is to develop a satisfactory operational yardstick for our work.60

The authors of this study did report that the average size of the small holdings they examined in Africa, Asia and Latin America was approximately five acres.61

According to Clive Bell and John Duloy, one may define a "small" farmer as one who has:

... access to sufficient land to provide at least a subsistence income to the farm family from its cultivation. (They may have other income opportunities, too, such as off-farm employment.)62

Specific quantitative limits to the standard of "sufficient land" were thought to be a country consideration. In general, African limits were thought to exist between one and 2.4 hectares, or 2.5 and six acres.63

In the Kenyan case, the small farmer is defined as one having a land holding of less than twenty hectares, or 49.4 acres. The comparatively large size of the maximum limit is due to the presence of large settlement farms in Kenya which biases the perception of smallness.

**Why Study the Peasant Farmer?**

There are several factors which have led this author to investigate this particular area of study. Given the outlined perspective on the concept of development, which reflects a personal assessment, it
seemed reasonable to examine the condition of some of the most neglected people in the rural sector and to study ways in which their development could be enhanced. There are people who are poorer and more neglected, such as the landless or nomadic peoples, but their situations do not easily lend themselves to academic examination by students whose resources are limited to printed research material. Lastly, the peasant farmers are interesting because they are numerous and perform vital tasks in maintaining and increasing this world's population. For, these are the people who manage, according to United Nations' estimates, approximately two-thirds of the total number of agricultural holdings (Table 1) and who are numerically (totalling about sixty percent of the world's population) and economically (providing the food needs for the bulk of the world's population) of great significance. However, such predominance is not reflected in the levels of income distribution in developing countries, which indicate that the lowest fifty percent of income earners, of which the peasant farmers would constitute the majority, receive between twenty-five to thirty percent of total income. In Kenya, as a specific example, it has been observed that approximately ninety percent of the population lives in the rural sector and that of these seventy percent consist of smallholders whose gross annual per capita income is rarely more than seventy American dollars. It is with this context of poverty and injustice that this paper is written.

Local Participation and the Peasant Farmer

Because it is felt that the peasant farmers should not be treated
TABLE 1

WORLD DISTRIBUTION OF AGRICULTURAL HOLDINGS, TOTAL AREA, AND TOTAL CROPLAND BY SIZE OF HOLDING (PERCENT)

<table>
<thead>
<tr>
<th>Number of Holdings</th>
<th>Total Area</th>
<th>Total Cropland</th>
</tr>
</thead>
<tbody>
<tr>
<td>ha &amp; under 2</td>
<td>31.4</td>
<td>1.7</td>
</tr>
<tr>
<td>ha &amp; under 5</td>
<td>34.0</td>
<td>4.1</td>
</tr>
<tr>
<td>ha &amp; under 10</td>
<td>15.7</td>
<td>4.2</td>
</tr>
<tr>
<td>ha &amp; under 20</td>
<td>8.6</td>
<td>4.4</td>
</tr>
<tr>
<td>ha &amp; under 50</td>
<td>5.2</td>
<td>5.8</td>
</tr>
<tr>
<td>ha &amp; under 100</td>
<td>2.3</td>
<td>5.8</td>
</tr>
<tr>
<td>ha &amp; under 200</td>
<td>1.4</td>
<td>6.7</td>
</tr>
<tr>
<td>ha &amp; under 500</td>
<td>0.8</td>
<td>8.7</td>
</tr>
<tr>
<td>ha &amp; under 1000</td>
<td>0.3</td>
<td>6.6</td>
</tr>
<tr>
<td>ha &amp; over</td>
<td>0.3</td>
<td>52.0</td>
</tr>
</tbody>
</table>

*Includes those holdings of less than 1 hectare.


Quoted in Biggs and Tinnermeier, p. 13.

as mere objects of policy decisions, there is a strong concern for responsible local participation in rural development programs. This concept has been developed by Friedmann and Douglass who have written that:

What is envisioned here is a system of governance in which effective power for decisions is devolved to agropolitan districts, to enable them to take advantage of ecological opportunities where they exist (while being mindful of ecological constraints), to harness the richly personal, embodied learning of local inhabitants to the more formal,
abstract knowledge of specialists and others experienced in agropolitan development, and to encourage a growing sense of identification of local people with the enlarged communal space of the agropolis.67

The point to be stressed here is that if national policy is concerned with the rural sector, it must be designed to enlist the co-operation of the rural people in the planning and implementing of local projects. In his survey of experiences with agricultural development, John de Wilde has argued for an interdisciplinary approach which stresses farmer co-operation, largely because:

... failures in agricultural development are largely traceable to inadequate knowledge or insufficient appreciation of the relevance of all the socio-economic factors that determine the proper approach to the farmer and that condition the farmer's responses and receptivity to change.68

Since the state of rural development programs seems to indicate a continuing lack of adequate perceptions of rural problems, the need to encourage local participation remains.69

Moreover, it would seem that by stressing the role of local involvement in plan preparation and implementation, alongside the administrative officers and technical specialists, it would be possible to reduce the failure rate of projects due to the lack of or decline in local interest. This is to assume that by raising levels of local involvement one is not only furthering a sense of local identification with a project, but is also increasing the probability of the design and implementation of projects which are appropriate to local needs and reflect local capabilities. In their study of thirty-six projects for small farmer development, Morss, Hatch, Micketwait and Sweet found that in terms of the overall success of rural development projects,
forty-nine percent of the variation in success scores were accounted for by differences in local action. Their conclusion was that:

After studying the local environment, project designers can most strongly influence potential success in rural development projects by generating various types of local action - small farmer involvement in project design and implementation and his commitment of resources. Local action means much more than just "participation" which, as measured by the growth rate in the number of project participants, has little bearing on project success.

Local involvement in project identification and design and in project implementation was spelled out more specifically as follows:

While no one has a monopoly on good ideas, small farmers can play major and perhaps critical roles in project design:

- Farmers can help tailor ideas imported from the outside so that they become workable under local conditions;
- They can act as experimenters with the project, especially in areas where there is high risk, by testing new technologies or organizational arrangements;
- They can either participate in or control decisions at the sub-project level as to what activities are carried out and through which mechanisms. Control is necessary for mobilizing resources for community self-help projects, while a sharing in decision-making is important in agricultural production projects at this stage.

Farmer involvement in project implementation can take four forms:

- Participation in a dialogue with project staff to monitor and correct project activities in local areas;
- Control of or sharing in project decision-making;
- The provision or testing of new technology; and
- The control of or sharing in management responsibilities.

Although they stress local involvement, there is within the report of Norsø et al. a decidedly "top-down" bias. There is a very real need for approaches which are responsive to the farmers' needs as they perceive them and in which they feel that they are the controlling actors. The distinguishing lines between external influence and external control, or between outside initiation and outside domination, are not easily drawn. The spatial aspects of the issue will be studied in
chapter three.

Referring to Table 2, which indicates external manpower assistance given to a select number of rural development projects, it is quite noticeable that in terms of the percentage distribution of work done by different groups that the foreign and central officials have played a dominant role in the identification and design of African projects. The major exception is that of the "local non-government" category, indicating that co-operatives and local farmer associations have played important roles in guiding local development. The weight of the contribution in project identification and design, remains in the foreign and central categories. And this is for projects designed to improve the well-being of small farmers.

TABLE 2

PERCENT DISTRIBUTION OF WORK DONE BY DIFFERENT GROUPS FOR PROJECT IDENTIFICATION/DESIGN AND IMPLEMENTATION STAGES

<table>
<thead>
<tr>
<th></th>
<th>All projects</th>
<th>African projects</th>
<th>Latin American projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I/D*</td>
<td>I*</td>
<td>I/D*</td>
</tr>
<tr>
<td>Expatriate consultant</td>
<td>18.17</td>
<td>6.38</td>
<td>20.67</td>
</tr>
<tr>
<td>National government</td>
<td>17.60</td>
<td>11.08</td>
<td>18.91</td>
</tr>
<tr>
<td>Regional government</td>
<td>12.43</td>
<td>14.18</td>
<td>10.31</td>
</tr>
<tr>
<td>Provincial government</td>
<td>.76</td>
<td>2.99</td>
<td>1.07</td>
</tr>
<tr>
<td>Local government</td>
<td>.32</td>
<td>32.89</td>
<td>1.80</td>
</tr>
<tr>
<td>Local non-government</td>
<td>26.19</td>
<td>22.07</td>
<td>25.12</td>
</tr>
</tbody>
</table>

*I/D = Identification/Design
 I = Implementation

One should note from Table 2 that the role of local government increases significantly when it comes to project implementation. It is conceivable, however, that what is gained through the use of local experience in implementation may be lost by relying on project design by expatriates or non-local nationals. This again refers to the problem of projects that are not locally appropriate in terms of the objectives they are designed to meet and of their use of local factors of production.

There can be a bias, intentional or non-intentional, toward transferring technological solutions that have worked in a different socio-economic context, such as high yielding varieties of seed, but which are not locally appropriate. Common factors not taken into consideration by non-local experts are the lack of infrastructures, and growing preferences. Feedback at the stage of implementation is of course valuable for adjusting design aspects; but it would be of much greater value to establish research and technological capabilities at the regional (and ideally district) level in order to minimize the amount of problems encountered in pursuing improved levels of farm production. To quote one critic of rural development strategies:

Instead of mounting programmes for the maximum diffusion of technologies based on the most sophisticated external research, it is suggested the local scientific resources, with selective use of suitable external elements, should make intensive studies of local conditions and locally received technology within those conditions, with a view to improving it in terms compatible with existing factor endowments and proportions and feasible for the typical existing unit of production and the type of unit which may evolve out of it.73

To complement the element of local involvement it is thought to be useful to argue for "self-sustaining" programs. In too many cases
the successful project written up in national and international newspapers is moribund several months or years later due to a shift in government funding policies or a termination of foreign aid programs. The objective here is to design projects whenever possible according to resource needs and availability and local capabilities, which can be administered and operated over time by the local people and funded at a rate compatible with their financial means. This is not to argue for complete local self-reliance, but for rural projects and programs that are locally appropriate and as free as possible from central or foreign technical and economic domination.\textsuperscript{74} Needless to say, such an emphasis upon local direction and self-sustenance will involve the making of costly mistakes which are not easily afforded in developing countries. The shift from an over-reliance on a limited number of social groups with experience in handling administration and organization to a more broadly based framework into which the formerly neglected groups are incorporated will involve costly mistakes. As has been argued earlier, policy guidelines based on strictly defined economic calculations must be expanded to include consideration of social objectives according to standards such as those of "authentic development."\textsuperscript{75}

Finally, the desire to expand the amount of local involvement can cause one to overlook the element of political cost. The central government will of course continue to function, but the focus of its activities will be directed towards the maintenance of a more regionally oriented system. Conceivably, the central government would agree: 

... to support locally initiated developments with financial, material, and technical resources, to undertake projects of national significance, to ensure interregional equity in the
allocation of development funds, and to maintain system-wide balances in the major macroeconomic parameters. In addition, the government would monitor the achievement of the guaranteed national minima and assist with accelerating progress in areas of marked shortfalls from the established standards. 76

This outline of the central role is based on the hope of a significant alteration of the present understanding of the responsibilities of central authorities as the dominant political and administrative figures.

Moreover, if more people at the local level are to become active participants in what amounts to the mobilization and allocation of local and national resources, and if the objective is to make local projects increasingly self-sustaining so as to ensure their continuance and impact on the local economic environment, this will entail a significant redistribution of economic and political power. Historically, peasants have not had the power to exert control over their social and economic environment. To argue for the elevation of their political status is to challenge the present distribution of power, whether this has been in existence for many centuries or only since the beginning of the European colonial period, in which the peasantry have assumed, or have been assigned, the position of obedient providers.

The nature of this system has been studied by Erich Jacoby who has written, in a South Asian context, that:

'It does not call for great psychological insight to understand that dependent and subordinate peasants can hardly be expected to voice strong opinions at committee meetings and that their influence, even if they do dare to speak up, is bound to be very limited because of their extremely weak political and economic bargaining position.' 77

Thus, it may be expected that the development of local skills and powerful institutions and processes, locally and nationally, for the
effective use of existing resources and the mobilization of additional financial and human resources for future programs within the rural sector for the benefit of the rural poor, will be seen as a threat to the continued dominance of the present elites over the nation. As an example, reference is made here to the efforts in Ethiopia to achieve the multiple objectives of economic and social welfare through rural development projects, biased in favor of the poor, including the Chilalo and Wolamo Agricultural Development Units and the Ada District Development project, with limited success. To quote one author:

The projects strive to create new locally based democratic institutions at the grass roots level that would have a great potential to revolutionize the attitudes and way of life of the Ethiopian peasants. But under feudalistic Ethiopia, where owning land meant owning economic and political power, it was in the interest of the officials to maintain the status quo.78

This dilemma, which was examined earlier in the paper, is one which seems to challenge the best efforts of thoughtful analysts and to coerce them into neglecting the consideration of alternative futures for developing countries. Fortunately, societies do change and crises do occur which force elites to consider alternatives. Such potentialities must be examined at the specific country level. The student of development therefore may be justified in considering alternatives which, while not presently feasible in total, may hold the possibility of acceptance in the future.

Concluding Comments

The thoughts expressed in this introduction are based on insights gained from a reading of various studies of rural development issues. Being relatively new in the field of international development studies,
there is no claim being made here as to the comprehensiveness of the survey of the literature. Although numerous analyses have been made of peasant farmers and development, there is a need to place greater emphasis on area specificity in rural development planning, and to document the reality of interregional variation. 79 If the shared concern is to improve the "... living standards of the mass of the low-income population residing in rural areas and making the process of their development self-sustaining," 80 more consideration must be given to the variations that exist within planning districts. Specifically, variations that exist in terms of income distribution, which may be accounted for by various reasons, including education, land use and connections within the administration, must be carefully considered prior to the decision to introduce programs of rural development. What may possibly happen, for instance, is that a program to improve farm production will be introduced within a district but will not benefit the poorer farmers. Such factors as geographical visibility (i.e., services following routes of communication) and social visibility (i.e., the administration catering to the more privileged farmers) may explain this situation. 81

This paper considers in chapter four the need for the decentralization of political and administrative power to the regional and district levels. For example, in Tanzania a decentralized regional planning system has been implemented in which responsibility for allocating approximately half of the development budget has been transferred to the regions from the sectoral ministries and significant responsibilities have been assigned to the district level. 82 Such changes in government
organization must be matched by the development of effective local organizations that are capable of articulating local needs based on an awareness of local priorities and of interacting with the public sector officials and experts. Unless the rural poor are organized, the possibility is distinct that benefits will continue to accrue to already dominant local groups. 83

The general hypothesis of this paper is that rural development programs must be area specific if peasant farmers are to achieve more equitable levels of development. Regarding the need to delimit rural development planning areas, D.G.R. Belshaw has written that:

... administrative boundaries rarely coincide with the ecological ones which strongly affect crop, livestock and other natural resource-based production potentials. It is desirable for efficient implementation that area-specific action plans are prepared which are based on a common development strategy. 84

The argument is also made that the emphasis must be placed on self-sustaining development in which the responsibility for the improvement of life conditions is increasingly the peasant farmers' and their communities'. This is not an argument for policies of self-reliant rural development in which regions and local districts are encouraged to break their dependent relationships with the central cores of the nation and to concentrate solely on internal development. The intention of this paper is to emphasize the alternative of the continued and strengthened integration of the rural and urban sectors. This is not to deny the existence of dependency relationships, but to argue that their annulment can possibly be achieved through the alteration rather than the abandonment of presently existing spatial and administrative frameworks.
The theoretical chapters of the paper will focus on the economic and social existence of the peasant farmer within a national system, and the spatial policies needed to stimulate peasant farmer development. The administrative policies required in the areas of extension and planning to implement and maintain locally relevant development programs will be studied with reference to Kenya in chapter four. A specific study of peasant farmers in Muranga District, Kenya, will be made to test the argument of this paper for increased area specificity and the need for local involvement in political, economic, and social programs.
NOTES


Reff also to the definition of development given by Wahidul Haque et al., "Towards a Theory of Rural Development," Development Dialogue No. 2 (1977): 15. Briefly, they argue that development is "... the process by which one's overall personality is enhanced" and is operative at the individual and collective levels.

3For myself, this concern is rooted in my humanity and is sustained by my theology, especially the belief that:

God has told you, O man, what is good;
And what does the Lord require of you,
But to do justice, to love kindness,
And to walk humbly with your God.

(Micah 6:8 (NASB).)


5Quoted in Griffin, "Increasing Poverty... Strategies," p. 500.

6Quoted in Griffin, "Increasing Poverty... Strategies," p. 501.

7Ibid., p. 501.


9As general indicators of this broad statement one can refer to the introductions to "Five Year Plans" of developing countries, or the familiar humanitarian appeals for aid for people, whether they be the impoverished children of India or the local family that lost its house in a fire.
10 As Goulet has argued: "At its most profound level, development is an ambiguous historical adventure born of tensions between what is sought and how it is obtained." (Goulet, p. 206)


12 Ibid., p. 386.


14 Griffin, "Increasing Poverty... Strategies," pp. 492-493

15 Ibid., pp. 492-493


21 Ibid., p. 20.

In a critique of rural development planning, Belshaw has outlined five different emphases found in approaches to rural development. These emphases are centred around distinctive concepts, including "... self-help, rural employment generation, intersectoral integration, structural reform of the rural economic system, and the identification of target groups of the low-income people." These concepts are thought to be included satisfactorily in the Lele definition.

Refer to Belshaw, "Rural Development Planning... Techniques," p. 282.

23Ibid., p. 285.

24Lele, The Design of Rural Development, p. 5.


28Ibid., p. 64.

29Raymond Apthorpe has cautioned similarly against an over-emphasis on quantitative analysis: "Quantities have the merit of seeming to introduce both certainty and generality into planning, thus making it more tangible and technical, less of a fantasy. But... this is at the cost of leaving out of the analysis everything that is not readily quantifiable, and what is allowed to enter the analysis as a structuring device soon comes to be treated as if it were an end in itself."


33Lipton, Why Poor People Stay Poor, p. 13.


36 Leys, Underdevelopment . . . , p. 13.

37 Refer also to E. A. Brett, Colonialism and Underdevelopment in East Africa (London: Heinemann, 1973), pp. 22-23.

38 C.L.G. Bell has argued that the rich will help the poor either out of enlightened self-interest or out of a need for support of the masses. C.L.G. Bell, "The Political Framework," in Redistribution With Growth, Chenery et al., p. 54.


44 Ibid., pp. 106-107.

45 In response to the question of whether the desire to escape from the peasantry is a characteristic feature, Colin Leys has quoted Robert Redfield's statement that: "... there are people seeking to become peasants and there are people seeking to escape from peasant life ... sub-peasants seek to get in while peasants seek to get out." Robert Redfield, Peasant Society, p. 77, quoted in Leys, "Politics," p. 332.


49 Wolf, Peasants, p. 4.


Refer also to Phillip Mbithi who writes that peasants are: "... people in old and new civilizations, who control and cultivate their land for subsistence as a part of a traditional way of life and work and are influenced in their market relationship by town people in selling their surpluses to them."

Mbithi, Rural Sociology and Rural Development, p. 22.


55 Refer also to Barnett, Peasant Types and Revolutionary Potential . . . , pp. 4-5, and Mintz, "... Definition of Peasantries," pp. 94-95.

56 Chapter 2 of this thesis.

57 Mintz, "... Definition of Peasantries," p. 93.

58 Ibid., p. 93.

59 Richards, Subsistence to Commercial Farming . . . , p. 3.


61 Ibid., 1:21.

62 C. L. G. Bell and John H. Duloy, "Formulating a Strategy," in Redistribution With Growth, Chenery et al., p. 91.

63 Ibid., p. 98.

64 These estimates are from Clifton R. Wharton, "Subsistence Agriculture: Concepts and Scope," in Subsistence Agriculture and Economic

65Ibid., p. 5.

66Lele, The Design of Rural Development, p. 3.


Belshaw has argued similarly that: "In planning for production activities in rural areas, the often unique significance of local environment features provides an additional argument from the efficiency standpoint for some measure of deconcentration and democratisation of the planning process."

Belshaw, "Rural Development Planning..., p. 282.


71Ibid., 1: 35.

72Ibid., 1: 82-83.


74Selective self-reliance has been studied by Dudley Seers on a national level. His comments on a national program of reduced dependency on external sources is appropriate to this consideration of internal selective self-reliance: "How far it is desirable, or even possible to go in that direction [self-reliance] depends on a country's size, location and natural resources; on its cultural homogeneity and depth of its traditions; on the extent to which its economy needs imported inputs to satisfy consumption patterns which have to be taken - at least in the short term - as political minima. The key to a development strategy of the type suggested is not to break all links, which would almost anywhere be socially dangerous and politically unworkable, but to adopt a selective approach to external influences of all types."


A critique of concepts of "self-sufficiency" is made by Thomas Balogh, "Failures in the Strategy Against Poverty," World


76 Friedmann and Douglass have written, appropriately, that: "According to this [new] paradigm, development must be fitted to ecological constraints; priority attention (in agrarian economies) must be given to rural development; and planning for rural development must be decentralized, participatory, and deeply immersed in the particulars of local settings. Planning, therefore, will have to be based on qualitative judgements, as much as on quantitative techniques. . . ."


77 Ibid., p. 377.


80 A concern for local involvement is expressed by various authors, including Lele, The Design of Rural Development, p. 20; Chambers, "Poverty and Future Rural Development. . . ." pp. 13-14; Morris et al., Strategies for Small Farm Development, p. 5.

81 Lele, The Design of Rural Development, p. 20.

82 Chambers, "Poverty and Future Rural Development. . . ." p. 4.


84 Bell, "The Political Framework," p. 66.

CHAPTER II

THE ENVIRONMENT OF THE PEASANT FARMER

Since the general hypothesis of this paper is that there is a need for area specificity in rural development planning, it is important that an effort be made to understand the nature of the general environment being planned for; that is, the nature of traditional agriculture and the characteristics of the peasant farmer. The objective of this chapter will be to argue that the traditional agricultural system can constitute the basis for an economically viable system and that the peasant farmers are interested in change and are capable of handling it in a rational way. The applicability of such generalized arguments will vary from nation to nation and from agricultural region to agricultural region. Agricultural systems cannot be classified as strictly traditional or modern, but are more of one, less of the other. However, it should be possible to begin to identify those basic characteristics of traditional rural areas that have contributed to the desire to change and that have the potential for providing bases for further change from within.

It should also be noted that although no attempt will be made to develop a particular model of agricultural development in relationship to the national economy,1 one should not ignore the interdependence that does exist in such areas as the intersectoral allocation of
resources and transfer of labour, and the level and composition of commodity flows. Nor can one overlook the structural and systemic changes that occur in such areas as investment, marketing, and economic policy when an efficient expansion of agricultural production occurs.² It is therefore accepted as fundamental that:

... growth in agricultural output is, in most societies, essential to the development process and that the contribution of agricultural growth to the development process is positively related to the rate of productivity growth in the agricultural sector.³

Hence, there is a need:

... to achieve a rate and pattern of output expansion in the agricultural sector that will promote overall economic growth and structural transformation and take advantage of positive interactions between agriculture and other sectors.⁴

Thus, by improving agricultural productivity, it is thought to be possible to stimulate overall rural productivity, including informal manufacturing and service operations, which, in turn, will improve rural standards of living, reduce rural-urban migration, and stimulate industry and the entire national economic performance.⁵

This approach is articulately presented by Johnston and Kilby who argue for a "unimodal strategy" for agricultural development.⁶ Their emphasis is on "... action to change the production possibilities available to farmers by modifying their institutional, technical and economic environment." Progressive modernization based on operational sized farm units is argued to be the most efficient means of attaining the threefold objectives of an agricultural strategy, namely:

1. the need to achieve a rate and pattern of output expansion in the agricultural sector that will promote overall
economic growth and structural transformation and take full advantage of positive interaction between agriculture and other sectors.

2. the need to achieve a broadly based improvement of the welfare of the rural population.

3. the need to foster a pattern of agricultural development that will have a favourable impact on social modernization as a result of inducing changes in rural attitudes, behaviour and institutions.7

The detailed formulations and argumentation required to substantiate this agricultural emphasis will not be attempted here. The purpose of this chapter is rather to argue for an approach to the solution of rural development problems which is able to mobilize all resources to meet basic needs and investments required, and is based on the consideration of local environmental variables.

A cautionary note, however, must be sounded with regard to agricultural development theories which propose a two-tiered model. According to this approach, those districts or areas which show the most evidence of growth in agricultural production are to be the targets of agricultural policies and, as a consequence, the recipients of most of the designated rural investments.

It is discomforting, but it cannot be helped that massive investments in backward areas will have to await development of substantial agricultural surplus in richer areas, which alone will provide the means for development of agriculture in backward areas, though some focal points for rapid growth in agricultural supplies may be found in select pockets even in the backward areas.8

This theory is advanced as a solution to the dilemma of attempting with very limited resources to increase as quickly as possible the levels of production and the standards of living in all areas of a country at once.

A policy direction such as this, however, carries with it the obvious risk that it will act to perpetuate, if not increase, the gap
between rich and poor farmers. The poor farmers will not be totally neglected, but they will be effectively isolated from the mainstream of national economic priorities. Erich Jacoby has commented that such a development strategy involves hardly more "... than a rebirth of the old colonial concept of prosperous agricultural oases in deserts of economic stagnation..." This concept is not morally acceptable to this author.

Be that as it may, it has been argued from the agricultural development experience of numerous countries, including Kenya, that if a selective approach had not been adopted, the present condition of the poorest would be worse, economically and socially. Moreover, it can be argued that if a more broadly based development approach is implemented too quickly, the possible negative impact on the stability of the national economy as the result of the cost of initially nonproductive investments in agricultural services and inputs, etc., would be disastrous and unjustifiable.

These arguments are significant and caution against the design and implementation of well-intentioned but radically disruptive programs. They do not, however, negate the general argument presented that the whole economy can benefit from improving the agricultural environment of the peasant farmer. As was noted in the introduction, selective approaches have produced economic processes that are biased to a small sector and are less than optimally efficient due to the weak linkages with the potentially productive peasant farm sector.

Before an attempt is made to discuss some of the characteristics of the traditional agricultural sector, it is necessary that a basic
definition of this sector be presented. For the purposes of this paper, the traditional agricultural sector will be defined in terms of, socially, the characteristics of a peasant farming system, and economically, a subsistence production function. A two-pronged definition is presented here in recognition of the fact that agriculture is more than a source of income from the perspective of the peasant farmer.

The Traditional Agricultural System

The social environment of traditional agriculture has been the subject of considerable research. The basic characteristics of this social system, as identified within an East African context, may be stated briefly as follows:

1. The family is the basic production and consumption unit.
2. Surplus production is encouraged for the purposes of exchange either within the community market places or in larger urban centres.
3. Their production activities are consistently integrated into the cultural values, beliefs and sanction mechanisms of the society.
4. Farming is on a small scale, although where cash crop is superimposed on (2) above, complimentary expansion leads to more openness of the production unit and more cosmopolitan behaviour.

A dominant economic feature of traditional agriculture is the concept of subsistence production. In ideal terms, this refers to:

... a self-contained and self-sufficient unit where all production is consumed and none is sold, and where no consumer or producer goods and services from sources external to the unit are purchased.

Obviously, systems which are characterized by the total absence of commercialization and monetization do not presently exist, but the subsistence concept does provide a starting point which is seen as common to traditional agricultural sectors. The criteria used to identify such
subsistence farming systems reflect the relative nature of economic
development, and include such guidelines as the consumption of the
majority of production, the minimal use of hired labour or purchased
production factors, the reliance on simpler levels of technology, and
the minimal income and poor standards of living. Raanan Weitz articulated
similar guidelines when he wrote that:

In traditional subsistence farming, output and consumption are
almost identical, and the staple crop . . . is the chief source
of caloric intake. Output and productivity are low and tools
are simple. Capital investment is negligible, while land and
labor are the key production factors. Labor is underutilized
. . . . The peasant cultivates only as much land as his family
is able to work without recourse to hired labor. It must be emphasized that these are general rather than precise
indicators of what is considered to be subsistence farming. Furthermore,
although there is wide agreement about the apparent nature of traditional
agriculture as a basically uniform type of peasant family farm in which
hard work is continuous and "life is insecure, and dietary, nutritional
and health levels are abnormally inadequate," it must be conceded
that, in terms of the practical considerations of the type of indicators
necessary for decision-making:

. . . very little is known about the content, structure, and
ecology of subsistence, and that there is an urgent need to
re-evaluate the productivity relationships between labour,
technology, and natural and human resources; the capability
of such systems to sustain human life over several generations
and to produce food of an acceptable dietary quality; to
assess the long-term ecological stability of particular systems;
and to analyse the potential of such systems for transfor-
mation into more highly developed systems. It will suffice, given the specific purpose of this paper, to acknowledge
these limitations without endeavouring to remove them or to explore them
further.
As has been noted, the concept of traditional agriculture encompasses a broad spectrum of farming systems. In some cases, as in Muranga District, Kenya, the qualities of economic isolation and the dominance of food crops have been replaced by increased integration into the national economy and the dominance of cash crops. Although this has involved a transformation of economic relationships towards an increased level of participation in marketing systems, the continued reliance of farmers on locally produced food crops and the predominance of family labour, minimal income and poor standards of living are significant indicators of the remaining dominance of the traditional agricultural system. In short, Muranga District is typical of agricultural districts that are experiencing economic development within a capitalist framework. It also provides, as shall be shown, a valuable case study of the benefits and costs of a centralized development strategy. Muranga District is more closely integrated into a market economy than the traditional peasant systems presented in this chapter and, as such, is not an optimal case study. However, given the problem of the limited availability of systematically collected data, and given the opportunity of access to data files collected for an area with similarities to the general case, it seemed desirable to proceed.

The Traditional Agricultural System - Economic Environment

Having established a definitional framework for the study of traditional agriculture, it is now possible to examine in more detail the characteristics of traditional agricultural systems. In particular, it is necessary to establish their strengths and weaknesses so that some guidelines are available for the development of realistic alternatives
for peasant farmers based on what is locally suitable. Firstly, a brief study will be made of the extent to which traditional agricultural systems are economically efficient according to the standard of the rational allocation of scarce resources.

The structure of the traditional agricultural sector, referring primarily to the tropical African case, is characterized by the limitations placed on production alternatives by climate and soil. As de Wilde has noted, the African soil and natural environment is generally impoverished and that, as a consequence: "... over large areas the natural milieu is not particularly conducive to successful and remunerative crop and animal husbandry." Within this framework the traditional farmer has nonetheless been able, over the centuries, to develop a system of food production which is efficient and productive. The selection of crops and animals, the methods of cultivation, including tools and timing, and the organization of labour have been integrated into balanced systems of farming which are effective in the achievement of minimal standards of living under adverse conditions. As Ruddle and Chesterfield have observed:

Most traditional human ecosystems represent environmentally sound adaptive mechanisms through which societies have been able to support themselves for many human generations.

It is also important to note that, although many traditional farming practices achieved a productive equilibrium, reflecting subsistence priorities, local environmental conditions, and available labour resources, it is not correct to conclude that, prior to the introduction of exchange economies, tropical African agricultural practices were static, or that farming systems were in a process of
involution. In fact, the transformation of agriculture from shifting to semi-permanent systems had begun to occur prior to the arrival of the Europeans.20

The dynamic nature of African farming systems prior to colonialism, and specifically in Tanganyika, has been studied and presented in a persuasive way by Helge Kjekshus. Quoting A. D. Roberts, Kjekshus begins his case with the observation that:

In place of the old myth that the African past was more or less static, or at best repetitive, we have to acknowledge a continuous process of social and political innovation, economic improvement and technical change.21

Kjekshus argues that prior to colonialism the African was very much a master of the environment and not a "captive of his barbarianism and his environment."22 The traditional farmers had a "fund of ecological knowledge" which enabled them to initiate change in order to sustain their way of life. The critical variable was population growth. According to a thesis developed by E. Boserup, an increasing population causes food shortages and "... forces man to intensify his efforts through technological inventions and longer hours of work."23 The ensuing form of agricultural development is "... an adoption of new methods that make possible a more intensive land-use through soil conservation, irrigation systems, and fertilization."24 Examples of such cultural innovations in East Africa include: "... new crops, irrigation, manuring systems, crop rotation, intercropping, nitrogen-fixing through legumes, anti-erosion methods and field techniques."25 These enabled the farmers to progress far beyond the adaptive stage of shifting cultivation. According to Kjekshus, the scourges of East Africa - the tsetse fly and trypanosomiasis - were effectively neutralized
primarily through avoiding diseased areas, until the colonial presence effectively disrupted the traditionally established man-environment relationships. 26

In general, it is suggested that during the 1890's as a result of the extensive destruction of the "... material base and the disintegration of social structures and economic agencies" by the initial colonial impact, "... we can venture the suggestion that the conditions for economic life deteriorated and brought many tribes back to a frontier situation where the conquest of the ecosystem had to recommence." 27

The important point to be made here is that, in general, traditional agricultural systems may be characterized as being open to change as well as being efficient and productive within the given environmental conditions and, specifically, low or slowly rising rates of population growth.

At the same time there are restraints on traditional agriculture which act to restrict the levels of productivity achieved. Thus, although it is correct to assert that traditional agricultural systems have been well adapted to their environment, it is also correct to state that the underlying technology can only provide modest returns to human effort. 28

Other students of traditional farming systems have commented similarly:

It would ... be foolish to believe that the peasants have not accumulated any economic wisdom during their long struggle with the hardest of all economic problems. The reality is that the peasant communities in an overwhelming number have ultimately reached a point where the problem has no longer a solution within their own reach. ... 29

[The peasant] may use the potential to the limit of his own capability, but even then a vast potential for production lies dormant and waits to be tapped with the combined input of science and technology, a wide range of manufactured items, and a multiplicity of skills. 30

Also acknowledging the limitations of traditional systems, such as the
lack of ordered cultivation and of innovations in soil preservation practices, Hans Ruthenberg has concluded from his study of smallholder farming in Tanzania that:

On the basis of available evidence we would argue that there is ample margin for increasing production through a better allocation of the means of production within the present state of arts which is not a traditional one, and that the margin is even greater if we include the proper use of innovations.\textsuperscript{31}

De Wilde has observed that, as the result of technological limitations and limited surplus investment, the cultivator has been unable to make the best use of the land, and as a result, farm output has tended to stabilize at a low level.\textsuperscript{32}

This leads to the issue of whether traditional farmers will respond in a rational way to different systems of farming which are potentially more productive based on the use of new technology and farm management practices.\textsuperscript{33} It would seem that traditional farmers have been able to deal rationally and successfully with environmental change. With the introduction of new technologies and the increased commercialization of agriculture, will the farmers respond as one would hope they would, by increasing production and by adopting innovations?

The diversity of the motivations which underlie the behaviour of traditional farmers should not be underestimated. These include economic factors and non-economic values that have developed in response to the complex process of living in a subsistence environment. The foremost motivation is that of survival. As will be seen later in this chapter, the peasant's social order is designed to further chances for individual and community survival. At the economic level, decision-making is oriented to producing those food crops which will provide an adequate
supply on a reliable basis and which will meet local taste and nutritional standards.\textsuperscript{34} The main criterion for increasing production or accepting new ideas, therefore, is that of the net advantage in terms of reliable and acceptable food production to the farmer and family. There will be value in appealing to the non-economic factors, such as dignity and personal satisfaction through improved educational and service facilities, as one seeks to increase farmer participation in agricultural improvement schemes; but there is substantial evidence that "... one of the most important factors motivating the farmer is the chance he has of augmenting his income."\textsuperscript{35}

The assumption made here is that of a rational supply response to changes in prices.\textsuperscript{36} In most cases, since significant amounts of capital are not widely available, the factors involved in the response to price changes are land and labour. As indicated in figure 1, the response involves a variety of decisions and trade-offs. The risk factor involved is significant. In some cases, it has been shown that farmers are willing to live at substantially lower levels of income from the maximum available in order to minimize risks.\textsuperscript{37} Given the close line that is tissed between life and starvation due to such factors as the variable nature of climate and the lack of adequate sources of supplementary aid and services, such choices are rational, if not geared to profit maximization. This decision-making may also be seen as being reliability optimizing, given that to increase returns it is usually necessary to expend an effort (time, money, labour) that is greater than return gained.

Moreover, the choice between leisure and productive activity
FIGURE 1

SMALLHOLDER DECISION MAKING

Leisure

Productive activity

Wage labour

Agricultural production

Z-goods

Crop 1  Crop 2  Crop 3  Crop N

Acreage  Yield

Personal consumption  Marketed surplus

reflects value choices which do not seem to be directly subject to
economic manipulation. Other contributing factors that are thought
to influence responsiveness include: tenure systems, social structures,
closeness to urban areas, degree of land scarcity, levels of education
and income, and wealth, availability of credit, purchasable inputs and
labour. In general, it can be stated that on the basis of available
evidence and given the presence of certain constraints, traditional
peasant farmers are responsive to changes in prices and are willing to
increase production.

Given the increasing importance attached to the role of
technological innovations in agricultural development, it is to be
expected that farmer response to innovations will be of equal, if not
greater, significance for the future of agriculture. The challenge
here is to overcome farmer suspicions vis-à-vis non-local ideas and
methods. It is possible for "improved" methods to be the product of
inappropriate research guidelines and to create rather than reduce con-
straints to increased productivity. Also, as one author has argued,
farmers might choose objectively to not adopt innovations if:

1. they increase gross returns by less than the increase in costs;
2. they increase long-run average net return but only at the
   risk of short-run calamity;
3. the prospective increases yield an unattractively low present
   net worth in the light of the farmers' high rates of time
   preference.

Although the study of the nature of modern agricultural technology
is not of central importance to this paper, it is important to note
certain of its essential features. The objective of much new technology,
specifically referring to the development of varieties of seeds, is to
produce "... stable new varieties of plant having certain desired
qualities, most of which are favourable to higher yields and higher production.\textsuperscript{41} including pest and disease resistance, greater structural strength, improved levels of tolerance to dry spells or cold temperatures, and taste and nutritive value. The farming requirement for this is "man-controlled environments" in which:

... these more delicate custom-built plants can best survive [and which are] achieved by means of the use of manufactured chemicals, carefully timed and rationed applications of moisture, and appropriate cultivation recipes.\textsuperscript{42}

The effect of introducing this technology into peasant farming systems is to increase significantly the degree of farmer domination of the environment in the interests of crop production. As Pearse has noted, the most immediately visible implication of this transformation for the peasant farmer is "... that agronomic dependence tends to replace self-sustaining local production/consumption systems."\textsuperscript{43} The two ways in which this occur are:

(a) chemicals, machinery and fuel must be obtained by cultivators from the industrial sectors of their own countries or else imported from the countries which produce them, and
(b) ultimate control over the correct cultivation recipes, recommended "packages" and other technological knowhow is vested in distant and other foreign research centres and experimental stations.\textsuperscript{44}

There are significant consequences for such changes as the peasant farmers are increasingly incorporated into market networks. It seems that involvement in market networks requires the development of attitudes and behaviour which, while they may have existed before, have not dominated their economic rationale. It is increasingly required that:

... they should become businessmen competent in market operations and small-scale financing and receptive to science-generated information about cropping practices, in place of being "artisan" cultivators obtaining family livelihood direct from their production, with variable surpluses offered on the market, on the basis of tradition and locally valid practices of husbandry.\textsuperscript{45}
As with price responsiveness, the response to innovation will vary from region to region according to local preference and the strength of contributing factors. A general standard, however, is that when there is a favourable environment - social, economic and natural - and the right incentives - including market opportunities and technological inputs - traditional farmers have shown themselves to be open to the adoption of innovations. Two additional points should be included. First, adoption of innovation has tended to occur at a greater rate among cash crop farmers than among food producers. This reflects a combination of elements, including the greater amounts invested in cash crop research and extension, and the higher prices and more efficient marketing systems provided for cash crops.

Secondly, research has established the characteristics of those farmers who are more or less likely to adopt innovations. Those farmers that fit into the more innovative categories are people that are willing to resist traditional restrictions placed on foreign ideas and to bear the risk involved in actively seeking new ideas and practices. These people are characterized by the fact that they are more likely to have had regular contacts with the "outside world," to have worked for wages or to have received special training or education. In his summary of studies of divergent behaviour, Gerald K. Helleiner noted that the more innovative farmers had common characteristics which were:

1. positively related - farm size, wealth, tenure status, extension contact, participation in local organizations, use of communications media, degree of full-time commitment to farming, commercial experience, and modernity.

2. unrelated - age, educational attainment, religion, sex, and work or farming experience.
3. of relevance, but not tested - protein nutrition in infancy, incidence of disease and parasites, exposure to various institutions of traditional or nonformal schooling. 49

Likelihood of adoption also depends on the local acceptability of the innovation, the quality of the extension program and agents, and on the changes in farmer attitudes towards change over time.

The particular significance of the co-existence of successful innovative farmers and poorer, seemingly less innovative farmers within the same district will be examined further in the study of Muranga District. It is important to note that wealth is perhaps the most important characteristic shared by the more innovative farmers. As John Weeks has argued:

The difference between poor cultivators and wealthier cultivators which is important for innovative behaviour may not be the degree of "conservatism", but the difference between the rich and the poor pointed out by Ernest Hemingway to F. Scott Fitzgerald. In response to Fitzgerald's comment that the "rich are different from us," Hemingway replied, "Yes, they have more money." 50

Thus it may be that wealth is the critical variable for understanding who will be innovative, since it provides security against risk and possibly indicates previous risk taking.

It should be pointed out here that in order to be effective, programs designed to diffuse new technologies must take into consideration the various constraints which peasant farmers face. It is erroneous to assume that production factors exist in seemingly unlimited quantities and at fixed prices. Since they do not, programs that aim at maximizing production per acre through the use of modern agricultural technologies can have the effect of increasing the disparity in welfare levels between richer and poorer farmers. 51 Rather, for equity purposes, the attempt...
must be made to adjust agricultural production technology to the social and economic systems presently existing in the local area under study.

In a study of the introduction of new technologies to peasant farmers in Western Nigeria, P. S. Zuckerman provides an interesting case of the economic benefits that can be obtained when consideration is given to providing special attention to the poorer farmer. The one hundred farmers surveyed lived in similar ecological conditions and had the same cropping patterns, based on maize, yam and cassava. The new technologies were a more stable variety of maize and a fertilizer-responsive variety of maize. The results derived from this study were interpreted and presented as a comparison between a representative rich and a representative poor farmer.

**TABLE 3**

**ESTIMATED INCREASE IN THE SURPLUS PRODUCED IN THE FARM PLAN OF A RICH AND A POOR FARMER WITH ADOPTION OF TWO MAIZE VARIETIES**

<table>
<thead>
<tr>
<th></th>
<th>Rich farmer A</th>
<th>Poor farmer B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fertilizer responsive variety</td>
<td>25%</td>
<td>Unworkable</td>
</tr>
<tr>
<td>With credit</td>
<td>25%</td>
<td>785%</td>
</tr>
<tr>
<td>2. Stabler yielding variety</td>
<td>2%</td>
<td>55%</td>
</tr>
</tbody>
</table>


Significantly, when credit is made available to both the rich and the poor farmer, the fertilizer responsive variety is acceptable and increases
in the surplus produced occur. The problem of yield risk which is a critical factor for poorer farmers who depend on guaranteed minimal returns may be overcome through credit provision. Credit provision also brings into reach generally unattainable high yielding seed and inputs and thus removes a barrier to increased production by poorer farmers. To conclude, innovative behaviour is not an exclusive domain of a few but a characteristic whose likelihood can be increased through the removal of specific economic barriers. The objective therefore should be to seek ways of reaching all farmers rather than the few who have tended to monopolize development benefits in the past. Other factors, such as social restraints placed by the community on non-traditional activities, are, of course, also operative and may undermine the possible gains achieved through economic means. Whether the economic benefits reaped can be considered to outweigh any social costs involved or whether both economic and social benefits occur, is a matter beyond the scope of this discussion.

The issue of land size is important to this paper. In the chapter no reference has yet been made to the significance that differences in farm size would have on economic performance. Obviously, one would expect that the larger the farm the greater the potential for higher levels of income. In turn, the farmer who receives more income based on commercial sales is more capable of purchasing the modern inputs needed to transform traditional technology. Bachman and Christensen have summarized the major arguments favouring larger sized holdings when they write that traditional small farm units:

... need to be replaced by large-scale mechanized units in order to get improved technology adopted, make efficient use of scarce
management and skilled manpower, utilize machinery efficiently, overcome inefficiencies in resource use associated with fragmentation of land in small holdings, and shift from subsistence to market-oriented production. Large scale units also make it possible to improve the organization of credit, extension and marketing facilities, and to exercise higher levels of quality control over the production process.

On the other hand, most small farms, employing the family plus one or two others at peak seasons, are capable of efficient operation. The evidence would seem to indicate that, given the predominant influence of the factors of land and labour, the small farm is an efficient unit of production.

Research from countries as diverse as Colombia and India indicates that the small farms apply more labor and other variable inputs per acre of land and achieve higher yields per acre. Large farms are less labor intensive and achieve lower yields per acre but higher yields per man-hour. Thus, for example, in Sri Lanka the rice yield has been 36-37 bushels per acre on farms of less than one acre and 33-34 bushels on larger plots. In central Thailand, yields on farms of two to six acres have averaged 304 kilos per acre, but only 194 kilos on farms of more than six acres. Niles Hansen has also observed that, since larger farms have a commitment to maximize profits, there is a tendency for total output to be "... less than that which would obtain if the aim were to maximize output." One should also add that because of the difficult physical environment in which traditional farmers operate and their limited access to capital, small farmers tend to be ingenious in adapting their choice of crops to the natural conditions of location and to the changing circumstances and are thus more likely to produce greater yields under more challenging circumstances. The limited amount of labour
involved facilitates the operation of these processes by providing the cohesiveness, careful management and intensive use of natural and human resources required. Furthermore, the supporting services of education, research marketing, credit and extension can be effectively established on the community basis.60

There are, of course, serious problems involved in small-scale farming. Some of these, such as the improper management of soils and the fragmentation of land holdings, 61 are the result of the lack of proper management skills, credit and agricultural services. Conceivably, these are correctable ills if central authorities can be convinced that the peasant farming sector holds sufficient economic and social value as to warrant significant amounts of investment. The problem of the allocation of labour within the small farm sector is also a serious issue since it places major constraints on farm productivity. Influencing factors include the seasonality of labour usage, the allotment of time between farm work, non-farm activities and leisure, and the sexual division of labour.62 Uma Lele, however, has argued that such problems are not insurmountable:

To summarize, the labor problem in African smallholder farming is largely an allocative problem. New cropping patterns and labor-saving innovations can facilitate reallocation and more efficient use of labor, provided such interventions are based on an adequate understanding of the complex economic, sociocultural, and physiological factors that determine the labor utilization pattern in traditional agriculture.63

This bias toward smallholder agriculture is not to be interpreted as a justification for the exploitation of the labour of poor farmers on undersized holdings. Jacoby has contended that advocates of smallholder farming who base their arguments on the efficiency per acre
criterion "... utterly neglect the possible effects of its practical
application upon the dignity of labour, upon the problem of incentives,
and upon soil conservation..." He goes on to say that:

By considering the smallness of holdings an asset, it will
disourage the badly needed re-examination of outdated
institutions and land distribution patterns in areas where
the ever-growing pressure on the land increases the trend
towards subdivision and fragmentation, and thus contribute
to technological backwardness and the continued servitude of
agricultural labour.65

It is certainly important to be aware that by stressing the
advantages of smallholder systems one could indeed cause further harm
to the traditional peasant farmers. However, while the hope can be
shared that significant redistribution of income and land will one day
occur, it is also important to strive to advance the position of peasant
farmers in the immediate future. While there is a danger in the blind
belief in the usefulness of technology as an easy way to improve farm
conditions, there is value in developing and distributing technologies
which are small farm biased and locally appropriate (i.e., yield-
increasing, highly divisible, affordable, understandable, practical)66
and supplementing these with effective service and marketing systems.67
In cases where land fragmentation has significantly undermined the
productivity of the land, redistribution of farmland would seem to be
justified. In all cases, sustained political efforts must be made to
stimulate the economic performance of the multitudinous small peasant
farms which blanket developing countries and to stimulate further the
authentic development of the rural population.

Finally, in any farming region the ultimate division of land use
will be based on numerous factors, including the type of farming, the
crops grown, the abundance of land relative to labour and capital. In those regions where small farms are prevalent it would seem to be wise to make them the base of the agricultural economy. The conditions attached to this statement include the need for adequate farm size, appropriate technology, and effective service and market systems, and a will by those who control national or regional resources to allocate them as effectively as possible.

The Traditional Agricultural System - Social Environment

This consideration of traditional agriculture would be incomplete without some reference being made to the social environment. Decision-making is affected significantly by the factor of economic rationality. However, policy development vis-à-vis the agricultural sector must be based on more than assumptions of economic rationality; an effort must be made to understand the social environment and the way in which it influences local responses to change.

Much emphasis has been placed on the supposedly restrictive nature of the traditional social systems. From the perspective of the European colonialist it seemed that the "uncivilized" peoples of the "New Worlds" were bound by primitive social and economic conditions which confined them to meagre existences and denied them the hope of human advancement.  

It was believed that the natives' tendency towards idleness, inefficiency, and restricted economic activity was an unchangeable component of their social and religious institutions and traditions.

Although such concepts as leisure preference and relative efficiency may be used as substitutes for idleness and inefficiency, the fact is that
traditional social systems do operate differently from European or Western systems and that attempts to improve traditional agricultural practices have been frustrated by the intransigence of the peasant farmers. What is the present understanding of traditional social systems, and how should this act as a guide for interaction between non-local and local people?

Firstly, early interpretations which were high in normative content (i.e., that European systems were unquestionably superior to non-European ones) and were based on simple assumptions concerning the uncomplicated and thus easily comprehended form of traditional systems, have been superseded by less normative approaches which attempt to identify the basic structural features and to understand the complex nature of the social interactions. Often there is a tendency to attempt to correlate non-European development patterns to those of the European experience and to apply European or Western techniques and institutions at the supposed appropriate time in order to speed up the development process. The desire to introduce change quickly has also resulted in less than productive generalizations concerning the "... stereotyped 'peasant' responding in a uniform way to a generalized environmental framework." However, in general, it would seem that there is much of value to be learned from the studies made of traditional societies and some useful observations concerning the nature of these societies will be presented.

Since the emphasis here is on the relationship between traditional communities and change, it is necessary that the presence of change be mentioned and that the different types of change be considered.
Too often the picture of traditional society stresses the unchanging nature of conservative peasants. Such a static portrait needs to be balanced by the inclusion of the fluid elements inherent in any society. As Guy Hunter has observed, traditional societies are not like clockwork mechanisms which break down if one mechanism is removed or altered, but are more like "... a number of elements suspended in a viscous medium which, under heat or pressure, can rearrange themselves."74

Although their boundaries overlap, it is possible to notice the two basic categories of change which affect the traditional social system. The first category concerns the selective and gradual adoption of external values, methods or ideas. According to the nature of this process, the local community incorporates these new features into its local tradition, and thus is able to balance the need for change with the value placed on isolation and tradition.

The second major category pertains to the type of change which challenges the traditional way of life and threatens to replace old values and methods with new values and methods. This process may be called modernization, or domination, depending on the outcome. The need for such change should be based on the desire to seek ways of improving the standard of living within traditional communities by introducing more efficient means of production and by providing better quality social services. The irrigation canal and the school building may seem to be obvious improvements from the perspective of an outsider. To the peasant farmer, their objective value may be nullified by traditional value preferences and fears. It is this latter category of substantial change which will be referred to as "change" in the following paragraphs.
As has been referred to already, a major characteristic of traditional societies has been that of conservatism:

For countless generations, the peasantry almost everywhere has built up a kind of psychological defence mechanism and developed a stubborn, almost virtuous, suspicion of new and unexpected developments. 75

To understand this apparent blockage to change, it is necessary to emphasize that this is a rational means of achieving security, of eliminating intrusions which threaten to disrupt the delicate socio-economic balance. As Nhitchi has noted: "New ideas are not sown on neutral ground but in an environment where the safeguarding of vested interests and a 'way of life' is very conspicuous." 76 From the subsistence perspective of the peasant farmer, a new high-yielding variety of seed offers more risk than security. The locally accepted variety would have stood the test of time and proven to be hardy and productive under the most difficult conditions. Moreover, local tastes would be accustomed to the products made from the older seed and local work habits would be established around its peculiar cultivation patterns. Also, if more money is required to buy the new seed and the necessary fertilizers, that money may not be easily acquired by subsistence farmers. 77

A major contributing factor to the conservative quality of traditional society is the concept of the closed community. Based on familial or tribal ties, the peasant community is rooted in a strong feeling of unity that is legitimized by local tradition. Raman Weitz has provided a useful insight into the stable nature of local value systems:
The essential feature of such a system is the complex web of agreed norms of behaviour, a kind of cumulative "common wisdom" unconsciously accepted by everyone without need of visible proof. This complex web affects every aspect of the life of the individual, determining his attitudes and reactions to the conditions of life, and especially to any proposed changes in these conditions.78

The economic system which sustains the community is also based on local priorities, as it is one which "... links purchasers and consumers, resource allocation and product allocation, in a network of ties which are more personal, more directly perceptible, than in a more developed, complex economy."79 Deep religious roots are also critical components of the social and economic systems, and underlie the accepted systems of values. As Jacoby has written:

"The conviction that this [traditional] order has been established by transcendental forces is so deeply rooted in the mind of the peasant that he is by nature inclined to submit to the worldly authorities represented by this order and accept the economic and social structure with its implicit power relations."80

Although such a socio-economic system may effectively compress individual initiative, it does cater to the survival interests of the whole community, including the more vulnerable members, the children, widows, and elderly.81

Thus, two very important elements of traditional societies are their resilience to change and their all-encompassing nature. These two features are closely related. Externally proposed changes, designed to stimulate local productivity, may be resisted on the grounds that they do not seem to be materially profitable. Local resistance, however, may be more strongly based on the fear that the way of life is being threatened and that traditionally accepted norms are being set aside for less acceptable foreign ones:
The acceptance or rejection of development plans is significantly affected by the subtle almost imperceived influence on the individual of the general communal attitudes toward such plans. In a study of traditional agriculture in Ghana, Rowena Lawson focussed her research on a rural community which was located in an area of high demand for food and was serviced by a good road and good marketing facilities, but which was not willing to exploit increased demands for food by increasing local production. To understand this resistance to a potentially profitable endeavour, Lawson examined contributing non-economic factors. Her observation was that:

The need to conform to the social norm, to spend time fulfilling expected social obligations, to spend one's income according to an accepted pattern, all frustrate the operation of normal economic incentives.

Lawson also noted the unquestioning acceptance of traditional standards of living. Those community members who did buy non-traditional consumer goods or indicated by their living habits that they had increased their level of income were made targets of unpleasant social comment:

... and suspicion would arise as to the source of [their] earnings, and quite sinister sources can be suggested where local men have exceptional quantities of cash available for spending.

Within a closed community, the threat of such comment could easily present a significant disincentive for those interested in improving their standard of living by being innovative and taking advantage of accessible economic incentives.

This brief presentation of some of the basic features of a corporate peasant life would seem to favour the proposition that traditional farmers are sufficiently bound by traditional value systems as to be impervious to change. However, although it is necessary to
acknowledge the restrictive nature of the social environment, it is not necessary to leave the discussion at that point. There are several reasons for continuing. First, if traditional farmers are to improve their standards of living, change in traditional values and ways of life must occur. Secondly, on the grounds that traditional systems of farming do indicate a rational process of decision-making, it would be reasonable to expect that, over time and with careful management, more peasant farmers will choose to respond to economic incentives and will undertake locally acceptable projects. Thirdly, since some farmers do adopt innovative behaviour and resist traditional restrictions, there is some indication that the transition from conservative behaviour to greater levels of risk-taking can be made on a larger scale, and that formerly unacceptable external linkages will receive wider acceptance.86

The challenge to be faced when introducing changes to traditionally oriented communities is to integrate the new elements into the traditional way of life, rather than superimposing the modern onto the traditional. Consideration must be given to the purpose of traditional social structures and to recognize that if they are not receptive to contemporary forces of change, no matter how well intentioned, it is because they have developed largely to meet security needs.87 In the words of two students of traditional society:

... for planned changes to be successful, they must be congruous with existing cultural beliefs (or at least not be in direct conflict with them) and must be presented in a manner which makes full use of existing social structural arrangements.88

It is not easy for farmers to accept that a young, inexperienced rural development technician from the city tells them that he knows something about farming that they do not know. But, if the technician comes to hear their definition of their own
problems, and then later returns with a proposal to solve these problems, they may be more amenable to listening to his information. 99

Moreover, it should be emphasized that, although it is useful to examine the general case and to develop theories of traditional societies, there are limitations to this approach. Oscar Lewis has written that:

... the concept "peasant society" may be a meaningful or useful classification for comparative research, but it is not sufficiently predictive in regard to cultural content and structure to take the place of knowledge of concrete reality situations especially in planning programs of cultural change. 90

Careful attention must be given to local values and perceptions of what is important, and to introduce change within that framework. Weitz has asked questions which are appropriate at this point:

What do these peasants want? What are their dreams? Do they, in fact, wish to continue in the hard but secure ways they have always known or have they, perhaps, lost confidence in the heritage of the past? Are they searching for a new way of life and new possibilities for the future? 91

On the basis of a personal interpretation of Western values, it would seem that the values which we export to developing countries, and which are in turn transferred to rural people through urban practitioners of Western beliefs, tend to overemphasize the value of economic considerations to the detriment of social values. African social customs which inhibit the acceptance of economic incentives, such as the time spent visiting and attending social gatherings, funerals and festivities, may be perceived as being primitive or irrational.

However, as an African scholar has argued:

These non-economic activities are means to achieving the social good just as income or wealth is, and they provide satisfaction or pleasure or happiness to those who undertake them as much as, or even more than, the wealth which could have been acquired in lieu
Man is not only an economic animal; he is also a social, a political and a religious animal. Subjugation of one aspect to the other makes him incomplete. 

It is very difficult to harmonize the various aspects of man's nature and to produce a neat package which will satisfy the life demands of producing and relaxing, of meeting subsistence needs and providing for tomorrow, or of living in the present and hoping for the future. Development programs cannot legislate rural development and hope to introduce significant changes which will reduce poverty and alleviate suffering, without careful consideration of local values. If rural people are to be motivated to accept change and to take the initiative for local self-improvement, conscious decisions to increase local participation must be made by central authorities so that a belief in a better future can be sparked at the local level and a willingness to act toward that future can be instilled.

A man's sense of satisfaction, whatever his color, education, religion or tradition, is dependent on the degree his work or role in life permits him a feeling of self-esteem and worth to his community.

Also, commitments to develop the social structure in the areas of education, communication and transportation are important factors for the improvement of local conditions.

The difficulties inherent in this approach should not be minimized. Rural suspicions of external influence are real and difficult to overcome. Years of neglect or misuse of agricultural resources have not endeared rural producers to government officials. On the other hand, government officials require a political will strong enough to resist the temptation to consider industrial-urban development as the primary national target and to allocate more time, energy and capital to
the agricultural-rural sector. In too many cases such decisions are made more difficult as the result of financial burden imposed on the national economy through increases in energy prices and unstable prices for commodities. It is within this known economic framework that this paper is written. The case study of Muranga District, Kenya, will provide a further basis for discussion of this aspect of the issue of rural development; as an interesting study of an agricultural district that has responded to external influences and has changed in the direction of increased integration into the national economy.
NOTES


4Johnston and Kilby, Agriculture and Structural Transformation, p. 133.

5As Uma Lele has noted: "In the absence of the development of the subsistence rural sector, inadequate effective demand remains a major constraint to development of the manufacturing and service sector, which otherwise holds considerable potential for increasing employment." Uma Lele, The Design of Rural Development (Baltimore and London: John Hopkins University Press for the World Bank, 1975), p. 5.


6Johnston and Kilby, Agriculture and Structural Transformation, p. 129.

7Ibid., pp. 133-37.


12. Ibid., pp. 15-16.


15. Ibid., p. 313.


22. Ibid., p. 4.

24Ibid., pp. 27-28.
25Ibid., p. 47.
26Ibid., p. 181.
27Ibid., p. 184.
33To say that decision makers are rational is a starting point - the exact decisions to be made are difficult to pinpoint. Refer to C. Palmer Jones, "A Comment on Planned Versus Actual Farmer Performance Under Uncertainty in Underdeveloped Agriculture," Journal of Agricultural Economics 28, No. 2 (May 1977): 177-179.
34Collinson, Farm Management in Peasant Agriculture, p. 23.
Gerlach has pointed out that: "... the nutritional status of a people is seen to be dependent upon their patterns of food production, preservation, distribution, and utilization. These, in turn, are dependent upon a complex web of intertwining social, economic, political, magico-religious, technological, attitudinal and environmental factors."
35Weitz, From Peasant to Farmer, p. 57.
36The economic behaviour of traditional farmers has been studied extensively. Some notable works include: Theodore W. Schultz, Transforming Traditional Agriculture (New Haven and London: Yale University Press, 1964); Michael Lipton, "The Theory of the Optimising Peasant,"
Journal of Development Studies 4, No. 3 (April 1968): 327-351; and previously cited studies by Collinson, Hayami and Ruttan, and Mellor.


29. For the African case refer to Helleiner, "Smallholder Decision Making. . .," pp. 31-44.


32. Ibid., p. 128.

33. Ibid., p. 128.

34. Ibid., p. 128.

35. Ibid., p. 129.


39. Helleiner, "Smallholder Decision-Making. . .," p. 49. Helleiner qualifies his survey with the observation that adoption may indicate the quality of innovativeness or gullibility according to the situation.


53Factors not accounted for include supplies and prices of inputs, the expenditure of cash that has high opportunity cost, the work involved in application, etc.

Zuckerman, "Different Smallholder Types. . . ." p. 126.

54Refer to Johnston and Kilby, Agriculture and Structural Transformation, p. 18.

The relationship between farm size and income is more complex than indicated. Refer also to Weitz, From Peasant to Farmer, p. 61.


56Reynolds, Agriculture in Development Theory, p. 4.


58Ibid., p. 320.

59Such adaptation includes adaptation of crops to soils and seasons, and adaptation of cropping by use of concentric belts, by changing the composition of mixed crops, and by use of staggered planting and crop rotations.


65. Ibid., p. 78.


68. The delegates to the Brussels Geographical Conference of 1876 were told by King Leopold of Belgium that: "To open up to civilization the sole portion of the globe to which it has not yet penetrated, to pierce the darkness which still envelops whole populations, is, I venture to say, a crusade worthy of this century of progress."


69. Ibid., p. 11.


76Ibid., p. 42.

77Jacob, Man and Land, p. 83.


76Nishi, Rural Sociology and Rural Development, p. 61.

77Refer to Hunter, Modernizing Peasant Society... , pp. 33-35.

78Weitz, From Peasant to Farmer, pp. 69-70.


80Jacob, Man and Land, p. 94.

81Firth, "Social Structure and Peasant Economy... ," p. 31.

82Weitz, From Peasant to Farmer, p. 69.

83Lawson, "Innovation and Growth in Traditional Agriculture... ," pp. 138-149.

84Ibid., p. 142.

85Ibid., p. 143.

86Johnston and Kilby, Agriculture and Structural Transformation, pp. 170-72.

87Ibid., p. 29.


89Ronald J. Duncan, "Small Farmer Communication," Paper prepared for the Agriculture, Food and Nutrition Science Field Staff Symposium of the International Development Research Centre, Ottawa, November 18-21, 1974, p. 26. This report contains excellent discussion of how to communicate in terms of the social knowledge of the receiving group.

91 Weitz, From Peasant to Farmer, p. 68.


93 Weitz, From Peasant to Farmer, pp. 68-69.

94 Jacoby has concluded similarly: "But if opposed by powerful interests, the transmission of new ideas and values will be a painful process that may last for generations."
Jacoby, Man and Land, p. 85.
CHAPTER III

THE SPATIAL ASPECT

To meet the needs of the peasant farmers it is necessary that planners and administrators operate within a spatial framework that will facilitate the achievement of established goals. Such a framework must provide for area specificity in planning, in order that resources are allocated to the most needy within a district, and must make it possible for the local population to participate actively within the development program. The concept of growth or development centres within a regional context is also thought to provide a useful basis for planning efforts designed to aid the peasant farmers.

The cornerstone on which spatial theories rest is the understanding that society is spatially organized "... in the sense that human activities and social interactions are space-forming as well as space-contingent."\(^1\) It follows from this that:

... as a society undergoes development its spatial structure will be transformed, but the development process will also be influenced by the existing patterns of spatial relations and the dynamic tensions that result from them.\(^2\)

Within the context of developing countries, the dominant pattern of spatial development has been dendritic or extractive. Johnson has noted that the economies of colonialism have resulted in the type of rural landscape design which reflect "... a struggle for power, between coastal cities and their hinterlands and between the towns in
such hinterlands and their rural dependent areas." Similarly, Taylor has written that:

In many developing nations, the spatial structures which currently exist are those of the colonial era. These structures reflected the goals of colonial governments and tend to be "extractive" in character and geared towards administration and law enforcement.4

In the specific context of Kenyan development, to be studied further in chapter four, Edward Soja has written about the highly uneven impact of "modernization":

Traditional social and economic organization, pre-European patterns of migration, and, perhaps most importantly, geographic proximity and accessibility to the major nodes and flow lines within the new (i.e., colonial) circulatory system affected the degree to which various peoples of Kenya were exposed to and transformed by the processes of change.5

The consequences of the geographically uneven impact of modernization and the "... absence of or barriers to a coordinated effort to construct a cohesive, modern African community..."6 have been:

... great inequalities both within and among the various ethnic groups in Kenya and ... in a structure of social communications directed toward serving a minority, not fulfilling the contemporary requirements of the country as a whole.7

Such spatial patterns have not been to the benefit of the peasant farmers. Their needs tended to be overlooked by the colonial governors, who sought to exploit the economic potential of the new territories and often did not recognize their responsibility to further the development of the peripheral areas. The effect was to restrict the peasant farmers to roles which were "passive, docile, and unrewarding."8 As shall be shown later, the Kenyan case provides an example of this neglect, and also of the apparent inability or unwillingness of the post-colonial governments to transform adequately the spatial system in order that
the roles of the small peasant farmers may be made "active, enterprising, and rewarding."

Key factors which restricted the ability of the first independent governments from planning effectively for the economic and social well-being of all members of the new state, were the reliance on sectoral planning and a belief in the "trickling down" and "spread" effects of economic growth in leading sectors. Although the recipient sectors, such as heavy industry or export crop production, generally responded to the attention, the investments in these sectors did not stimulate development throughout the economy. Linkages were not established, "backwash" effects built up, and profits were invested in developed countries.

The result is a dual economy, with concomitant social disparities, a disruption of tribal culture and productive harmony, and a disintegration of social links.9

This is a simplification of a complex process and minimizes the significant contributions made by the earlier growth theories to the study of development and the invaluable experiences gained from their implementation. However, the imbalances sustained and created by these early attempts have become the object of serious concern and study as people have reacted to dualistic national economies and have sought to establish social objectives alongside the economic ones.

Regional Planning in Theory

In the attempt to develop more integrated models for planning and administration, an increased emphasis has been placed on the regional approach to development planning.10 Zygmunt Pioro has summarized the aim of regional planning as being:
... to organize geographical space in such a way that people living in it can develop their natural endowment, both biological and cultural, to its fullest dimensions. Its primordial task is to make the intimate relationship that exists between man, in search of livelihood, and nature, source of that livelihood, more efficient and more rational in terms of human welfare and environmental conservation. To this end, regional planning proposes a definite pattern of land use and settlement system which must be adapted to local geographic, economic, and social conditions. 11

A primary goal of regional planning is to remove the false dichotomies of industrial versus agricultural development and urban versus rural development, and to correct for biases toward certain dominant spatial structures, such as the large urban centre. The effectiveness of regional policies may therefore be graded according to the promotion and ultimate achievement of "spatial equity." This latter concept has been defined by Stöhr and Tödtling:

Besides the criteria usually considered, such as regional product, regional income, access to employment opportunities, basic services, or to minimum environmental quality, there will also be included the right of individuals and small groups to determine their immediate natural and human environment and to exert adequate control on the influence of external economic, technological, cultural and other influences which affect their well-being. Equity is therefore considered not only in terms of equal social-economic levels but also in terms of equal chances of individuals and groups for diversity and for being different. 12

The intent of regional planning is easier to establish than an exact definition of what it is. In broad terms a region is usually a sub-national unit, determined on the basis of physical features, administrative divisions, or functions. 13 Although these criteria are not strictly separable, the stress in this chapter will be on the functional concept and a region will be considered primarily according to the standard of the distribution of and access to a hierarchy of services. As Lundqvist has noted:
Thus, if the nation as a whole has a "full hierarchy" of services, usually available at the capital centre, then it would seem logical that the regions, which are the next highest national units, should have a "next-to-a-full-hierarchy" of the services that exist in the country as a whole. Therefore, one can broadly define regional planning as:

... a type of public planning which involves decision-making within a region which is a scale rather than a level of operation and which is supra urban and sub national in dimensions.

Although the focus of this paper permits only a limited study of the region as a level of planning, it is important to note that a review of regional development policies by Stöhr and Tödtling has criticized the lack of success of these policies in removing spatial disparities. Their concern is that regional policies are losing sight of the needs of the small and intermediate sized territorially organized social groups and thus are not fulfilling their role as a countervailing power to sectoral or other functionally oriented trends and policies. In their critique of the failure of current policies to advance spatial equity, Stöhr and Tödtling conclude that the basic weaknesses of regional development thought rest on:

... the heavy reliance on neo-classical economics, the strong concentration on large-scale vertically organized [private and public] institutions, the heavy reliance on market and institution-based processes neglecting non-market and informal processes, and the strong emphasis on economic and the neglect of social and political processes.

John Friedmann has also presented a critique of regional planning. Quoting earlier works by himself, he writes that the two objectives of regional policy have been stated to be:

1. The gradual elimination of the periphery on a national scale by substituting for it a single, interdependent system of urban regions.
2. The progressive integration of the space economy by the
extension, on a national scale, of a system of efficient commodity and factor markets. In essence, the regional planners' purpose has been "... to integrate the spatially articulated national economy by subordinating its smaller, local economies to the reason of the national market." The consequences have been the neglect of rural area needs as noted by Stühr and Tödtling.

The political aspect of planning also has a significant role to play in determining the overall effectiveness of regional planning efforts. Although this factor will not be examined at length, it is important to note the implications of political conflict. The issues which people identify with most closely are those which confront them daily - the basics of survival, the need for food, shelter, clothing. It is at the local and regional levels that these needs are expressed most intensely and demand constant attention. When these needs cannot be met solely within the local area, representatives of the people, traditional, appointed or elected, must interact with the regional and national systems of distribution. Since it is in their interest to acquire as great a share as possible of the available goods, the representation of their needs may not be as accurate or as fair as is needed to operate a just distribution system. Such a situation is described by Lefebre in his study of the relations between state and national planners in India:

The approach to state planning considered to be strategic by state officials consists of overstating the benefits and understating the costs of regional projects so as to maximize the likelihood of approval by the union government. In other words, state planners have a built-in motivation to mislead national planners with respect to the merits of their plans.
in the hope that by so doing they will increase the flow of resources to their respective states. Needless to say, such tactics might work if only one state resorted to them while others followed nationally agreed upon criteria; however, when all participants play the same game, some or all have to be losers and the planning process is bound to lead to waste.  

Moreover, although a sustained effort may be made by capable decision-makers, planners, and administrators, to transform the spatial structures of a nation, their efforts may be seriously undermined by the conscious desire of the powerful few to preserve the economically rewarding future they perceive for themselves. As one observer has commented:

"It is a very good idea to give higher values to non-market and non-institution based activities from my point of view as a citizen of a richer part of the country, but the inhabitant of a peripheral region has generally just adopted the value system of the industrialized society which asks for higher incomes, better consumption possibilities, more "having."

To conclude, the concern for spatial equity and the need to consider placing greater emphasis on the development of the smaller scale environment are elements of spatial policy which are thought to be essential for the success of rural development planning. Moreover, it is within this context that development centres, as they will be defined, can be expected to achieve their full potential.

Central Place Systems in Theory

At this point in the chapter the focus will shift to the study of relationships between urban centres and rural hinterlands. For purposes of planning, it is very important to have a critical understanding of the nature of the interaction which exists between these two areas. Within this paper the attempt will be made to emphasize
the functional interdependence of urban and rural areas rather than to stress their distinctive characteristics. This approach is based on the regional emphasis of this chapter and the desire to advance a holistic study of spatial development.

In terms of the historical development of spatial theory within a Western or European framework, the study of the urban system has been an area of interest since the middle of the nineteenth century. Of great significance for this was the development of theories of central place systems. These were used to explain the structure of spatial organizations and stressed the hierarchical ordering of a spatial structure according to the demand for and the provision of services:

Thus a hierarchical spatial structure emerged, with the local circulation system meeting most needs, but with the higher levels of organization articulating the long-distance trading within the total space economy.

R. P. Misra has presented a summary of the basic elements of central place theory as follows:

a) There is a hierarchy of central places ranging from a metropolitan town to a village;
b) There is one superior centre where all goods are produced and sold. There is specialization, division of labour, and trade between centres, the lowest order centres producing and selling the lowest order goods;
c) Higher order centres are larger with respect of number of activities, ranges of goods produced, and the amount of business and trade handled;
d) Distance, in terms of transportation and communication costs, plays an important role in the location of central places. Smaller centres tend to locate at the gravity centres of triangles formed by places of next higher order, or half-way between two larger centres.

There has been much debate over the nature of central place systems, whether their ordering is according to principles of hierarchy or rank size, and many refinements have been added, but the basic
contribution of the theories to the understanding of spatial inter-
relations has continued to be acknowledged and relied upon. As
Hermansen has observed in his survey of the theories of Christaller
and Losch:

... these theories were the first global theories of location,
attempting a simultaneous coherent explanation of the spatial
pattern of human settlement including the location of production
and consumption to spatial clusters of different locations,
size and functional structure. 27

In general, the major weakness of central place theories has
been their inability to provide a basis for understanding growth
phenomena:

It is a static theory that aims only at explaining the existence
of certain patterns of centers, not how this pattern has
gradually come into being, and it says nothing about how the
pattern may undergo future changes. 28

Growth Centres in Theory

To understand the growth phenomena, much attention has been
given to the development of theories of growth centres. Historically,
this body of theory has its roots in the work of François Perroux,
whose study of economic development led to the observation that:

... development does not appear everywhere and all at once:
it appears in points or development poles with variable
intensities; it spreads along diverse channels and has varying
terminal effects for the whole of the economy. ... 29

This initial perception of polarized development has been the stimulus
to a great number of studies on change in spatial organization. This
paper will not attempt to unravel the complex tangle of theories which
has since been produced. 30 It will be sufficient for the purposes of
this paper to acknowledge the development of a synthesis of contributing
theories, 31 including those of central place, growth poles, 32 and
innovation diffusion.\textsuperscript{33} It is the conclusion of Lasauèn that:

The profound geographical regularity (hierarchical) of the patterns of the diffusion and adoption subprocess, seems to me the most obvious factors to account for the hierarchical and stable order in which the system of regions grow and develop. For this reason, the factors determining the patterns, which steadily through this time, follow the diffusions and adoptions of successive sets from some leading regions hierarchically down to the regions which follow, are to be considered the factors to explain the invariant behaviour of the system of nations.\textsuperscript{34}

Although he has radically changed his ideas, a quote is presented here from one of the earlier writings of John Friedmann as an example of how hierarchical processes have dominated development thinking:

Development, viewed as occurring through a discontinuous but cumulative process of innovation, .. will tend to have its origin in a relatively small number of "centers of change" located at the points of highest potential interaction within a communication field. .. ; innovations will tend to spread downward and outward from these centers to areas where the probability of potential interaction is lower.\textsuperscript{35}

These centres of change, or growth centres, are thus thought to be the dynamic spatial elements within a region, radiating influences which spread downward toward the smaller urban centres and ultimately into the rural hinterland. A concise definition of these growth centres has been given by Hansen who has stated that:

By a "growth center" or "centers" is meant a complex consisting of one or more communities or places which, taken together, provide or are likely to provide, a range of cultural, social, employment, trade and service functions for itself and its associated rural hinterland.\textsuperscript{36}

If one accepts the role of urban centres as growth centres, and if one is interested in induced change within a region, it would seem that the urban centre would provide the required point of entry into the functioning of the spatial system.\textsuperscript{37} The model would indicate that diffusion of innovation occurs from the larger centre to the smaller
and that by stimulating economic growth in the former, it is possible to encourage economic growth in the rural areas. Moreover, if the objective is to advance social as well as economic development in the hinterland areas, it is possible to achieve this by introducing innovations at the "top," the larger urban centres. Thus, in attempting to redefine their geography of development, successive governments have turned to growth-centre strategies in order to "... reorientate internal production and organizational interlinkages towards the sustained and more equal development of local resources."^{38}

The models of growth centres, however, do not seem to function in reality as well as they ought to. Stöhr and Tödtling have reviewed a number of case studies and investigations and their main findings are as follows:

1. Spread effects from growth centres were usually smaller than expected, or less than backwash-effects and therefore had a negative net result on the hinterland. They were narrowly limited in geographical extent, usually restricted to the commuting area, often as a function of the size of the centre. . . .

2. Increases in income of lower order centres or rural areas create strong income multipliers in higher order centres but not the other way round. . . . They seem to move upward rather than downward within the urban hierarchy.

3. In the context of policies for broad spatial development it is difficult to justify growth-centre policies for lagging areas due to their lack of spread effects in the urban hierarchy downward or from the growth centre to a broader hinterland. . . .^{39}

The gap between promise and delivery has also been noted by Appalraju and Safier. They consider the issue of the time-span involved:

... the creation and still more the execution of growth centre policies has been relatively recent in most countries. Significant changes in spatial structure are likely to take longer to mature than the period covered by one or two five-year plans. Nevertheless, if what is being attempted is more than small
incremental adjustments to established economic and geographic patterns of activity, it should be possible to identify movements away from these patterns at a quite early stage in the production of an alternative economic and spatial formation. The signs are still few and far between.  

It may be that further refinement of the general theories must continue. Perhaps the ambitious scope of the research in growth centre concepts has not permitted as yet the identification of the exact nature of the transmission of growth.

If the detailed research undertaken in the European and North American context has not produced a clear picture of the role of growth centres, this should modify one's expectations regarding an accurate understanding of how the concept is to be understood and applied within the context of the developing countries. This is not to belittle the contributions made to the general body of theory by the analysts of spatial systems in developed countries. Rather it is to indicate that one should have qualified expectations when it comes to applying concepts developed within a different historical, economic and social context.

With specific reference to spatial planning, Alan Gilbert has written that:

The assumption that spatial planning works well in developed countries is only partially true. As a result, the subsequent idea that it can be transferred to other societies in the less-developed world can also only be partially true.

In fact it will be argued here that the models of growth centres which stress the importance of diffusion through a hierarchical spatial system should not be relied upon as the sole basis for a spatial development policy by most of the developing countries. To justify this, one could contend that, given the need for effective planned change with developing countries, it is not in the best interests of
planners and administrators to rely heavily upon models which have not been conclusively proven to be functional. By itself, this argument is not totally persuasive. The lack of conclusive evidence need not deter one from using a body of theory which rests on seemingly rational and useful principles and which continues to offer the promise of a reasonable means for expanding national development in the leading regions and sectors, if not in the lagging ones, through spatial organization. Also, it may be observed that if planners do use inappropriate models and techniques in the full knowledge that they are unsatisfactory, it is often because there is nothing else available. The powerful influence of an international demonstration effect on professional planners also cannot be overlooked.

There are, however, other factors which point to the need for alternative forms of spatial organization. As has been mentioned, the context can make a difference when it comes to applying a model. In his study of regional development in Ghana, Dickson has observed that it is not possible to generalize about Ghanaian towns as having spread, backwash or blight effects on regional development because a static equilibrium is often maintained. This is the result of the colonial origins of the dynamics of urban growth in which "... the nature of urban development often bears little or no relationship to the nature of the regional economy." To understand the lack of integration between the urban centres and the rural hinterlands, it is necessary to examine not only the extractive nature of colonial development policies, which has been referred to (p. 81), but also the spatial landscape that existed prior
to the domination of European interests and which was largely incorporated into the colonial spatial system. The principal assumption to be made here is that spatial landscapes are influenced and shaped by dominating organizational principles, such as military, juridical, administrative, or economic influences.\textsuperscript{46}

It has been argued by Johnson that the economic or market influence has traditionally been the weakest within the developing societies.\textsuperscript{47} The predominance of field crop activity resulted in a spatial organization in which the village was the predominant feature, reflecting the need for farmers to remain close to their fields. In these village-structured economies, larger market centres were relatively few and, as a consequence, towns were not established to service larger spatial areas. Thus, the higher levels of efficiency and service, which markets encourage through trade and specialization of production, did not occur.

With the establishment of European control over most of the economies of Africa, Asia and Latin America, the spatial organization patterns were altered significantly by the development of large towns on the coast, along major transportation routes, and at natural resource based towns in the interior. Ultimately, those towns designated as the administrative and political capitals, or those coastal towns which were at locations of greatest opportunity and maximum economic return (i.e., towns located "... where major scale and external economies could be realized and where best access to markets, information, technology, and imported commodities existed."\textsuperscript{48}), or those towns which had both characteristics, grew inordinately large relative to the rest
of the urban areas in the spatial system. Indeed, differing rates of
development within the developing nations became obvious. Rather than
diffusing into the interior, industrial development, including the
light manufacturing, processing and service industries, transport and
trading organizations, educational facilities, social services, and
administrative and political power tended to centre within the large
urban centre, resulting in the primacy of one or two urban areas.49

As a consequence, it has become apparent that:

... a satisfactory interconnection between town and country by
means of a hierarchy of central places, functionally dispersed
over a landscape in descending scale of utility and size, is
either lacking or so imperfectly developed as to leave large
unserved interstices.50

The consequences of this predominance of the larger urban
centres can be studied in terms of "core" and "periphery." The struc-
tural dynamics of core-periphery relationships have been studied by
many theorists and the negative impact of such relationships have been
carefully documented. The concentration of national policies upon
development within the urban centres, a position supported by concern
for economic growth via industrialization and by belief in the role of
the rural sector as a provider of resources for the urban sector, has
certainly benefited the core regions of the country. The cost involved,
however, has been borne by the rural areas. Disparities have reached
extreme positions in such areas as levels of employment, personal
income and wealth, education and skills, productivity, and public
expenditure on a per capita basis for health, transportation, etc., and,
in general, in the standard of living.51
Stöhr and Palme, in their study of centre-periphery development alternatives, have argued that rural areas in developing countries play the role of extreme peripheries in the interaction system of four fields; namely, commodity flows, factor flows, innovation flows, and power flows. The primary factors affecting this position are the cumulative result of the rural areas' low system-wide accessibility, due to the present urban bias of transport and communication networks; low innovation rates; lack of potential scale and external economies; and low productivity of capital. In turn, the rural areas may be described as having "... dependency relations to urban areas and to the rest of the national and/or international system essentially in four fields." These are listed as being: trade, external production factors, external innovation, and outside decision-making. These dependencies are the cause of disparities of development levels both between peripheral areas and centres and within peripheries, and are distance sensitive.

In sum, the lack of forward and backward linkages seems to be a crucial weakness in the application of a policy of diffused development based on urban growth centres. The integration between the urban and rural sectors which has occurred in more developed countries, in which both sectors have contributed to the overall growth of the other with generally a minimum of long-range backwash effects, has not occurred in developing countries to the same extent. Lundqvist has observed that:

It seems more valid to assume that the present growth of towns in Africa and other developing parts of the world generates little development in the regional economy. On the contrary, it often leads to an increased flow of migrants, capital and other resources from the rural areas to the urban sectors."
In developing countries where growth centre policies have been pushed, the bias of these policies toward the large urban centre has contributed further to the dominance of the core regions. At the conceptual level, the city has been viewed as:

...a centre that has superior ability not only to be served by but also to serve its surroundings and periphery, to penetrate and transform them, the practical consequence being that the city is treated as an indispensable vehicle on whose efficient location and successful operation the integration of regional and, through a hierarchy of cities, national space depends.57

The characteristic lack of spatial hierarchies in most developing countries has been referred to in this chapter. The consequence, then, of emphasizing growth centre policies has been a substantiation of the already existing polarized form of development.58 To the extent that growth centre policies have been based on the concentration of resources in industrial development as the propulsive basis for spread effects, they have contributed to regional imbalances. Rubén Utria has analyzed this form of development within the Latin American context, and has commented that:

...it is the increasing polarization under recent industrialization which had led to the 'marginalization of vast amounts of natural resources and broad sectors of the population', which has been a 'decisive factor in strengthening and sharpening regional disequilibria', and which has led to the massive selective migration of the 'most-dynamic and best trained individuals' toward an ever-smaller number of large development poles.59

The spatial impact of development policies designed to stimulate the integration of rural areas and urban centres will be affected further by the presence of initial disparities and by the factors of distance between the urban centre and rural target areas.60 With regard to initial disparities, it might be noted that integration is
more difficult to achieve when disparities are large, and vice versa.

At the country level, Stöhr and Palme have observed that:

With small initial disparities between countries, integration is likely to bring about further convergence and promote accelerated growth of the entire system. If initial disparities are large, integration may lead to a further divergence of economic levels unless strong redistributive measures take place.61

With specific reference to integration in Brazil, it was observed that initial disparities increased after the integration of the less developed North-east and the more highly developed South-east took place. As might be expected, there is a need to be aware of the internal disparities within a country before consideration is given to the implementation of presumably universally applicable spatial strategies. The effectiveness of integration policies would seem to be less for most developing countries as the result of the disparities that exist.

The analysis of "development surfaces" in developing countries has revealed that a decline in living levels occurs with increasing distance from urban centres. Distance is a critical factor in the determination of the effectiveness of "push" or displacement effects outward from the urban centre, and "pull" effects exerted by peripheral areas "... on account of immobile or little mobile resources (usually natural resources or labor) in increasing system wide demand,"62 Thus for those rural areas that are remote from existing dynamic urban centres and which are experiencing low levels of development, the need for an alternative approach to spatial planning would seem to be even more critical than for less remote rural areas.
An Alternate Approach

Thus the rhetorical question which may be posed is whether it is likely ... that further polarization of development will reduce the regional problems apparently created by historical processes of polarization." As Stühr and Tödtling have concluded:

In summary one can say that since most problems to which national policies for spatial development address themselves were caused by large-scale influences transmitted through vertical functional channels, the use of large-scale, vertically integrated institutions turned out to be a rather evasive instrument for controlling these problems and in the long run must be expected to operate in the interest of these large-scale organizations rather than in that of the respective regions for which the policies were meant to operate.

Thus, it is thought that the emphasis must be placed upon spatial policies which are based on the more traditional spatial patterns and not on the imposed system of primate cities and their hinterlands and which attempt to stimulate development in all sectors, formal and informal of the national economy, and thus are more capable of integrating the core and periphery. This is not to negate the importance of the development of secondary cities and the industrial economy, since these are important factors for the alleviation of urban problems associated with primacy, and for economic growth and development. It is, however, important to stress the need for alternative programs to complement present top-down spatial policies and to reduce the negative impact of polarized development.

Moreover, on the basis of economic arguments for the development of the productive potential of agriculture, specifically peasant farm development, the neglect of the rural sector should not continue. Rural
exploitation should not remain as a basis for urban aggrandizement. Commitments to national development must be translated into programs which effectively stimulate development and growth in all sectors of the economy. On principle and in practice, the dependency of the rural sector upon the urban oriented systems of trade and production must be replaced by an integration of the "rural" and the "urban" which reflects an understanding of the non-dichotomized nature of the national economy, based on a functional interdependence, and which enhances the productive capabilities of the rural sector.66

Finally, the sole reliance on "top-down" models of growth theories may be criticized because the diffusion component tends to neglect the importance of local impulses for change and development.

It is widely accepted that the developed parts should participate actively in the development of the periphery, which is regarded as passive and static. A conclusion of this philosophy is that, once a part of society has reached a higher degree of development compared to its surroundings, it is given that the other parts of the society will only act as receivers of development impulses and not be able to stimulate their own development.67

The position taken in this paper is that local participation in development is a critical component for a successful, national effort to improve standards of living in all parts of the spatial system. Any effort to involve the presently peripheral areas in the nation will require a commitment to the decentralization of power from central institutions to regional or local institutions. It is realized that the relinquishment of power is a difficult task for administrative and political bodies to carry through.68 However, it is to be hoped that the economic and social arguments contained in this paper and in other available and more authoritative sources will stimulate responsible officials to
consider alternatives and to alert them to the long-run benefits to be accrued by the nation (and, specifically, by themselves) if they act on them.

The primary reasons for stimulating local participation in development efforts are as follows. Firstly, in terms of establishing programs for development within an area, it is essential that local preferences be understood and incorporated. The resistance of peasants to change may not be the result of their conservative nature alone, but may also reflect the failure of planners to take into consideration local perceptions of what is important.

The most important question to pose is not: "How congruent are the characteristics of the African's perceived environment and the 'real' environment?" It is rather: "How does the African's perception of his environment influence his spatial behaviour and use of resources?" 69

For example, if the peasants perceive that agriculture is their area of expertise, it is important to work with the people and to understand what aspects of agriculture they would like to see transformed, rather than imposing improved systems of farming which will be rejected because they are unwanted and foreign to the local farming culture. It may be concluded with Lundqvist that, "The fact that the success of innovations and changes directed at local areas 'from above' has been limited, is therefore more a sign of a wrong strategy than it is a confirmation of local resistance to change." 70

Another feature of development which should not be overlooked is the social aspect. In the introductory comments to this paper, development was defined as a holistic concept in which human self-realization is an important part. Development programs, however, have
not always stressed the non-economic or non-material needs of people. As a consequence, the quality of life has been neglected and social dissatisfaction has increased. A. E. Larimore has written that:

The parameters of his [African peasant's] life space are formed by complex social, economic, and political attitudes which influence the structure of his environment and spatial perceptions. 71

Larimore has then asked:

Can his resulting behaviour be understood, much less changed with effects beneficial to himself, if he is viewed simplistically as a governed subject or an economic producer? 72

Also, in their review of regional development programs, Stöhr and Töttling have noted that:

The subjective perception of conditions of living by concrete regional communities seems to show growing discontent on the part of subnational social groups (including local and regional ones) about the increasing impact upon them of exogenous economic and political determinants (large scale functional changes) and their diminishing ability to resist them and shape their own destiny within large and still expanding economic and political systems. 73

This reflects a continued dependency on central bodies for political and economic purposes, as well as for needed innovations.

Discussions concerning the extent of self-fulfilment achieved by people within various communities are difficult to support, since reliable indicators cannot easily be established, nor can comparisons be easily made. This should not discourage one from arguing, however, that some policies are more conducive to the furtherance of qualities of life, such as "loving" and "being," 74 than are others. Policies which place the responsibility for local development decisions increasingly within the hands of the local people and which endeavour to
counteract the exploitative nature of urban or industrial oriented biases provide a basis for social development. Unfortunately, spatial policies based on the top-down diffusion process often do not incorporate within their frameworks the elements required to emphasize local considerations in the area of social development.

Within the regional context of planning, then, what spatial policy should be pursued which would correct the imbalances and develop the areas of neglect noted in this chapter? In the broad regional context, more emphasis needs to be placed on the informal sector and the small-scale environment. As Stühr and Tödtling have noted, heavy reliance on large-scale vertically organized institutions has not reduced regional disparities, nor has it encouraged the qualities of life, such as "loving" and "being." It is thought that by emphasizing more the development of small-scale, non-institutional informal activities in rural areas, it will be possible to advance not only the material development of regions through the stimulation of the local productive potential, but also the satisfaction of non-material human needs. Essential to this approach is decentralization of power to the territorial or local level and biassed increases of accessibility for lagging areas.

For rural areas that are remote from dynamic urban centres and have low levels of development (i.e., the extreme periphery), the policy of selective self-reliance may be considered as an alternative development approach. This has been defined as:

... a controlled stepwise integration process in which large and extremely underdeveloped rural areas start by mobilizing to a maximum possible their own resources for the satisfaction of
their own basic needs - with only subsidiary external help and no strings attached - before major functional and spatial integration takes place.77

More specifically, the areas to be considered for such a policy are to be characterized by:

a) great distance from dynamic urban centers and very low own urbanization rate;
b) high population density compared to own resource potential, i.e., little chance to develop an "export base" founded on regional resources;
c) great population magnitude in relation to total national population which makes it seem unfeasible to absorb the excess of rural population in existing urban centers;
d) large physical extent and compact form which might facilitate internal interaction;
e) population with a relatively high degree of local and/or regional consciousness. . . .78

The intent and design of this selective approach merits careful consideration. Ideally, it would be most constructive to attempt to identify a specific rural area which has the above characteristics and to consider the applicability of the policy in that context. Since the case study material to be used here is for a district which has been affected greatly by functional and spatial integration, such an academic exercise cannot be attempted. At this time it must suffice to acknowledge the value perceived to exist in selective spatial closure for extreme peripheries according to the standards of "authentic development."

Similar to the thought of Stühr and Palme is the work of John Friedmann on "agropolitan" development. Two basic assumptions of his approach are that development should be subservient to territorial rather than functional power, and that "... every territorially integrated national community must be able to meet the basic needs of its members or lose its claim to legitimacy."79 Basic needs are defined as "... the essential conditions of a dignified human existence."80
Other settings can also incorporate variants of agropolitan development or may choose entirely different solutions.

The two basic conditions for successful agropolitan development are the communalization of productive wealth and the equalization of access to the use of social power. The latter must be based on a "... decentralized process of production and control at the lowest territorial level that can become reasonably self-supporting...", i.e., the agropolitan district. This model, as is the case with Stöhr and Palme's, provides a conceptual framework for the effective reaching of peasant farmers in remote areas and is compatible with the general thrust of this paper for "authentic development."

It is conceivable that such models of self-reliant development could be interpreted as being autarchic. To the contrary, the objective is to integrate rural with urban development, the countryside with the cities. What is under consideration here is a parallel economy that will exist side by side with an export-oriented, internationally competitive economy. It is a protective approach that recognizes the need for peripheral areas to develop their local production processes with limited external influences. The extent to which this occurs will depend on the present degree of integration. In all cases there will be a need for developing complementary relationships between the regional and national systems and for establishing:

... the co-ordination of decision-making at the national and regional level and a constant dialogue between national and regional policy-makers concerning all problems of economic and social development.

Or, as Friedmann has written:
In any event, the complexity of the response space does not allow of ideologically "pure" answers. Territory and function are both needed for development. The real question is, which principle is to be mastered.

In terms of the more specific concern for a growth centre policy as a critical focal point in development space, the two major principles which will be emphasized here are the necessity of building on traditional spatial patterns and of specifically involving the local people in the definition and implementation of local development projects. Based on his study of rural development schemes, Taylor has observed that failure often arises when planners attempt to establish a path of transformation which is not related to traditional economic, social and spatial systems.

Consequently, if rural development strategy builds on traditional socio-economic values, than a spatial system, which purports to serve the aims of rural development must build on and complement those elements to the traditional spatial pattern which are conducive to that development. In this way, existing economic and social linkages can be utilized and the likelihood of success will increase.

Thus the existence of complementarities between the village and its hinterland, that is between the traditional settlement nucleus and the surrounding rural areas, can be utilized effectively as a means of transmitting induced innovations.

The model of growth centres to be presented here is that of rural growth centres or "development centres." This concept is that of D.R.F. Taylor, who defines a development centre as:

... a small agro-urban place whose function is to provide innovative cultural, social, employment, trade and service functions for itself and its associated rural hinterland.

The advantages of this concept are that it combines development and
centrality, with an emphasis on the former, and focusses on the following functions:

1. Stimulation of economic and commercial growth, especially small scale enterprise, plus employment.
2. Diffusion of innovation especially induced innovation.
3. Provision of adequate services, especially health, education, water and power.
4. Coordination of government and local development planning.
5. An effective interaction point for local ideas and initiatives.\(^8^9\)

Development centres also offer potential as vital "spatial decision points" between developing rural systems and developing urban systems.\(^9^0\)

This is especially important, given the bias of this paper towards the periphery and especially to preserving and developing the peasant farmers' identity within larger scale systems.

In order that development centres can have the greatest impact on the rural sector, by exploiting existing complementarities, their selection should be based on traditional spatial patterns.\(^9^1\) Hence market centres may be used effectively in their traditional roles as centres of local transportation and communication. According to Kimani and Taylor, such local factors as the relative growth and importance of small scale enterprise over time; relative social attraction and importance; extent of linkages with the hinterland and other centres; the relative number of entrepreneurs; the relative wealth of the hinterland; and the people's perception of involvement in the affairs of a centre are all important indicators for selection of a development centre.\(^9^2\)

Earlier in this chapter regional development policies were faulted by Stöhr and Tödtling for their strong concentration on large-scale
vertically organized institutions, their heavy reliance on market and institution-based processes neglecting non-market and informal processes, and the strong emphasis on economic and the neglect of social and political processes. The introduction of development centres will serve to reduce the inequalities that have arisen, based on colonial and post-colonial spatial patterns, and will develop the appropriate local linkages required for spatial equity. Area specificity in planning and local participation in development will be respected and promoted. For the extreme periphery, the concepts of selective spatial closure and agropolitan development are thought to provide functional alternatives.
NOTES


2 Ibid., p. 84.


6 Ibid., p. 105.

7 Ibid., p. 105.

8 "The ultimate incidence of these efforts to engross the trading connections of agrarian communities with towns, cities, and overseas markets is on the peasantry, whose freedom to sell and whose capacity to buy is encapsulated by a system of markets in which producers of a wide variety of agricultural products must be content with a role that is passive, docile and unrewarding." (Johnson, Organization of Space..., p. 86.)


10 Although the focus of this paper is narrower than the broad area of regional development, it is important to establish the general field of study in order to provide a context for the more specific examination of growth centres.

11 Pjörö, "Growth Centres in Regional Development...", p. 322.


14Ibid., p. 21.


16Their survey of studies and investigations are found in Stöhr and Tödtling, "Spatial Equity...", pp. 12-16.

17Ibid., p. 2.

18Ibid., p. 4.


23L. Bridel, "Comments," in "Comments Received on the Paper 'Spatial Equity - Some Antitheses to Current Regional Development Doctrine' by Walter Stöhr and Franz Tödtling," Presented at the Seventeenth European Regional Science Congress, Krakow, Poland, August 23-26, 1977, p. 3.


25Johnston, Organization of Space..., p. 20.


27Hermansen has incorporated the ideas of H. C. Bos in this quotation. Hermansen, "Development Poles...", p. 179.
28Ibid., p. 179.

29Quoted in Ibid., p. 161.


31Refer to Hermansen, "Development Poles...", pp. 160-203; and N. M. Hansen, "An Evaluation of Growth-Center Theory and Practice," Environment and Planning A 7, No. 7 (1975): 821-832; and R. P. Misra, "Growth Foci...", pp. 135-146. A positive interpretation of the complementary nature of the theories of location, economic development and the growth phenomena is given by Hermansen: "...the theory of central places... may well serve as a point of departure for analyzing the impact of development in a given centre on the other centres, problems of how to direct changes in the system of centres, and urban growth control... and the essential parts of central place theory form a useful framework for discussing both the actual system of centres and also how changes in the system take place, as well as the possibilities of steering these changes." Hermansen, quoted in Hans C. T. Van Raay, "A Case for Regional Planning and a Statement of Intent," Development and Change 2, No. 3 (1970-71): 18-19.

32A generally acceptable definition of a growth pole is provided by Lasuen: "A growth pole is a large group of industries (a) strongly related through their input-output linkages (b) around a leading industry (c), and clustered geographically (d). The leading industry itself (e) and (through its inducement (f)) the whole group, innovate (g) and grow (h) at a faster pace (i) than the industries external to the pole." J. R. Lasuen, "A Generalization of the Growth Pole Notion," in Proceedings of the Commission, 1:26.

This strict definition has been expanded to include other concepts and processes. Hence, Gilbert is able to write that: "The role of the growth pole in the diffusion of innovations and benefits from development is normally seen in terms of two processes: (1) through the process by which 'impulses of economic changes are transmitted in order from higher to lower centres in the urban hierarchy' and (2) by the process whereby 'the spatial incidence of economic growth is a function of distance from a central city'" A. G. Gilbert, quoting J. Friedmann, "Growth Poles - the Instant Solution to Regional Problems?" in Proceedings of the Commission, 1: 119.

33Based on a study of the diffusion of television stations and market penetration by the television industry in the U.S.A., Berry has argued that the spread of an innovation occurs on a hierarchical pattern (as the result of the market searching process, the trickle-down process, the imitation process, and the simple probability mechanism). He thus
observes that: "The most probable time that an innovation becomes available to the households within an urban region, therefore, depends upon the functional location of the urban center within the hierarchy of towns and its geographic location or centrality within the force field of innovative potentials arising from general access to information provided by the early adopters." Brian J. C. Berry, "Hierarchical Diffusion: the Basis of Development Filtering and Spread in a System of Growth Centers," in Proceedings of the Commission, 2: 117.

34Lasuén, quoted in Hermansen, "Development Poles...," p. 191.


37Similarly, Berry has written that (based on the general case for innovation diffusion): "The purpose of spatially-selective public investments in growth centers, it is held, is to hasten the focused extension of growth to lower echelons of the hierarchy in outlying regions, and to link the growth centers more closely into the national system via higher-echelon centers in the urban hierarchy." Berry, quoted in Hansen, "Evaluation...," p. 824.


39Stöhr and Tödtling, "Spatial Equity...," p. 16.

40Appalraj and Safier, "Growth-Centre Strategies...," p. 144.

41Refer to Hansen, "Evaluation...," pp. 828-829. Moseley also refers to the lack of a universally acceptable definition or a generally accepted identification procedure in the article, Malcolm J. Moseley, "Growth Centers - A Shibboleth?" Area 5, No. 2 (1973): 143-150. Refer also to the "conceptual muddle" noted in Friedmann, "Territory and Function," pp. 18-19.


43Ibid., p. 12.


47 Refer also to Appalraju and Safier, "Growth-Centre Strategies . . .," p. 152.


49 In a survey conducted by Lipton, it was found that personal disposable income per head of rural population in selected countries has been between one-third and one-ninth of that of urban populations. Michael Lipton, *Why Poor People Stay Poor* (London: Temple Smith, 1977), p. 430.


53 Ibid., pp. 7-8.

54 Ibid., p. 8.

55 Ibid., p. 8.


57 Van Raay, "Regional Planning. . .," p. 12.

58 Appalraju and Safier have argued that: "In general, the designated (growth) centres have not been foci for structural transformation in the social formation of space, but rather have been encapsulated within, and contributory to, the pre-existing geography of development and change." Appalraju and Safier, "Growth-Centre Strategies. . .," p. 145.


In the Ghanaian context, Dickson has noted that since independence, "The towns are still deriving their growth stimulus from
investment by governmental agencies, and the nature of urban development often bears little or no relationship to the nature of the regional economy." Dickson, "... The Case of Ghana," p. 281.

60 These thoughts are based on Stöhr and Palme, "Centre-Periphery ...," pp. 14-22.
62 Ibid., p. 15.
64 Stöhr and Tödtling, Spatial Equity ..., p. 7.
65 Not all theorists argue that dualism cannot be tolerated. For an articulate representation of this position, refer to Miles Hansen, "Growth Strategies and Human Settlement Systems in Developing Countries," Research Memorandum, RM-76-2, International Institute for Applied Systems Analysis, Laxenburg, Austria, January 1976.

66 As Dickson has argued in his study of interaction between towns and rural areas in Ghana: "In sum, the economic and social institutions in the towns could, conceptually, generate impulses for regional growth if they produced directly, or indirectly but through their own functioning, the services which would meet the urgent needs for development in the regions with which the towns are so intimately connected." Dickson, "... The Case of Ghana," p. 281.


67 Lundqvist, Impulses ..., p. 11.
68 For example, refer to the study of the Tanzanian case in ibid., pp. 31-33.


70 Lundqvist, Impulses ..., p. 30. In his study of Morogoro District in Tanzania, Lundqvist noted that there were weak positive relationships between the authorities of the centre and the local people with regard to the latter's acceptance of impulses for change. Ibid., pp. 204-205.
71 Larimore, "Spatial Perception ...," p. 279.
72 Ibid., p. 279.
These groups of human needs may be said to include: "... the dimension of 'having' (income, density of dwellings, employment conditions, health, education) to which most of the currently used indicators of regional development relate; the dimension of 'loving' (relationships between individuals measured by components such as local solidarity, family solidarity and friendship) and the dimension of 'being' (referring to the degree of self-realization versus alienation of the individual in society expressed by components such as the degree of irreplaceability, the amount of political resources or access to decision-making available to the individual)." This is based on a study by E. Allardt, "About Dimensions of Welfare," quoted in Stöhr and Tödtling, "Spatial Equity...," p. 10.


Ibid., pp. 19-20.

Stöhr and Palme, "Centre-Periphery...", pp. 28-29.

Ibid., p. 29. Specific components of the policy are outlined in pp. 30-32.


Ibid., 2: 9.

Ibid., 2: 15.

Ibid., 2: 16-17.

Ibid., 2: 18.

Leszek Zienkowski, "Comments," in "Comments Received on the Paper 'Spatial Equity = Some Antitheses to Current Regional Development Doctrine' by Walter Stöhr and Franz Tödtling," Presented at the Seventeenth European Regional Science Congress, Krakow, Poland, August 23-26, 1977, p. 3.


Ibid., pp. 4-5.

90 Gould, quoted in ibid., p. 7.

91 Taylor, "Restructuring Space...," p. 9.


93 See Page 85 of this chapter.
CHAPTER IV

RURAL DEVELOPMENT IN KENYA

To consider the necessity for alternative approaches to rural development, this chapter examines the development situation in Kenya. In order to establish the political and economic context for the statistical analysis of a particular area, Muranga District, prior study will be made of the history and nature of the development experience in Kenya as a nation. Special emphasis will be placed on rural development and on the spatial and administrative policies pursued. Since the volume of academic analyses of Kenyan development is substantial, the approach taken is selective, with the objective of establishing the effect of policies on the peasant farmer.

Development in Kenya

A primary objective of the independent Kenyan Government has been the achievement of a fast overall growth rate. In itemized lists, such as the following, growth has a standard position - at the top. The continuing long-term development strategies of the government were listed in June 1977 as:

1. The achievement and maintenance of a fast rate of economic growth.
2. Increasing employment not only through faster economic growth but also through greater use of labour-intensive rather than capital-intensive means of production.
3. The improvement of living standards of the "working poor" most of whom earn their livelihood in rural areas on small-holdings.
4. The reduction of income differentials.
5. The reduction in the divergence in wage rates between large
and small firms for people of similar skills, to promote optimal growth.
6. Making indirect taxation more progressive by imposing higher taxes on those items considered to be luxuries.
7. Emphasizing economic production in those sectors which will increase exports and reduce imports.¹

In 1963 the national goals were:

The fundamental objective of the KANU Government is to achieve economic independence for Kenya. We shall therefore strive to attain the fastest rate of economic growth and to secure a just distribution of national income, both between different areas of the country and between individuals.²

These goals were endorsed in Sessional Paper ⁰⁵ of 1965, entitled "African Socialism and Its Application to Planning in Kenya."

The Second and Third Development Plans also explicitly stated rapid economic growth as being a primary objective, with emphasis also placed on rural growth and fundamental structural changes. In the Third Plan, 1974 to 1978, it was declared that the five basic elements in government strategy to defeat the problems of employment, poverty and income distribution were:

1. continued rapid growth
2. "family planning
3. income redistribution
4. agricultural and rural modernization
5. education reform
6. promotion of small scale enterprises.³

On the basis of various reports released in the mid-1970's, it seemed that the Kenyan Government had a considerable amount of success in its efforts to achieve rapid growth. In their report on Kenya, the World Bank group wrote that:

During the first decade of Independence, Kenya has been remarkably successful in the first objective of achieving rapid economic growth. Virtually every indicator of performance in this field is well above average for a country at Kenya's stage of development. The Gross Domestic Product (GDP) grew at an average rate of about 7 percent a year
between 1964 and 1972, and few developing countries can better this kind of performance over an eight-year period. Such a rapid rate of growth has meant that real per capita incomes have increased significantly since Independence, despite one of the highest rates of population growth in the world. The promotion of the overall growth of the economy was stimulated by relatively high growth rates of investment and capital formation. Economic policies encouraged foreign investment and total capital formation grew over one ten-year period (1964-1973) at the rate of about eleven percent annually.

Kenya's vulnerability to international inflation became evident in 1974. Import prices, excluding oil, rose by forty-two percent, causing domestic prices to increase by fifteen percent. In contrast the average annual increase in domestic prices between 1969 and 1972 was three percent. The year 1975 was also a difficult year economically. GDP at constant prices increased by only 1.2 percent, compared with an average increase of 6.6 percent for the years 1964-1973, and real per capita incomes fell by 2.5 percent.

Short term measures taken by the government, including restrictions on a variety of non-essential imports and increased oil prices, did not resolve the increasing balance of payments problems. Sessional Paper 4, released in 1975, committed the government to the more active promotion of local resource-based, labour-intensive industries as the major thrust of growth. Commitments were made to labour-intensive industries as the major thrust of growth. Commitments were also made to labour-intensive agricultural production and basic rural infrastructures.

The year 1976 was a year of recovery, with the help of increased
prices for coffee and tea, and the GDP increased by 7.2 percent and  
real per capita income increased by as much as 8.3 percent. During  
1976/77, real GDP rose at an annual average rate of 6.5 percent.  
Longer range outlooks by the government were cautious given the  
uncertainty of international economic stability and national economic  
capabilities.  

But the outlook beyond 1977 is much more uncertain. Coffee  
prices cannot be expected to indefinitely remain at present  
high levels. A change in the structure of the economy is  
needed that will lead to larger exports of goods and services  
and to greater output of such import-competing goods and  
services as can be economically justified.  

An International Labour Office team has also commented on the uncertain  
prospects for growth:  

As import substitution becomes increasingly difficult and as  
Africanization opportunities in land ownership, cash crop  
growing and commerce are exhausted, the tendency is to look  
outwards for sources of dynamism. Prospects there do not  
look particularly promising...  

The 1979 Economic Survey by the Government of Kenya revealed  
that GDP rose by 5.7 percent in 1978. The terms of trade, however,  
deteriorated further with the 1978 trade deficit climbing to K£ 266  
million from K£ 30 million in 1977.  

The Fourth Development Plan (1979-83) has continued in the  
tradition of putting priority on the achievement of growth targets.  
The significant new direction in the Plan is the explicit adoption of  
a basic needs approach to development as an operational strategy. A  
four front attack on poverty is proposed, based on:  

1. the creation of income earning opportunities,  
2. the improvement of expenditure patterns,  
3. the provision of other basic needs, such as nutrition,  
   healthcare, basic education, water and housing, and  
4. institution building.
Formerly, economic growth was understood to be the product of the rapid expansion of the modern industrial and progressive farm sectors. With the pace of growth in these sectors slowing down, the basic needs strategy provides an alternate base for dynamic growth as well as responding to primary human needs. An ILO report on basic needs in Kenya has commented that:

... the shift in strategy would maintain the momentum of growth by bringing into productive use the underemployed resources of labour, land, and local materials, by economizing on scarce, expensive skills, and by potential reduction on imported intermediate, capital and luxury goods.12

The economic achievements since independence have been notable given the context of the problems inherited in 1963. Foremost was the problem of poverty. Per capita income statistics provide an indication of the extent of this poverty.13 In 1963 per capita income in Kenya was around £30 or US $85 per year, and in the African population, the per capita income was closer to £20 or US $50 per year.14 Given that ninety percent of the population was located in rural areas and was effectively excluded from the wage economy calculations, it would be reasonable to propose that average per capita income was actually less than £30 a year.

For the year 1969 the International Labour Office computed the following income statistics (Table 4). With the exception of the formal sector in Nairobi, the average incomes are again low.

Alongside the presence of poverty, some other hindrances to economic growth that have yet to be resolved include: developing African expertise in industrial and agricultural management; Africanization of the public sector; diversifying exports to overcome a heavy
### Table 4

**Average* Incomes of Selected Groups**

**in Rural and Urban Areas, 1969**

(£ Per Annum)**

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rural</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Farms</td>
<td>68</td>
<td>73</td>
<td>46</td>
</tr>
<tr>
<td>Small Farms</td>
<td>38</td>
<td>41</td>
<td>34</td>
</tr>
<tr>
<td>Non-Agricultural Enterprises</td>
<td>45</td>
<td>47</td>
<td>34</td>
</tr>
<tr>
<td>Self-Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smallholders</td>
<td>113</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Owners of Non-Agricultural Enterprises</td>
<td>130</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal Sector, Nairobi</td>
<td>443</td>
<td>471</td>
<td>297</td>
</tr>
<tr>
<td>Statutory Minimum Wages in the Formal Sector, Nairobi</td>
<td>...</td>
<td>106</td>
<td>84</td>
</tr>
<tr>
<td>Informal Urban</td>
<td>40</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Self-Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal Urban</td>
<td>60</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>


*There are often wide variations in earnings around the averages shown. This applies particularly to the smallholders.*

**£ = US $2.80, approximate value.**

***... indicates "not available."***

reliance on agricultural products; and establishing political control internally.

While the growth objective has been given top priority and has been achieved with considerable success, the issue of a just distribution of income, an objective which has been recognized since the early days of independence, has not been resolved. The following table (5)
### TABLE 5

**HOUSEHOLD INCOME DISTRIBUTION**
**BY ECONOMIC GROUP AND INCOME SIZE, 1968-70**

<table>
<thead>
<tr>
<th>Economic Group</th>
<th>Annual Income (£)</th>
<th>Number of Households (thousands, approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners of medium-sized to large non-agricultural enterprises in the formal sector of commerce, industry and services; rentiers; big farmers; self-employed professional people; holders of high-level jobs in the formal sector. 1000 and over</td>
<td>600-1000</td>
<td>30</td>
</tr>
<tr>
<td>Intermediate-level employees in the formal sector; owners of medium-sized non-agricultural enterprises in the formal sector; less prosperous big farmers.</td>
<td>200-600</td>
<td>50</td>
</tr>
<tr>
<td>Semi-skilled employees in the formal sector; prosperous smallholders; better-off owners of non-agricultural rural enterprises; a small proportion of owners of enterprises in the formal sector.</td>
<td>120-200</td>
<td>220</td>
</tr>
<tr>
<td>Unskilled employees in the formal non-agricultural sector; significant proportion of smallholders; most of the owners of non-agricultural rural enterprises.</td>
<td>60-120</td>
<td>240</td>
</tr>
<tr>
<td>Employees in formal-sector agriculture; a small proportion of unskilled employees in the formal sector; better-off wage earners and self-employed persons in the informal urban sector; a small proportion of owners of non-agricultural rural enterprises.</td>
<td>20-60</td>
<td>1140</td>
</tr>
<tr>
<td>Workers employed on small holdings and in rural non-agricultural enterprises; a significant proportion of employed and self-employed persons in the informal urban sector; sizeable number of smallholders.</td>
<td>20-60</td>
<td>1140</td>
</tr>
</tbody>
</table>
### Table 5 (Continued)

<table>
<thead>
<tr>
<th>Economic Group</th>
<th>Annual Income (£)</th>
<th>Number of Households (thousands, approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallholders; pastoralists in semi-arid and arid zones; unemployed and landless persons in both rural and urban areas.</td>
<td>20 and less</td>
<td>330</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2340</td>
</tr>
</tbody>
</table>


provides evidence of the highly skewed nature of the distribution of economic benefits within Kenya in favour of the top economic groups. Significantly, the largest number of households were identified as being in a state of real poverty; i.e., less than £120 a year.

The findings of the ILO team are comparable to those of Tony Killick (Table 6). According to these figures, the poorest fifty percent of the population receive an estimated fourteen percent of total income, and the richest ten percent obtain an estimated fifty-six percent of total income. Interestingly, less than twenty percent of the population is indicated to receive an income equal to, or greater than, the average per capita income of 871 shillings.

In a more "down to earth" context, the existence of poverty can be indicated by the reality of hunger in Kenya. The following quote was written in 1975:

Although Kenya's food and population problems are nowhere near as serious as those of India, our population has increased by a drastic 40% from 9 million in 1963 to an upper estimate of 15 million today. Since it is rising at the annual rate of between 3.5 and 4 percent, by the end of the decade there will
<table>
<thead>
<tr>
<th>Decile</th>
<th>% Share of Total Income</th>
<th>Cumulative Share</th>
<th>Per Capita Income* (shs**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>1.8</td>
<td>1.8</td>
<td>157</td>
</tr>
<tr>
<td>2nd</td>
<td>2.0</td>
<td>3.8</td>
<td>174</td>
</tr>
<tr>
<td>3rd</td>
<td>2.6</td>
<td>6.4</td>
<td>226</td>
</tr>
<tr>
<td>4th</td>
<td>3.6</td>
<td>10.0</td>
<td>313</td>
</tr>
<tr>
<td>5th</td>
<td>4.0</td>
<td>14.0</td>
<td>348</td>
</tr>
<tr>
<td>6th</td>
<td>4.5</td>
<td>18.5</td>
<td>392</td>
</tr>
<tr>
<td>7th</td>
<td>5.2</td>
<td>23.7</td>
<td>453</td>
</tr>
<tr>
<td>8th</td>
<td>8.3</td>
<td>32.0</td>
<td>723</td>
</tr>
<tr>
<td>9th</td>
<td>11.7</td>
<td>43.7</td>
<td>1,018</td>
</tr>
<tr>
<td>10th</td>
<td>56.3</td>
<td>100.0</td>
<td>4,901</td>
</tr>
<tr>
<td>Average</td>
<td>-</td>
<td>-</td>
<td>871</td>
</tr>
</tbody>
</table>

Analysis of 10th Decile

| Bottom 5% | 12.0 | - | 2,090 |
| Top 5%    | 44.3 | - | 7,715 |
| Top 2%*** | 29.0 | - | 12,614|
| Top 1%*** | 18.5 | - | 16,168|


*Per capita GDP at factor cost in current prices.

**1£ = Sh.20.

***Estimated from Lorenz curve by Killick.
be up to 20 million Kenyans to feed. Shall we rise to the occasion? Already, according to an authoritative claim, "More people in Kenya are hungry today than ever before." And actual starvation is repeatedly reported from the districts of the North-Eastern Province and from many districts in the Coast and Rift Valley Provinces.15

Although rates of rapid economic growth have been achieved, the problems of distribution and real poverty remain.

What factors can be understood as being contributory to this situation of unequal income distribution? The factors to be isolated here are the interrelated ones of the inheritance of a "colonialized" economy and the choice of a capitalist economic strategy. The linkage between these two factors is very strong. At independence the Kenyan government became politically and economically responsible for an economic system for which they lacked the resources of manpower, technology and finance required to make independent decisions, and for which the future was largely but not completely controlled by institutions and events in the international economic system.16 Indeed, one can argue that no choice needed to be made given the roots of the independent government in the existing capitalist system.17

In 1963 the Government of Kenya inherited a colonial economy consisting of four identifiable layers:

1. primary producers, almost entirely in agriculture;
2. processors and traders who handled their products;
3. metropolitan export industries established within the colonial market; and
4. the colonial administration and political apparatus responsible for managing the entire system.18

With independence the main elements of the colonial economic structures were maintained, with the exceptions of converting part of the European farming areas from large scale mixed farming to small scale household
plots for Africans (Settlement Scheme) and of ending the restrictions 
formerly imposed on African farming in the areas reserved for them 
by the colonial administration.19

and Its Application to Planning in Kenya," committed Kenya to the 
mobilization of resources for rapid economic growth. The economy was 
fully opened to foreign investment. A parallel commitment was made 
to the Africanization of the economy through the substitution of 
African personnel for expatriates in state and private companies, 
and through state support for African enterprises.

The modern industrial sector, largely run by Europeans and 
Asians, did provide the basis for a head start in manufacturing and 
services and encouraged the development of an early export market 
with neighbouring countries. In agriculture, the established European 
large farm sector laid the foundation for:

... the rapid development of African farming by success-
fully pioneering commercial crops, establishing Kenya in 
world markets, and creating - by virtue of their political 
power - the infrastructure and services in the high 
potential farm area. ...20

The continued reliance on the expansion of the modern sector, 
however, has not proven to be a successful strategy in terms of 
solving distribution problems. The output targets set by the govern-
ment have been met by concentrating resources on a small part of the 
total economy, and to a great extent, neglecting the rest.21 While 
not levelling direct blame, the recent World Bank report has observed 
that:

... the very existence of a modern, relatively sophisticated 
economy demanded a disproportionate amount of the scarce
management capacity of Government and tended to distract attention from the wider problem of mass poverty.\textsuperscript{22}

The decision to concentrate investment in the modern sector reflected the orthodox economic theory that placed productivity ahead of welfare in the expectation that a stronger economy would provide a sound basis for effective social policies in the future. The general picture, however, has been weakened by the neglect of intersectoral linkages,\textsuperscript{23} resulting in uneven growth patterns, and by the growth of monopoly institutions and the centralization of power,\textsuperscript{24} resulting in limited access to financial and political resources. According to Ghai, Godirey and Lisk, the net result of state intervention in the economy has probably been "... to reinforce the tendency towards inequality deriving from market forces, product differentiation, ownership and control."\textsuperscript{25}

Alternative development strategies, as proposed by the International Labour Organization (1972) and by the World Bank (1975) were completed in response to the recognized problem of poverty and, in particular, to the observable phenomena of rural-urban migration and the employment problem. Recommendations were based on the need for changes in growth patterns so that a just distribution of national income could be achieved.

In the ILO report redistribution from growth was presented as the key element for an effective development strategy. The primary objective was to bring every sector of the economy up to a reasonable minimal level of employment so that all people could enjoy a satisfactory minimum level of living.\textsuperscript{26} As Tony Killick has observed, the essential feature of this development strategy was the idea that:
... income inequalities (and the associated poverty and underutilization of labour) can be reduced by a policy of sustained, perhaps accelerated, overall growth of GNP combined with measures to ensure that the resulting increments to income accrue primarily to the poor.  

The main elements of a redistribution from growth strategy have been identified as:

(a) Sectoral priorities which particularly favour smallholder agriculture and rural and urban 'informal' activities; negatively, a lower-order priority for the development of modern industry and large-scale plantation farming.

(b) Rural development linked to the increased emphasis on small-holder agriculture, but a broader concept of integrated and simultaneous improvement in rural productivities and rural amenities. This aspect is commonly linked to prescriptions for a decentralisation of planning.

(c) Factoral priorities which favour labour-intensity and economise on the use of capital and foreign exchange. The adoption of more appropriate technologies is central to this aspect of the strategy.

(d) Population restraint is also an integral part of the strategy in countries with rapidly expanding populations because of the close connection between population growth and poverty and unemployment.

In the World Bank report of 1975, entitled *Kenya: Into the Second Decade*, concern was expressed that government policy regarding income distribution was being thwarted by the operations of an economy that had continued to result in concentrated income groups. Modern sector wage rates, urban development biases, and Kenyanization of the economy were seen as contributing factors to the entrenchment of income inequalities. Policy preference was for a restructured pattern of growth and a reformed process of growth. The envisioned restructuring would result in a basic change in the sectoral and subsectoral composition of growth, with a renewed emphasis to be placed on agriculture. The reformation of growth was to occur in terms of the more efficient
use of domestic resources. For agriculture, it was recommended that stress be placed simultaneously on production and export expansion, with income earning and nutritional improvement as important secondary factors.\textsuperscript{31}

The Government of Kenya incorporated some recommendations of the ILO in the 1974-78 Development Plan, emphasizing employment and equity objectives. Weaknesses in the Plan regarding these objectives have been noted by Tony Killick. Based on his observations, it would seem that the government's response to the ILO proposals was characterized by "dilution"; that is, "... a tactic in which the government responds to recommendations by expressing agreement in principle but an unwillingness to commit itself to specific action."\textsuperscript{32} ILO proposals concerning regional policy and the informal sector suffered this fate. Indeed, the main thrusts of the report, summarized as:

(a) a freeze on the real incomes of the richest 10 per cent of the population; (b) employment of the resources thus released for 'special' investment designed explicitly to reduce poverty and create employment; and (c) the setting of minimum income targets.\textsuperscript{33}

were tacitly rejected (a,c) or accepted in a weakened form (b).

Some ILO recommendations were implemented,\textsuperscript{34} but the general theme was dilution. Government behaviour in resisting the opportunity to pursue aggressively solutions to the problems of equity and employment may be partially absolved because of a lack of information. Killick notes that at the time of the plan's writing there was "... insufficient data on the distribution of income, the incidence of poverty, the underutilization of labour, and other key variables for the setting of numerical targets to be meaningful."\textsuperscript{35} However, with Killick
it is possible to observe that Kenyan political realities have an essentially negative influence on the implementation of a strengthened strategy of redistribution through growth. Or as Colin Leys has argued, the ILO did not see that poverty and unemployment were an expression of the power structure in Kenya.

They [ILO mission] wrote of social or political forces antithetical to their own proposals as 'interests' or 'obstacles' which would have to be overridden or overcome, as if there were some further 'interest', independent of these and more powerful which would respond to its appeal. But the political power of the compradores, and the political impotence of the 'working poor' were also integral parts of the structure of underdevelopment. This observation needs to be balanced by the comments of Dharam Ghai that measures have been taken which have confronted the interests of the capitalists. These include: capital gains tax, taxation of luxury goods, abolition of investment allowance, the imposition of tariff and sales tax on capital and intermediate goods, and the lack of action to prevent the subdivision of large farms. Significantly, these measures were taken against the background of, first, the severe recession of 1974-75, and then the boom of 1976-77.

With the publication of the Fourth Development Plan, the Government of Kenya has committed itself to the policy objective that "... through an appropriate combination of private consumption and community produced goods and services, the basic needs of all persons and households..." will be met at a stipulated level. Using the dual criteria of low incomes and lack of access to opportunities, five target groups are identified: pastoralists, small farmers, landless rural workers, urban poor, and the handicapped.
comprehensive set of policies is proposed with the central objective of assisting these target groups to meet their basic needs and to expand the economy. Major emphasis is placed in the plan on employment expansion and productivity enhancement, both in the modern, formal sector and in the urban informal, non-farm rural and smallholder sectors. Commitments are also made to appropriate technology, improved social services, and decentralized planning.

As Ghai, Godfrey and Lisk point out, however, a serious commitment is not made in the area of land or other asset redistribution. To illustrate this aspect, it is important to note that the plan identifies the components of the rural development strategy as being "... increased rural production and income, increased equity in the distribution of this income, increased access to services, and increased participation and decision-making at the district level."42

A. The Spatial Aspect of Kenyan Development

It is a working principle of this paper that an understanding of the spatial patterns is essential to a more complete understanding of the development process. Spatial planning in Kenya has reflected the basic political orientation of the colonial administrators and the independent government of Kenya toward economic growth and political stability. Edward Soja has written in very strong terms that:

... the social and spatial structures which evolved during colonial times were designed to distribute scarce resources ("health, nutrition, modern education facilities, better farming techniques, easier transportation and communication") in such a way as to promote an exploitative emphasis in economic relations, to facilitate control and domination by a nonindigenous colonial elite, and to solidify a condition of dependency within the international market system. Whatever the benefits of underdevelopment might have been, it has engrained a framework of
social and spatial relations and a system of unequal exchange between areas and between different population groups which is inherently antithetical to an autonomously controlled and socially just process of development. 43

This commitment to modernization and progress has created "islands of development," a phenomenon recognized by Soja in his 1968 study of Kenyan spatial patterns. 44

To understand the development of spatial patterns in Kenya it is necessary to start with the pre-colonial pattern, observe the impact of colonization, and review the spatial planning undertaken by the independent Kenyan Government. The pre-colonial spatial pattern was characterized by large areas of apparently uninhabited and underutilized land. 45 These acted as buffer zones between ethnically related clusters of people and were the result of the lack of strong institutionalized territorial organization and the competition for land and animals. For nearly all the peoples of "Kenya" the basic organization pattern consisted of:

... diffuse, egalitarian polities structured around an age-ordered functional system of classes at one level and kinship ties (clan, lineage) at another. Territorial identity was primarily a function of kinship. ... 46

This was in contrast to the more centralized networks of production and redistribution developed in much of Africa.

The European colonialists responded to the seeming availability of productive land and the lack of large cohesively structured territorial units by rigidly partitioning the land into "scheduled" areas, that is areas reserved exclusively for their use, and "reserve" areas for the native population. 47 From this grew two identifiable socio-economic systems, the European and the African, which provided
the foundation for the spatial structure for the British Colony of Kenya.

The core area for this structure was the Nairobi - Nakuru axis and the White Highlands. The peripheral areas were the African reserves. As observed previously in this chapter, the distribution of resources was biased in favour of the European system. Frank Bernard observes, however, that there were substantial barriers between the two systems, and that:

African reserves closest to the core, such as Kikuyu - occupied Central Province, generally received innovations sooner than those farther from the core, and thus felt the pulsations of change more rapidly and more pervasively.48

During the early twentieth century the Ugandan Railroad, connecting the seaport of Mombasa to Lake Victoria, was crucial to the development of the Kenyan Colony's export potential. Thus a dendritic spatial pattern developed to the benefit of the European system with limited positive impact on the African. The process of excluding the African from the central economic system and its benefits is documented by Soja who writes that:

Although Africans produced 70 percent of the exports of Kenya up to the First World War, this percentage dropped to less than 20 percent by 1928 and for many years African productivity declined in absolute value as well.49

With independence, and the expressed concern of the political leadership for building national unity, government planning was geared to centralism. Indeed, the leading political party, the Kenya African National Union (KANU) developed the slogan "Umoja" (unity) and fought politically to centralize political and economic power at the expense of the regions.50 Concurrently, a growth centre policy was accepted as
crucial to the development and completion of urban and rural life in Kenya.

The interdependence between rural and urban areas grows in the process of development and with it comes enhancement of the role of the town as the producer of goods and services and the consumer of agricultural production. This interaction leads to cumulative self-sustaining growth.\(^5\)

As well, it was hoped that the development of a hierarchy of centres would slow the movement of people from the land to the cities, and thus reduce population pressures on Nairobi and other cities.

In the Third Development Plan (1970-74), four major types of growth centres were identified, including urban, rural, market and local centres. A total of 1,681 centres were selected and classified, consisting of 96 urban centres, 150 rural centres, 420 market centres, and 1,015 local centres. This hierarchy of growth centres has been analyzed and considered to fit roughly the central place theoretical distribution.\(^5\) According to Kimani and Taylor, these growth centres appear to have two purposes:

... firstly, to provide adequate services for the rural areas around them, and secondly, to stimulate the economic and social development of these areas.\(^5\)

In the Fourth Plan, the government acknowledges that rural and urban areas are interdependent and that a careful balance must be maintained between the two. The hierarchy of centres is stated to range from Nairobi and Mombasa to small villages and is designed to serve as "... essential links between the formally defined urban areas and the economic activities that are strictly rural in character and setting."\(^5\) In all, 1,681 communities were identified as designated service centres, consisting of 96 urban centres, 150 rural centres,
market centres and 1,015 local centres.

To date the tendency has remained to continue to concentrate development in the urban centres, and in particular, Nairobi. Gaile provides selected examples of this bias, including:

The construction of industrial estates was proposed to aid the development of large growth centers throughout the country, yet the first such estate was constructed in Nairobi and a second has since been constructed there, the government claiming the original plan was "too ambitious." 55

Between 1974 and 1978 five times more money was spent linking Mombasa and Nairobi with a 275 kV electrical transmission line than was spent on the entire rural electrification program. 56

Again quoting Gaile, it would seem that:

... the government has constructed a spatial skeleton for national development yet the bones remain bare. Only the heart of the nation thrives. 57

In general terms we can conclude with Taylor that:

In spatial development terms the "centre-down," urban-based, outward-looking model continues to dominate in Kenya and the political appeal of this to the present government is strong. When this is allied to the economic benefits of promised "trickle-down" over time, its appeal increases and politicians can rationalize their practical policies in terms of "sound and objective" spatial development theory. Both growth pole policies and the creation of a new and more efficient urban hierarchy are explicit components of Kenya's strategy. 58

The study of development in Muranga District will indicate the extent to which Kenya's spatial strategy has reached the people.

Rural Development in Kenya

Having drawn attention to the underlying themes in Kenyan economic and spatial development, it is now possible to focus on the history and nature of Kenyan rural development:

For Kenya is primarily an agricultural country, and whatever progress may be made in enhancing the status of Nairobi as the
financial, commercial, and industrial centre of East Africa. ... the bulk of Kenya's people will, for the foreseeable future, be dependent on the land for their livings, either directly or indirectly.\textsuperscript{59}

In their review of Kenyan rural development, Heyer, Ireri and Moris stressed one fundamental point, that "... the existing approaches in Kenya, valuable as they are, will not be sufficient to solve the contemporary problems of rural development."\textsuperscript{60} In particular, this section will examine the development of the rural sector in Kenya with an emphasis on the unequal distribution of land and resources,\textsuperscript{61} and the implications for peasant farming.

In his history of Kenya and Uganda, van Zwanenberg established the principle that traditional land distribution among African farmers tended to be relatively equal within clans.

There was one great similarity among all groups, namely that every single individual could expect to have some right to occupation and use of land. A person's right stemmed either from his position as a member of a kinship group or from his entrepreneurial abilities. Only in the extreme circumstance of a total outcast might all land rights be lost, but even a man in such a position could attach himself to other people further away. By tradition everyone had a right to land.\textsuperscript{62}

Group rights were linked to clearance, integration and conquest. Availability of land was tied to settlement patterns and kinship ties. According to van Zwanenberg there was basically no land shortage. When fertility was depleted, the clan would move on to another location. The length of time spent in each location, usually between two to four years, would depend on the land's fertility and the farming practices used.

The watershed for land control and use was the European colonial intrusion. The British undertook direct administration of East Africa in 1893. This in turn required a search for local sources of tax revenue
and for the development of trade to make the area self-financing. Since it did not appear that the indigenous agricultural system provided a sufficient tax base, plantation and settler agriculture were encouraged. Moreover, the building of the railway between Mombasa and Lake Victoria (1896-1902) opened the interior and in particular the prime higher altitude agricultural land to settlers. Consequently, eighteen percent of the best land was alienated in the early twentieth century for use by 1,000 to 3,500 European farmers. It was expected that the "White Highlands" would provide an economic stimulus to the rest of the economy. At the same time the designated African reserves were based on twenty-two percent of the total land area, and held eighty-six percent of the total population.

To persuade settlers to settle in Kenya and not in South Africa, Australia and New Zealand, and to support those settlers when they began farming, the colonial administration initiated the following policies. But (1901) and poll taxes (1910) were enforced to ensure a reliable supply of African labour for the European farms. The Department of Native Affairs (1907) encouraged the use of coercion to force people to work on public and private projects. And in 1921, the Native Registration Ordinance required Africans to carry certificates showing their periods of employment and unemployment. By 1926, over forty percent of eligible African males worked on European farms.

The administration also controlled the production of crops and livestock, to the benefit of the Europeans. African farmers were not permitted to grow coffee and the number of cattle was strictly limited. While the settlers were heavily engaged in cash cropping, in particular
coffees and sisal, the African farmers were encouraged to grow food crops. That commercial cropping of tobacco, wattles, cashews and potatoes developed within the African sector was primarily the result of local initiatives and not colonial policy. African farming was not to be ignored, but its encouragement was to be secondary to farming by the European settlers. Policies on agricultural research and advisory services, transportation, and customs and tariff regulations were also biased in favour of the Europeans. Significantly, during 1920-23, seventy percent of Kenya's tax revenue was raised from the African sector.

The separation of agricultural areas into the highlands (for European settlers), the reserves (for Africans), and the frontiers placed serious strain on the African farmers and disrupted traditional systems, forcing them either to adapt to a new system of farming based on limited amounts of land, or to become squatters, owing their existence to the European landlord. Edward Seja has commented that:

Here was a classical example of underdevelopment which produced an African-subsidized island of European-controlled production amidst a series of densely populated, land-starved, subsistence farming reserves faced with few alternatives other than to supply a dependable source of cheap labour.67

Related consequences included the undercutting of traditional authority, famine due to population pressures and soil depletion, migration for employment, and political unrest.68

Gradually, agricultural reform policies for African farming were instituted and included demonstration plots and free seed, erosion countermeasures, and land consolidation, and land tenure policies were developed by the Land Commission of 1934. However, the administration's
attitude may be summed up in this quote from the Department of Agriculture's Annual Report for 1920:

... it will be seen that in order to develop the agricultural resources and wealth of the country it is essential, if natives are to take their proper place in the economic life of Kenya, that they should be made to utilize profitably those large sections of the country in which they are left in undisturbed peaceful possession. Under any circumstances progress must, inevitably, be comparatively slow among tribes which have so recently come into touch with civilisation and whose methods and outlook cannot be easily changed. 69

European farming suffered during the 1930's as the result of the depressed international economic situation. In the 1940's, however, a reversal occurred as Kenyan agriculture was expanded to achieve food self-sufficiency in response to the disruption of international trade relations. Growth in production was related to increases in total land under cultivation rather than improved farming methods.

During this period, African farming continued to confront serious problems. The imposed White Highland Policy resulted in steadily declining farm sizes and significant soil erosion. In an attempt to resolve these problems and to better the condition of the African farm population, the Worthington Plan was introduced in 1946 and the African Land Development Organization (ALDEV) created. The basic assumption was that subsistence farming and traditional economic arrangements should be encouraged. The short-run strategy placed priority on conservation methods, including terracing, enclosures, and the protection of banks, rivers and streams. 70 The major long-run strategy was to investigate the possibility of obtaining suitable land for the increasing population. Although the intent was commendable,
the decision to deny Africans the right to land as private property and to cultivate the more valuable export crops resulted in a bitter response from the African population. The selective nature of the approach to development, concentrating on the progressive farmers, also elicited negative responses.

The Emergency of 1952-53 was a catalyst for a review of policies for African farming to ensure political stability. A Plan to Intensify the Development of African Agriculture in Kenya (1954), or the Swynnerton Plan, introduced land tenure reform. The Plan recognized the failure of attempts to modernize African agriculture within traditional and increasingly fragmented landholding systems and proposed that land tenure based on individual proprietorship would "in and of itself generate industry and enterprise." The Plan did not propose to alter drastically the agrarian patterns by redistributing land rights. Instead, traditional practice was to govern the settlement of land claims and to determine holding sizes, resulting in the continuation of subsistence land holding. The concern for security was greater than the need for drastic farm reform.

William Barber has presented an interpretation of the rationale used to justify the Swynnerton Plan proposals:

1. That consolidation would generate gains in output by attacking the sources of waste and inefficiency in the fragmented pattern of cultivation.
2. That the issue of a negotiable title would instil a new attitude toward land as an asset and induce changes in behaviour which would improve agricultural performance.
3. That the resulting structure would be conducive to the future remolding of the behaviour of farmers in productive ways.
4. That the restructuring of the basic production unit in African agriculture would touch off general uplift throughout the rural areas.
The Plan expected social casualties to occur. Inefficient farmers would be forced to sell their land titles to efficient farmers, resulting in a loss of independence for some. Or as Swynnerton stated:

... if these recommendations are accepted... able, energetic or rich Africans will be able to acquire more land and bad or poor farmers less, creating a landed and a landless class. This is a normal step in the evolution of a country.73

This policy was in contrast to the traditional African practice that individuals could expect to have some right to occupation and use of land.74

Point three of Barber's summary refers to the recognized need to improve African farming methods. Extension advice on farm layouts, cropping patterns, rotational systems and soil protection works would be offered and credit would be made available with the negotiable titles acting as security for loans.75 Cash cropping by progressive farmers was to be encouraged. Indeed, only farmers with holdings of more than four acres were to be encouraged to grow such cash crops as coffee, tea, and pyrethrum. Most farmers were to divide their land and labour between food crops and enclosed pastures for livestock. Political stability and economic growth were to result from this bold approach to African farming.

Judith Heyer has noted the very uneven impact that the Swynnerton Plan had on the agricultural sector.76 While the land reform instituted in Central Province was of some importance and complemented the voluntary consolidation already underway, it was of dubious value elsewhere. The expansion of extension services was closely tied to the control of cash crops:
... extension officials were as much concerned with ensuring that all formal requirements for growing such crops were met, as with giving advice that was more positively beneficial.77

Also, extension officials tended to concentrate on progressive farmers. In general, the Swynnerton Plan provided primarily for agricultural development in the high potential areas, overlooking the lower, drier areas.

Another policy introduced and accepted in the mid 1950's was the proposal of the East Africa Royal Commission (1955) that racial and political barriers be removed from the movement of land, labour and capital. The basic goal of a capitalist system of economics was in keeping with the purposes of the Swynnerton Plan. The shared objective was the development of a solid, conservative peasant class.78 The Kikuyu were one tribe able to take advantage of the land reform measures as will be noted in the section on Muranga District.

The 1960's witnessed the introduction of comprehensive planning in East Africa. Agricultural policies were defined within a national planning framework. J. Tait Davis has summarized the proposed role for agriculture in the national economy as:

1. to increase total agricultural production as a contribution to overall economic growth,
2. to increase export earnings in anticipation of a sharp rise in the demands for foreign exchange generated by the developing economy, and
3. to absorb a major part of the rapidly expanding rural population, most of which could not possibly find employment in non-agricultural activities.79

The Million Acres Settlement Scheme, initiated in 1961 to resettle landless families, was rooted in these overall objectives. The strategy was to resettle the families on small holdings created by subdividing
large commercial farms formerly owned by non-Kenyans.

In all, over a million acres of European mixed farmland previously owned by 2,000 Europeans were transferred to about 47,000 African smallholder families, who, in addition to receiving government loans and support for purchasing the land, were introduced to advanced techniques of farming through extension services. 80

Although the scheme affected less than five percent of the rural population during the ten years of its implementation, it did contribute to the rapid expansion in cash crop production and had a significant demonstration effect on peasant farmers. As Ghai has commented:

Indeed, the rapid expansion in small-holder cash crop production and the consequent spread of the modern sector into the rural areas could be singled out as the most important structural change in the Kenyan economy in the sixties. 81

By 1962, 2.4 of the 5.7 million acres to be enclosed and registered had been consolidated. Cash cropping among Africans had been stimulated by improved government services and a free market approach. Agrarian resource use was intensified, especially in terms of the use of family labour inputs. 82 Weaknesses in the drive to create a politically stable and economically viable rural sector developed. The land consolidation goal of 7.5 acres per farm was undermined by the subdivision of land according to tribal patterns. Continued increases in population size placed increased pressure on the land, resulting in further fragmentation. Peasant or subsistence farming increased. At the same time a small group of African farmers were becoming wealthy based on their ability to acquire land and to market cash crops. Land acquisition was facilitated by the tendency of small farmers to sell their negotiable titles to provide funds for such necessities as education for their children and payment of taxes. 83
A crucial conference on rural development was held at Kericho in 1966. Attended by senior officials and academics, it addressed the pressing issue of achieving increased income and employment through rural development. The Conference had to consider a Kenyan economy which was not able to absorb the growth in the population and the labour force. Since wage employment in industry and commerce was limited by the industrial base, the great bulk of employment would have to originate within the rural, and in particular, the agricultural sector. To overcome the limited capacity of the rural sector to absorb more people, a strategy was required to stimulate productivity. The Kericho Conference emphasized the selection of labour-intensive alternatives; the development of economic incentives, including reasonable prices for crops; improved transportation, processing and marketing services to farmers; enhancing the prestige of farmers; and encouraging extension services and agricultural research.

With the start of the 1970s, significant steps had been taken to improve agricultural development in Kenya. Peasant farmers' incomes had been increased, and land hunger had been assuaged by the various settlement schemes. The ranch and plantation sectors had not been disturbed, but the European farmers were bought out with over a third of their mixed farms retained for African-owned farming.

In the 1970s, a particular focus was given to landlessness as a key to poverty in the agricultural sector. The International Labour Office report on Employment, Incomes and Equality proposed specifically that a redistribution of ownership was required to alleviate rural poverty and encouraged measures to subdivide the large farms. At the same time, Kenyan studies compared the performance of the settlement
schemes of the 1960's with that of the large scale farms acquired by Africans in the 1960's. According to Leys, these indicated:

... that the smaller the size of the farm, the higher the output per hectare, the higher the level of wage employment in relation to the area farmed, and the smaller the cost of inputs used per hectare.86

These studies lent support to the ILO's recommendations on subdivision of land. The 1973 Sessional Paper on Employment and the 1974-78 Development Plan also supported greater investment in the smallholder sector. By the end of the decade the government's commitment to the sector had not been supported significantly by the introduction and implementation of detailed plans. Indeed, Taylor has written that:

It could be argued that land ownership has become increasingly more restrictive over time - the process of land consolidation and the buying of land by the elite cancelling out the gains made by the takeover of sections of the White Highlands and the establishment of settlement schemes for small farmers who were previously landless. With land being a scarce resource, and population increasing, the problem is clearly a serious one.87

In their review of the Kenyan economy, Ghaí, Godfrey and Lisk document that an unequal distribution of assets, and in particular land, underlies the overall unequal distribution of income in Kenya. A study by Collier on household income distribution studies is cited by them to show that an increase in the degree of concentration of land ownership among peasant farmers has occurred between 1963 and 1974.

Collier has calculated that the 40 percent of the smallholder population of Central province with the smallest holdings (excluding the landless) owned 18 percent of the smallholder land area in 1974; moreover, this proportion had fallen from 26 percent in 1963.88

A review of the small farm sector will reveal in more detail the relative lack of support given to this sector and the potential for increased
agricultural productivity.\textsuperscript{89}

The Integrated Rural Survey, conducted by the Central Bureau of Statistics (1972-1976), revealed that not far short of eighty percent of Kenya's population live on agricultural holdings of under twenty hectares.\textsuperscript{90} These 1.5 million holdings have an average size of 2.3 hectares. Thirty percent of these holdings are less than one hectare, and nearly sixty percent are less than two hectares in size. Significantly, these small farms accounted for over fifty-three percent of gross marketed production during 1972-1976. Annual average value of production per holding in Kenya was K.Sh. 2,883 (1974-1975), and forty-five percent of the value of production was consumed at home. For Central Province, those figures were K.Sh. 3,360 and forty-two percent, respectively. According to the survey, about twenty-two percent of the holdings sold less than ten percent of the value of their production, and about thirty-six percent sold less than twenty percent.

Disposable income statistics were also collected for the Integrated Rural Survey. On average, the survey revealed that:

\[ \text{59.5 per cent of disposable income accrued from the operating farm surpluses, 30.2 per cent from non-farm activities - mostly from wages - and 10.2 per cent from remittances mainly from members of the household living in urban areas.}^91 \]

For Central Province, these figures were 50.5 percent, 36.1 percent, and 11.4 percent. In per capita terms, average annual disposable income was K.Sh. 556 for all provinces, and K.Sh. 642 for Central Province.

An important review of the development of the small farmer sector has been written by Judith Heyer and J. K. Waweru.\textsuperscript{92} They identify small farm areas to include:
1. the 'non-scheduled areas', the former African areas, with their over one million small farms and two hundred and fifty thousand pastoral holdings,
2. the settlement schemes on which there are about thirty-five thousand holdings in all,
3. the irrigation schemes on which there are about three thousand five hundred tenants and
4. the areas of 'illegal settlement' in which as many as three hundred thousand small farmers live.\(^\text{93}\)

Given the diversity within the small farm sector, it is expected that the contrasts among the small farm areas would be great. Significant influences have included: the quality of road, water, and communication services; the history of agricultural development; the location of urban centres, industries, large farms, missions; and the cultural and political traditions.\(^\text{94}\) The variety in small farm systems ranges from:

... the systems based primarily on annual food crops to those in which permanent crops play a major role; from systems in which most production is for subsistence purposes to systems which are relatively commercially oriented; from systems in which livestock are peripheral to systems in which livestock play an integral role; and from systems in which there are virtually no purchased inputs to systems in which purchased inputs including hired labour play a significant part.\(^\text{95}\)

If there are common characteristics to the small farm sector, these are usually identified in contrast to the large farm sector, including:

... relative scarcity of land, relatively large quantities of labour to apply to the land, relatively small quantities of capital, low incomes, small scale of business, and limited access to research, technical advice, skills, information markets, transport, and finance.\(^\text{96}\)

The major crops of this sector are coffee, tea, pyrethrum and dairy products. Overall marketed production accounts for thirty to forty percent of production. During 1970 to 1974, small farm market production averaged 56.5 K\(\text{m}\), increasing from 44.2 K\(\text{m}\) in 1970 to 74.6 K\(\text{m}\) in 1974, or an average of 51.6 percent of total marketed farm production.

In his review of the small farm sector (1954-72), J. Tait Davis
also states that the sector has contributed a major expansion of production and a major contribution to export earnings. The sector has also absorbed a population increase of 4.4 million people and achieved "... an over-all per capita gain in gross revenue, in current prices, from 42K shillings to 111K shillings, an annual average rate of increase (1957-71) of approximately 5.5 per cent."  

Two key factors to change are the desire to change and the availability of tools to produce change. Davis argues that the small farm sector has been responsive to agricultural policy. He observes that:

The association between policy emphasis in Kenya and the aggregate performance of the small-farm sector is manifest in the steadily rising production of crops for market. ... coffee and tea are the principal underpinnings of this performance, and their emphasis is consistent with central planning objectives of increasing the production of cash crops for export.

Heyer and Waweru observe, however, that government policies in such areas as research, extension, input distribution and farm credit, mechanization and equipment programs, have usually been biased in favour of the larger farms and/or the progressive small farmer. With particular reference to research, they write that:

Kenya compares well with other developing countries in the level of expenditures of research. ... Although many developing countries share the problem of inefficient research programmes, few face the additional problem of bias away from small farms to such a degree.

Concerning extension programs, they observe that the services are impressive in comparison with many other African countries, but that the use of inefficient extension methods and poorly qualified staff affects negatively the overall extension performance. In particular, extension has relied too heavily on individual farm visits and has concentrated on the better farmers. Also, the small farm sector could be specifically
assisted by encouraging a wider variety of crops, to include those that:

... provide a high degree of employment, products that economize on imported inputs, products with strong linkages with the rest of the economy, products that improve the position of underprivileged areas, or products that improve the position of underprivileged groups.100

More general policy considerations should include as well:

1. ... the intensification of land use for both crop and livestock production, with a concentration of effort directed to the poorer families in an attempt to raise their standard of living by comparison with that of the community as a whole.
2. ... a redistribution of land towards more labour-intensive farm units.
3. ... the settlement of unused or underutilized land.101

Heyer and Waweru observe that:

Those responsible for agricultural policy are already aware of the seriousness of the inequalities, and it is clear that there is a general commitment to reducing the inequalities as far as possible. But what is not sufficiently widely realized yet is the size of the task, and the magnitude of the effort required if there is to be any noticeable success in tackling the inequality problems.102

In his review of Kenyan development strategy since 1971, Leys notes that the government policy balance seems to be tipping:

... in favour of small farms in official thinking and public policy. ... For instance, the share of state-provided agricultural credit going to small farms ... doubled from 21.6% of the total issued in 1972-73 to 42.5% in 1975-76, and the share going to co-operatives rose from 21.3% to 27% over the same period.103

Leys, however, cautions against conclusions that a general commitment will result in the enactment of significant policy changes. Based on the patterns of subdivision, he argues that the large-scale mixed farm area will not disappear, with up to forty percent of the former large-scale area left in undivided large farms. Moreover, subdivision has produced not only the small household farming unit, but also medium size
farms. One must also take into consideration the "progressive" farmer, who, in Muranga and Nyeri Districts, constitute ten percent of the producers but account for between thirty to sixty percent of coffee, tea and milk sales in these districts. Com­mit­ments to the small farmers and their greater productivity per hectare do exist, but their implemen­ta­tion will be affected by com­mit­ments to capitalist farmers and to increased productivity of farm labour.

The maintenance of policies oriented to large farm production in spite of official acceptance of the doctrine of smallness - in credit, extension, pricing, new settlement scheme organization, etc. - testifies not so much to the inertia of the old con­ven­tion­al wisdom, as to the vigour of capitalist farming in com­pet­i­tion with middle peasant production along contours rather different from the old "large farm/smallholder" divide which is still enshrined in official thinking and statistics.

In his study of peasant agriculture in Kenya, Tony Moody cautions against high expectations for com­mercial expansion among peasant farmers. For the peasant, land is the basic form of security "in the face of uncertain changes in the cost of living" and this affects the use of land for such functions as "... the security of food supply (subsistence production), maintenance of capital savings (land and livestock), and the yield of cash income (commercial production)." Recorded increases in peasant com­mercial production have not been at the expense of subsistence production. In Kisii District the increase in production that did occur was largely as the result of small individual plantings by many producers and not the result of a few landowners specifically accumulating land for the purpose of agricultural entrepreneurship. Moody cites the case of the Maize Marketing Board as an example of weaknesses within the food distribution system that constrains the marketing of food crops. The marketing system is oriented to a rural-urban flow and does not allow for
intra-rural trade. Marketing boards are also criticized for contributing
to the uncertainty of the actual earnings involved getting to the
producer of cash crops. These are all contributing factors to the
resistance to change exhibited by many rural producers. A workable
solution rests not on agricultural pricing or service policies, but on a
significant redistribution of land. Hope is expressed, however, that:

... at least a better system of price guarantees, price
subsidies, and rational distribution could be feasible and
would contribute to greater specialization in agricultural
production within the context of Kenya's present class
structure.108

Another author, Niels Roling, argues that with rapid change
serious inequities have resulted. He contends that "Knowledge benefits
those who have most knowledge ... success breeds the self-fulfilling
expectation of more success."109 This is the argument that government
services are directed to known progressive farmers, to the neglect of the
potentially productive and successful peasant farmer.

Lastly, it is important to remember that the development of the
agricultural sector cannot be separated from the development of the
economy as a whole. For example, while the nucleus of Kenyan industry
is based on agricultural inputs, "... it would be even more helpful
if the industrial sector were able to take agricultural products to more
final stages of processing."110 Also, the high cost industrial sector,
which Kenya has developed, is not in a position to provide the
agricultural sector with cheap inputs of high quality.

Kenya has few of the small concerns located in rural
markets manufacturing or repairing agricultural equip-
ment and continually adapting it to the needs of the
farmers who use it. ...111

In short, the overall picture is one of underdeveloped intersectoral linkages.
Agricultural Administration: Planning and Extension

In the preceding review, several references were made to the role of agricultural administration and specifically, extension, as a major factor affecting rural development. It is important to the purposes of this paper that a review of Kenyan agricultural planning and administration be undertaken with specific priority given to the elements of local participation in planning and reaching the peasant farmer.

There have been many studies made of the Kenyan administrative system. The civil service as the main instrument of social control and development has been responsible for the tremendous task of guiding Kenya's development as a nation. As such, the civil service has also been held responsible for meeting the challenge of increasing income and employment in the rural sector, urban unemployment, rural welfare problems (disease, ignorance, lack of amenities, lack of access to opportunities), and overcoming an inadequate rural administration which has been weak in the areas of local plan coordination and schedule implementation.

Kenya has maintained a centralized administrative system, modelled on a British colonial pattern. The 1963 "majimbo" constitution did introduce regionalism, but in December 1964 the government abandoned that approach in preference for a hierarchically organized administrative system that provided a direct chain of communication from the locality, to the district, to the province and then to the office of the president. Centralism has, however, restricted independent initiative at the district level. The Ndegwa Commission, established in 1970 to inquire into the structure and remuneration of the civil service, recognized that the restrictions placed on District Officers and Divisional District Officers
were inhibiting factors for rural development, and recommended that "... a good deal of independent authority be given to the administra-
tion at the level; i.e., to the District Commissioner and his staff."\cite{116}

Criticism has been made that the roles of control and development are in conflict with each other. J. R. Nellis concluded in the early 1970's that:

The Kenyan bureaucracy... has yet to demonstrate that it is a truly effective mechanism for the implementation of develop-
ment plans and programmes, mainly because such programmes usually call for innovative, non-regulation behaviour, and coordinated interagency activity.\cite{117}

Robert Jackson has also studied the Kenyan administrative system and has questioned:

... whether this essentially bureaucratic system of administra-
tion with its sharp hierarchical authority structure, its preoccupation with defining and delimiting jurisdictional areas, its emphasis on replicability within a framework of clearly indicated rules and precedents - which was, after all, adapted more to the problem of control rather than change - is entirely appropriate for present development needs.\cite{118}

As well, critics have focussed on the fact that many administration staff have lacked the training and experience necessary to undertake development.\cite{119}

This tension between two roles has its roots, according to John Okumu, in the colonial period:

This is partly a consequence of the colonial legacy which assigned to the civil service - and especially the provincial administration - prime responsibility for maintaining law and order, promoting development, and linking the state to the ordinary citizens, the majority of whom reside in the countryside.\cite{120}

The second major contributing factor to this tension has been the political party system which was characterized during the colonial period by the fission and fusion of contending groups, and weakly centralized parties.\cite{121}

Although there is active political participation within Kenya both locally
and, to a lesser extent nationally, and at times a responsiveness from the political centre to local need, the political party system has not been able to accommodate the volume of demand placed on it. The Kenyan African National Union (KANU), the dominant political party, has played a post-independence role as an arena for elite competition and social mobility, and has represented local interests on the basis of patron-client networks. But it has not been characterized as a political party attempting to reach out to the people or trying to change the normative structure of society. Indeed, according to Bienen, the central political authorities, recognizing that the civil service is the major point of contact with the government for most Kenyans, have agreed that:

...[the civil service] should be a channel for local demands and that it should try to handle local grievances because the political leadership has determined to bypass an unreliable and fragmented ruling party.\textsuperscript{122}

Moreover, as part of the centralist bias of the government, there has been a continuing policy of controlling local government councils to limit the amount of local level competition for resources, a process which is seen as being a threat to local stability.\textsuperscript{123} This tendency to downgrade the importance of district and town councils has been critiqued by Amey and Leonard. Their approach to this decline is based on a perceived conflict between the petty-bourgeois class, which dominates local government posts, and the "matajirii" (rich) class, predominantly Kikuyu, which controls the centre.

Thus it is hardly surprising that a matajirii-oriented government controlled by the members of one tribe should seek to downgrade the importance of the district and town councils dominated by petty-bourgeois interests which question the class structure of the regime and which are more radical in attacking Kikuyu rule.\textsuperscript{124}

According to Amey and Leonard, the civil service offers a solid alternative
to controlling local resource allocation through district councils. There are more petty-bourgeois than matajirii in the civil service, but the administrative system's hierarchical reward structure and the control exerted by matajirii civil servants is extensive. 125

More specific diagnoses have been made of the rural administrative system in Kenya. 126 A common criticism made in the 1960's was that there was a lack of high-level manpower. As this shortage was overcome, the issue has been refocussed and concern has been expressed regarding the quality of the performance of those staff. Indeed, Robert Chambers has stated that the missing prescription has been the need to improve management procedures, thus overcoming urban biases, failures to plan management, and biases to capital over recurrent expenditures, and centralized management systems. 127

The attitudes of public servants have also been considered as negatively affecting their performance. A counter argument has been made, however, that:

... often an examination of the work environment, perceptions and expectations of field staff will show, not that they are wilfully negligent, but that they are reacting rationally to a situation in which it is not clear what is expected of them but in which it is clear that the exercise of initiative in development matters is at least as likely to be penalized as deviant behaviour as rewarded for being good work. 128

As well, the need for closer integration and coordination of planning is recognized as being crucial to an improved rural administrative system.

To permit some understanding of the potential for local participation in development planning, it will be helpful to review some of the criticisms of the planning process, with specific concern for the agricultural sector, and to note government responses. Kenya has opted
for a disaggregated approach to rural planning in which neither the
districts involved nor the provinces have independent powers of decision
over resource allocation. This, according to D.G.R. Belshaw's research,
will have a negligible impact on central ministry priorities, and will result in:

... the mechanistic production of "shopping lists" at the local
planning level and eventual disillusionment with the system by
both civil servants and local political leaders.¹²⁹

Mbithi and Barnes have also commented on the effect of a centralized
planning system when they write that planning in Kenya has tended to
consider national needs, priorities and constraints and has failed to
consider the diverse needs and resources of local areas.¹³⁰ They argue
that this perspective on planning has contributed to the minor success or
complete failure of many programs. It is their understanding that a
centralized planning system with a top-down bias cannot plan for the
complex nature of rural society and the variety of social units which can
become targets or instruments of change. These units are identified as:

1. farm and pastoral households
2. progressive farmers
3. rural communities
4. units planning and administering change
5. rural non-farm enterprises¹³¹

As well, development planners at the centre are criticized for under-
estimating the capabilities of rural persons.

For example, it has been assumed that all spheres of rural
activity are subject to simplistic analysis and manipulation,
and consequently little attempt has been made to collect
information which would lead to a fuller understanding of the
lives and activities of rural people.¹³²

Other roadblocks to effective planning have been identified as a bottleneck
at the centre, where numerous and sometimes competing agencies and
officials delay clearance, and the lack of low level field personnel able to be innovative and cooperative with other departments, and able to transform abstract plans into concrete action.  

The Special Rural Development Programme (SRDP) was created in response to the Kericho Conference of 1966, which called for a strategy to overcome such planning roadblocks. The Conference called upon the Government of Kenya to develop a pilot program in the area of comprehensive rural development. After some negotiation among government officials and expatriate advisers, the idea for the SRDP was initiated in 1967 and in 1969 the decision was made to launch the program in six of fourteen divisions. The program's primary objective was to increase rural incomes and employment opportunities. Secondary objectives were:

1. To establish procedures and techniques for acceleration and self-generating rural development which can be repeated in other similar areas.
2. To improve the development capacity of the Kenya Government officials in the field of rural development.
3. To increase rural production and productivity.

There were many interesting aspects of the SRDP. Of primary importance to this paper is the recommendation by a University College, Nairobi, team that "... the programme be handled through the existing machinery of government, and that one of the prime goals of the entire exercise be to enhance Kenyan capabilities in every aspect of rural development planning and implementation." Also of importance was the setting of the goal to involve local people in program production in a meaningful way.

A review of the SRDP by W. Ouma Oyugi has stressed that the program did not tackle the usual organizational inadequacies in development administration in the field. The program was also weakened by the
failure to remove communication bottlenecks and to get resources released quickly to the project level. Indeed, the commitment to the experimental nature of the SRDP was lost as senior administrators shifted the emphasis to achieving development productivity. Also, the program was conceived as an integrated area-based program involving close participation in planning and implementation by local level staff. According to Oyugi this did happen, but "... most of the decisions made at the programme level were still subject to approval by the centre before being implemented." Also, the assigned local level "area co-ordinators" suffered from a lack of administrative authority, although they were able to oversee programs in their areas "... more or less effectively on the strength of their personalities." Finally, it appears that the SRDP was not very well understood and appreciated by government officials between the very top and the local level.

Lack of understanding and commitment to SRDP was therefore largely responsible for reluctance to implement some of the innovations that emerged during its evolution.

The goal to increase local involvement in development projects was also pursued with mixed results. SRDP revived interest in local development committees that were dormant partly because they lacked meaningful roles to play in the development process. The concept of consulting with the lowest level staff and people was stressed. Mbiti and Barnes have referred to the SRDP in Migori-Kuria District where the hierarchy of local development committees was revitalized, including the traditional village committee and the locational development committee. Greater local participation in planning also occurred in the women's group program operating in SRDP areas.

However, as Nellis has observed:
In effect, Nairobi wanted the planning exercise to be as decentralized a process as possible, but in reality, and predictably, the fulcrum of the operation tended to be located between the Provincial Planning Officer, and the District Development Committee.141

Indeed, Oyugi has observed that planning often failed to involve the relevant social units, resulting in project delays and failures.142

And Mbithi and Barnes have written that:

The most widespread effort to achieve local involvement was to inform people in each SRDP area through large, impressive barazas (meetings) of the development of infrastructures and increases in income and employment which the programme would bring.143

Unfortunately, such misguided publicity often served to create unrealistic expectations. The shortness of time involved between planning assignments and completion dates also affected the amount of possible local participation.

In keeping with the growing appreciation for local level participation, local level planning was an important ingredient of the 1974-1978 Development Plan. The Plan stated that planning should occur increasingly at the district level, in coordination with the Ministry of Economic Planning and Development and the planning unit in the Ministry of Agriculture. District development plans were to be the responsibility of District Development Committees, comprised of local leaders and government officials, with direct assistance from the District Development Officer. Professional guidance was to be provided by the Provincial Development Committees. Assigned the responsibility for the spatial distribution of government services within the urban service centre hierarchy and for the identification of district development resources, the district plans were to be funded both by the operating ministries
concerned by the Ministry of Finance and Planning under the District Development Grant system. It was expected that every district should participate in the development program in order to:

1. seek willing and active participation of local communities in the planning and implementation of development programmes; and
2. train local leaders and officials with a view to making them planning-conscious and to providing them a wider understanding of the development process.144

This disaggregation of planning was hoped to provide a basis for a process of relatively even development among the different parts of the rural areas.

The 1979-1983 Development Plan has increased the emphasis to be given to administrative decentralization and reliance on local units. District Development Committees (DDC's) are expected to "... play an increasing and central role in planning for district development, coordinating rural development activities, and monitoring ministry programmes at district level."145 Local coordination is to be improved by requiring all district level committees to become subcommittees of the DDC's, and all Harambee projects to receive final approval from the DDC's. District level participation in development planning, monitoring and implementation is to be encouraged by ministries, when appropriate to their programs, by providing district level disaggregated information on planned and actual expenditures, output targets, and program impact on employment. When appropriate, guidelines will be developed for the geographic distribution of services and infrastructure.

Information of these kinds will enable ministries and districts to monitor more carefully the extent to which national and local rural development objectives are being realized.146

A specific government response to the needs of peasant farmers was
the Integrated Agricultural Development Programme (IADP), initiated in 1976 to raise the income of smallholders through increased production of food crops. In particular, the production of maize, beans, potatoes, passion fruit, cotton, groundnuts, beef and milk were to be encouraged. Modern inputs, credit, training, extension and improved facilities for marketing were to be coordinated. As well, the program was to place emphasis on "... decentralized planning and project implementation; strengthening of existing credit, training and marketing institutions, including cooperatives; and development of comprehensive farming systems rather than the promotion of a single crop or activity." During 1976-1981, 70,000 families from eighty locations in Central, Eastern, Nyanza, and Western Provinces, were expected to benefit, and an estimated 118,000 families were expected to benefit indirectly.

The extent of the success of this program will be another indication of the strength of the commitment of the government to peasant farmers. Ghai, Godfrey and Lisk have observed that the intended beneficiaries are likely to have holdings considerably above the provincial averages, but that in terms of income, they would be among the lowest forty percent of smallholders.

In general, then, since the late 1960's Kenya has developed a form of decentralized planning. The objective has been to provide opportunity for local level participation in the selection and implementation of local level development projects. District and provincial development committees have the responsibility of:

1. proposing projects for inclusion in the national plan.
2. coordinating projects initiated by central government ministries and local authorities.
3. reviewing the implementation of local projects.
In their review of planning for basic needs in Kenya, Ghai, Godfrey and Lisk are critical of the actual fulfilling of these responsibilities on the basis of broad-based local participation. To the extent that local level committees consist almost entirely of major administrative and professional staff of central government ministries at the local level, and make decisions without consulting the local people, they act as miniature central administrations. Indeed, the development advisory committees also generally consist of leading citizens and do not allow for local participation from other social levels. Ghai, Godfrey and Lisk have argued that:

As far as the concept of decentralized participatory planning is conceived, the absence of genuine grass-roots participation in the activities of local development committees robs it of any practical significance in the Kenyan context.¹⁵²

It is possible to observe that unless the government's commitment is genuine, then the possibility will remain of the centre making decisions which do not reflect local needs, and implementing them at the local level. Although the 1979-83 Development Plan stresses further the importance of local involvement in development planning by increasing the role of District Development Committees and by deploying key technical administrative personnel to the local level, the need for other significant reforms in the administrative system and structures remains. Ghai, Godfrey and Lisk note that genuine decentralized participatory planning will require:

... a more efficient organization and use of local resources (human and material) at the local level, greater local influence with respect to decision-making in allocation and use of resources, as well as more practical and beneficial ways of integrating local efforts into the over-all development process.¹⁵³

This will need to involve as well greater support to the Harambee movement.
plus the strengthening of support services at the local level. The extent to which this disaggregated approach will advance a more even development process will ultimately depend on the strength of the commitment of the centre. Previous experience dictates a cautious attitude in this area.

Local participation, of course, can also result in control by a few unless management principles are consistently adhered to and the priority to non-elite members is followed. The abilities of the people themselves to participate is also a critical factor, and the extent of literacy, experience in planning and local social cohesion must be taken into account. Previous experiences in project planning and implementation have revealed the "zig-zag" process often associated with local decision-making, and the local politicking that can affect the efficiency of the implementation.

Intertwined with the concern for creating possibilities for local participation in planning, is the desire to reach the peasant farmer in order to provide the stimulus and assistance required to become more than subsistence farmers. This is the essential role of the agricultural extension field service, to be a linking mechanism. These linkages include those between farmers and research centres, and those between farmers and supplies, credit, and markets. The objective of these linkages has been primarily technological, to increase the farmer's and community's technical mastery over the physical environment.

The role of extension services as catalysts for agricultural development has been open to question. In one review of rural districts in six Latin American countries, it was observed that other factors, including credit, profit levels, and farmer associations were more
important factors for progress among smallholders growing food crops.\textsuperscript{156} In this study it was concluded that extension agents had a conditioning role to play, with a function as sensitizers to new ideas. The argument was presented for a greater coordination of effort among the extension, credit, and marketing services and farmer associations.

With regard to Kenya, some of the requisites for agricultural development have been adequately met relative to other developing countries. These include an effective agricultural research establishment, a number of profitable crop innovations, incentive-providing market prices, and an adequate supply and marketing infrastructure. Kenya also has a ratio of extension workers to farmers of approximately 1:310.\textsuperscript{157} However, as Leonard has noted, in spite of all these advantages, "... the Kenyan extension services have been disturbingly inefficient."\textsuperscript{158} Statistics on the rate of adoption of farming innovations indicate that the effectiveness of agricultural extension needs to be improved.\textsuperscript{159} At the same time, the Government of Kenya has maintained its commitment to agricultural extension which provides grounds for improving extension efficiency.

The agricultural extension services should aim to give the farmer advice and services which enable him to run his farm and home business more successfully. In its orientation, the extension service should cover the whole range of farmers from the best to the poorest.\textsuperscript{160}

Of primary interest to this paper is the extent to which the extension service has been able to "cover the whole range of farmers from the best to the poorest." One author, Thoden van Velzen, has proposed, based on his study of an extension division in Kenya, that:
1. the distribution of extension benefits is skewed in favour of the wealthier farmers;
2. this favouritism accentuates rural inequality and may prevent the maximum possible economic growth.  

Such a skewing of extension resources is often justified according to the concept of a "progressive farmer strategy."

According to the Progressive Farmer Strategy, total national agricultural production and export of agricultural commodities can best be promoted by concentrating one's efforts to introduce productivity-raising techniques on farmers who have large farms, the capital to innovate and the education to grasp the advantages of new ideas quickly. That way, the pay-off from the limited resources available to Ministries of Agriculture is said to be maximized.  

From research done in Western Province, it seems to be clear that Kenyan extension agents have concentrated on the progressive farmers. Using the basic technique of visiting individual farmers, the average extension agent spent fifty-seven percent of his visits with progressive farmers, and six percent of his visits with non-innovative ones. This finding has been substantiated for Tetu District by Joseph Ascroft et al., and for Muranga District, Central Province, by Fiona Thomson.  

It is argued here that progressive farmer strategies are inefficient. The history of the "Green Revolution" has shown that innovations are not diffused effectively from progressive to small farmers. In Tetu District, Ascroft observed that:

Thus the introduction of new agricultural technology and the lop-sided distribution of extension services seem to increase the poverty of large numbers of rural people, and . . . accelerate the rate at which rural people feel impelled to sell out and leave the rural area in search for employment in the cities.  

Siegfried Schonherr and Erastus Mbugua have written that the gap between progressive farmers and other farmers is too great to permit efficient diffusion. Capabilities in the areas of risk-taking,
management, and systematic marketing analyses, and security are important contributing factors to that gap. Also, Schonherr and Mbugua note that progressive farmers are aware that an agricultural innovation is particularly valuable when it is adopted by only a few. Priority should be given to reaching the average farmers, which may equal sixty to eighty percent of the farmers. Leonard has also critiqued the progressive farmer strategy and agrees that the middle group of farmers may be a more appropriate focus for extension. 168 Again, the extension of innovations alone will not succeed without support services.

The economic argument used to support progressive farmer strategies is based on the concept that extension is a tool for achieving economic growth, not social welfare. Hence, visiting progressive farmers can be rationalized as more will be gained per visit. Since there is a commitment to growth in Kenya, this bias to progressive farmers is understandable, if not justifiable according to arguments against sustaining rural inequality. However, Leonard argues that the bias is rooted in additional, noneconomic grounds. The social causes of unequal distribution are basically that of the "squawk factor" - "... that the progressive farmers are the ones most likely to complain to a senior officer if extension is not provided to them." 169 Thus, the distribution of extension visits represents an inefficient allocation of manpower and technical resources.

To support a realignment of extension resources to peasant farmers, there needs to be the initial commitment to agricultural development at the local level. The progressive farmer skew is consistent with the general pattern of benefit distribution in Kenya. Indeed, as Leonard has observed,
until peasant farmers emerge as a "distinct and noticeable political force," decision-makers will be hesitant to alter the imbalance.¹⁷⁰

At the policy level, greater emphasis on Farmer Training Centres,¹⁷¹ group extension methods,¹⁷² and improved management and agent training programs,¹⁷³ are also requisites for improved extension programs. As well, the emphasis of extension linkages on technical matters, when matched with an accompanying lack of skill in the art of communicating ideas to farmers, has been observed to be counter-productive.¹⁷⁴ Other factors need to be taken into consideration as part of the extension strategy, including cultural prescriptions, traditional practices, and unwillingness to jeopardize existing community goodwill or community vested interests.

Consistent with the ethos of this paper is the recognition that effective extension must be part of a decentralized administrative system in order to deal effectively with local needs and resources. Leonard has argued that "There are too many unique local opportunities that are profitable to exploit and location-specific problems that need urgent solution for rural development to be commanded completely by central agricultural planners."¹⁷⁵ The preferred administrative solution is for the coexistence of local decision centres (district level) with national crop authorities. The local decision centre is responsible for integrating the multitude of government programs and to respond to location-specific problems. The national crop authority is responsible to provide expertise and to negotiate the delivery of required support system services, such as credit, markets, research and incentive-producing prices. In Kenya, where the basic administrative system exists, the continuing challenge
is to grant to the district level the financial authority required to plan and to take initiatives locally.

**Harambee**

The Harambee self-help movement has been a dominant feature of Kenyan rural development, and provides a source of hope for continued effective action at the local level. Harambee projects are characterized by the local identification of needs, mobilization of community resources, and implementation. As such, project features have included: "... small size, narrow service area and limited use of expensive or imported materials, technological means of design concepts."\(^{177}\) In 1972, according to data reported by Mbithi and Barnes, 8,851 projects were undertaken, of which 1,800 were completed and 1,057 abandoned by the end of the year.\(^{178}\) Educational and health and social facility projects were the most common, with agricultural and water-related projects of increasing importance.

As well as their significance as signs of local initiative and leadership, and of social cohesion, Harambee projects are also important for the serious dilemmas they provide for central government planners. In a study of self-help groups in Kisii District, F. Holmquist concluded that such groups can have a preemptive strategy for planning by which they attempt to influence the commitment of operating funds from the government. Holmquist found that:

... local people would build maternity clinics even when government was opposed because the supply of nurses and doctors was insufficient; they would build schools and run them even when government refused to guarantee them teachers.\(^{179}\)

As economic considerations become more important than the political and social aspects of Harambee, the government has attempted to increase
its regulatory power over the self-help movement. Specific areas of concern are the types of projects chosen and the handling of funds and materials. The 1979-1983 Development Plan, for instance, requires that final approval to Harambee projects be given by District Development Committees. The amount of intervention and the way in which it is handled requires considerable sensitivity in order to avoid discouraging local initiative and participation.

There is a significant variance in rates of self-help activity throughout Kenya. In 1968, Nyanza (forty percent) and Central (twenty-one percent) Provinces accounted for sixty-one percent of national projects, amounting to forty-nine percent of the capital value added, yet comprised only thirty-four percent of the Kenyan population and received only twenty percent of national grant money. The imbalance at the district level is even more noticeable. In 1968, in every province except Central, one district was responsible for fifty-percent or more of provincial self-help projects. In Central Province, the districts of Nyeri and Muranga shared closely in the total number of projects.

Based on their studies, Winans and Haugerud concluded that prior levels of development accounted for a quarter or more of the regional variations in project levels. They also concluded that land potential and population density are strongly associated with mobilization for change. There is one significant exception to this second conclusion.

... high levels of commercial activity and visible urban alternatives to a rural way of life work against factors such as good land potential which otherwise favor rural development through self-help. The proximity of a major market for goods and labor apparently acts as a disincentive for rural self-help even though such proximity could potentially complement locally initiated rural development endeavors.
Whether the Harambee movement has been a factor for regional equalization in development is open to question. Winans and Haugerud write that the rise in self-help activity in agriculture and water projects will stimulate development in the poorer potential, less densely settled areas. Also, although government contributions to Harambee projects are limited, more funds are designated for projects in less prosperous areas. Ghai, Godfrey and Lisk, however, observe that the more prosperous areas are in a better position to raise funds for self-help projects and thus to preempt government planning. Given the existing regional disparities, it would seem that the Harambee movement will represent a dynamic local level development resource which has the potential for resolving local problems but only assisting in the resolution of the greater regional inequities.

One aspect of agricultural development that has not been discussed is cooperative organizations. The Kenyan Government supports cooperatives, and it has generally been expected that cooperatives can perform a variety of functions including:

... increasing agricultural productivity, securing agricultural markets, promoting the more equitable distribution of wealth, and enhancing a communal orientation to the productive process among peasants.

Very importantly, cooperatives have been expected to serve the interests of all members equally.

In Kenya, cooperatives have either been on the scale of the countrywide agricultural unions, such as the Kenya Planters Co-operative Union or the Kenya Farmers Association, or of the primary societies for marketing and savings. In either case, the social environment has influenced most cooperatives in that leadership has come from economically stronger members
of the community. As a result, the cooperatives have not been able to serve all members equally. Goran Hyden has written that "... 'possessive individualism' rather than collective or communal welfare seems to be the dominant characteristic of co-operative leadership." As well, when a cooperative committee represents a broad cross-section of interests, there is a strong tendency for committee members to argue on behalf of their immediate constituents at the expense of the union.

Lastly, to the extent that cooperatives are initiated and closely regulated by the Government of Kenya, they may be viewed as a branch of the government. As Hyden has concluded, Kenyan cooperative organizations are perceived by the government as a means for effecting public policies in the agricultural sector - a handmaiden of the state.
NOTES


3. Ibid., 1: 91.


8. Ibid., p. 10.

9. Ibid., p. 6.


13. It may be argued that poverty is futhered by the choice of economic policies. This is considered later.

14. World Bank, Kenya, p. 3.


17 Colin Leys, *Underdevelopment in Kenya* (London: Heinemann, 1975), pp. 60-1. "The transition from colonialism to neo-colonialism was a planned one, aimed at preserving the greater part of the monopolistic colonial economic structure in the interests of large-scale commercial, financial and estate capital by coming to terms with those leaders in the nationalist movement - a majority - who represented the new petty-bourgeois strata which had been formed throughout most of Kenya under colonialism." Ibid., p. 254.


20 World Bank, *Kenya*, p. 3.


22 World Bank, *Kenya*, p. 3.


28 Ibid., p. 1.


30 Ibid., pp. 29-30.

31 Ibid., p. 458.


33 Ibid., pp. 30-32.
The abolition of the graduated personal tax, the imposition of duties on imported capital and intermediate goods, proportionately greater allocations of agricultural credit to cooperatives and small-holders, the general thrust of incomes policies—all these have been in line with the ILO's proposals." Ibid., p. 32. Refer also to Ghai, Godfrey and Lisk, Basic Needs, pp. 150, 155-161.


Ibid., p. 32.


Ghai, Godfrey and Lisk, Basic Needs, p. 151.

Ibid., p. 66.


Ghai, Godfrey and Lisk, Basic Needs, p. 74.


Ibid., pp. 11-13.

Ibid., p. 10.


Ibid., p. 273.


52. Gaile, "Distance and Development," p. 207.


56. Ibid., p. 206.

57. Ibid., p. 206.


61. In 1970, 0.1 percent of landowners shared an average landholding of 714 hectares, 3.9 percent had an average of 11.7 hectares, and 96 percent had an average of 3.8 hectares. Refer to Tony Moody, "Peasant Agriculture, Commercial Production and Employment in Kenya," Africa Development 1, No. 2 (September 1976): 64.

62. van Zwanenberg, Economic History, p. 28.


71 Okoth-Ogendo, "Tenure Reform," p. 163.
73 Swayne, quoted in Ibid., p. 11.
74 Refer to p. 137 of this chapter.
75 Barber, "Land Reform," p. 12.
77 Ibid., p. 28.
78 Refer to Leys, Underdevelopment in Kenya, pp. 70-72 for discussion of the linkage between freehold tenure policies and the provision of foreign aid.
80 Ghai, Godfrey, and Lisk, Basic Needs, p. 3.
81 Ibid., p. 3.
82 Barber, "Land Reform," p. 19.
83 Ibid., p. 23.
86 Ibid., p. 311.
88 Quoted in Ghai, Godfrey and Lisk, Basic Needs, pp. 22-23.
89 Although the author's preference is to use the term "peasant farmer," for the purposes of compatibility with the authors quoted, the term "small farmer" will also be used at this point.
91 Ibid., p. 86.

93 Ibid., p. 187.

94 Ibid., p. 188.

95 Ibid., p. 189.

96 Ibid., p. 189.


98 Ibid., p. 53.


100 Ibid., p. 201.


104 Ibid., p. 319.

105 Ibid., p. 320.


107 Ibid., p. 71.

108 Ibid., p. 72.


111 Ibid., p. 7.


115Ibid., p. 186.

116Ndegwa Report, quoted in Ibid., p. 191.


121Refer to Bienen, Politics, pp. 29-30.

122Ibid., p. 39.


124Alan B. Amey and David K. Leonard, "Public Policy, Class and Inequality in Kenya and Tanzania," Africa Today 26 (October-December 1979): 17. The concept of class used by these authors is non-Marxist and is based on purely economic class analyses.


127 Ibid., pp. 28-31.

128 Ibid., p. 23.


131 Ibid., pp. 3-4.

132 Ibid., p. 4.


135 Wellis, "Administration," p. 11.


137 Ibid., p. 42.


139 Oyugi, "SRDP," p. 43.

140 Mbithi and Barnes, "Conceptual Analysis," p. 18.


143 Mbithi and Barnes, "Conceptual Analysis," p. 18.


146 Ibid., 1: 44.

147 Refer to Ghai, Godfrey and Lisk, Basic Needs, pp. 112-114.
148 Ibid., p. 112.
149 Ibid., p. 115.
150 Ibid., pp. 139-140.
151 Ibid., p. 139.
152 Ibid., p. 140.
153 Ibid., p. 141.
157 Leonard, Peasant Farmer, p. xvi.
158 Ibid., p. xvi.
159 Refer to Ibid., p. xvii.
163 Leonard, Peasant Farmer, pp. 175-177.
164 Ascroft et al., "Does Extension Create Poverty?" pp. 30-33.
166 Ascroft et al., "Does Extension Create Poverty?" p. 32.


168 Leonard, Peasant Farmer, p. 182.

169 Ibid., pp. 188-189.

170 Ibid., p. 194.

171 Ascroft et al., "Does Extension Create Poverty?"

172 Leonard, Peasant Farmer, p. 203.


177 Winans and Haugerud, "Harambee," p. 335.


179 Quoted in Ibid., p. 16.


181 Ibid., p. 344.

182 Ibid., p. 347.

183 Ghai, Godfrey and Lisk, Basic Needs, p. 58.


185 Ibid., p. 306.

186 Ibid., p. 315.
CHAPTER V

MURANGA DISTRICT: A CASE STUDY
OF FARMING IN KENYA

To illustrate the significant changes that have occurred in rural Kenya, and to lay the framework for the statistical study presented in the chapter, an overview of development trends in Muranga District is presented.¹

Muranga District has experienced rapid economic change over the preceding thirty years. According to Taylor, a substantial increase in cash income has occurred and "... the agricultural revolution which has been created is often used as a model for agricultural change in other areas of Africa."² The district is situated in the heart of the Kikuyu Plateau of Central Province, at the edge of Nairobi's extended hinterland, covering an area of 2,476 square kilometres. Gary Gaile has described the district as follows:

Its population of about 500,000 live in a relatively densely settled rural environment with densities averaging 250 people per square kilometre. The district is inhabited primarily by the Kikuyu ethnic group - which group is dominant numerically, economically, and politically in Kenya; and thus the district is well integrated with the socioeconomic mainstream of the nation.³

Gaile also observes that "Much of the most productive land in the district was not in the former scheduled areas ... but in the African reserves."⁴ The administrative and market centre is Muranga/Makuyu, with a population of 12,000; other important centres include Maragua, and Saba Saba.

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The predominant people in Muranga District, the Kikuyu, have traditionally relied on agriculture as their economic mainstay. Prior to the colonization of East Africa, the Kikuyu were successful subsistence farmers, growing chiefly millet, maize, pulse, beans, and such perennials as bananas, sweet potatoes, sugar cane and colocasia. Sheep and goats were also important for meat, clothing and socio-religious purposes. According to Taylor, the traditional food system was "... a very successful one, inasmuch as a considerable population appears to have been supported by it."5

The basic social unit in traditional Kikuyu society was the extended family. Each extended family or sub-clan group had one or more land units (githaka) which varied in size from 700 to 5,000 acres.6 Within these economically self-sufficient groupings each adult male was given a plot of land to cultivate. The Kikuyu were not villagers traditionally, tending to live in dispersed households and trading at periodic markets. Land claims were held on an individual basis, and not communally. According to William Barber, the landless or "ahoi" were given tenancy rights when there was a surplus of land.7

Colonization had a varying impact on Kenya. Geoff Lamb refers to the depredation of the Kikuyu through "... the expropriation of land, the forced proletarization of large numbers of people, and the violent and thorough disruption of economic and social relations..."8 Taylor writes that the Kikuyu lost at least 100,000 acres of land in Southern Kikuyu.9 Within the designated Kikuyu Reserve, a remarkable increase in population occurred reflecting "... the influence of the British administration in improving health conditions,
stopping inter-tribal warfare and importing food in times of famine.\textsuperscript{10}

To provide sufficient food for the rapidly increasing population, the Kikuyu brought almost all of the common land under cultivation by 1930. The fragmentation of land holdings increased, and soil fertility declined.

Soil erosion became an increasingly serious problem as the population density grew because, as the land became scarce, even slopes of 30 degrees and more were utilized without adequate precautions being taken.\textsuperscript{11}

At the same time the Kikuyu were responsive to European farming and economic concepts and engaged increasingly in cash cropping, in particular, wattle.\textsuperscript{12}

According to the European settlers, land fragmentation was a hindrance to African progress:

Fragmented cultivation blunted much of the effort of agricultural extension officers; the absence of enclosed pastures precluded high standards of animal husbandry with grade animals; and the absence of negotiable titles (which could be offered as security against loans) was held to have blocked the availability of credit to African farmers.\textsuperscript{13}

The Emergency of 1952 to 1960 provided the justification for a restructuring of African farming and settlement patterns. The Swynnerton Plan, 1954, provided the framework, with a particular emphasis on consolidating, in terms of land and politics, the Kikuyu area.

The Plan stimulated agricultural development in Kikuyuland. Farm management techniques were improved and land titles were made secure, providing the expertise and stability required for agricultural loans and growth in production. According to Kimani and Taylor, the limitations and restrictions on the growing of cash crops were eased, "... and by the early 1960's coffee, tea, tobacco, pyrethrum, and a variety of other crops were being grown on an expanding basis."\textsuperscript{14}
By 1965 many farmers had come close to the Swynnerton target of subsistence plus $300 per year. A study of Fort Hall District by Taylor revealed that increases of up to 2,000 percent in monetary income were realized. In his study of Murang'a District, J. Tait Davis observed that the amount of gross farm revenue from crops increased from 6.2 million Kenyan shillings in 1960/61, to 39.9 million Kenyan shillings in 1969/70, or from 17.9 K. shillings per capita to 92.5 K. shillings per capita. Although consolidation itself was not panacea, as too few acres were being portioned to too many farmers, it may be seen as a practical alternative at that time to agricultural and social difficulties. When combined with the stimulative effect of the political independence of 1963 and the dynamism of the self-help movement, a strong foundation was laid for economic growth.

It is important to emphasize that the Kikuyu are a very strong tribal grouping that have dominated the political, social and economic life in Kenya:

Already before colonial rule the Kikuyu had been expanding demographically and territorially, and had established themselves as a network of trading communities with complex relations with the Masai to the west and the Kamba to the east.

The Kikuyu were the first to experience prolonged contact with Europeans, the first to experience subjugation and the first to adapt their social structure and their culture to the European system. Besides learning to be wage-labourers, some of the more enterprising Kikuyu also learned to trade with the capitalist sector, in so far as they were allowed to, and their notables quickly learned to turn to commercial advantage the colonial chieftships which they were able to obtain, and laid the foundations of numerous petty-bourgeois family fortunes.
Later, the Kikuyu were able to take advantage of the benefits of the Swynnerton Plan. With Independence came new opportunities:

The new opportunities created by the Kenyatta government were not monopolized by Kikuyu, but they were able to take advantage of them out of proportion to their share in the total population. 21

The Kikuyu have also dominated the Kenya African National Union (KANU) including the presidency under Jomo Kenyatta (1963-78).

It is significant that peasant farmers are thought to have benefited from land consolidation and improved marketing and government services. In terms of marketed production, peasant farmers have indeed responded well, increasing the marketed production of coffee from 750,000 tons in 1955 to 4,607,000 tons in 1960. 22 Quoting a study by Crawford and Thorbecke on income distribution for Kenya, Ghai, Godfrey and Lisk note that Central Province had the best ranking in the areas of the incidence of smallholder poverty and amenity and service indicators, based on 1974/75 figures. 23 The results of the Integrated Rural Survey substantiated that Central Province is a leading agricultural province in terms of value of production and disposable income statistics. Also, the 1977 Economic Survey revealed that Central Province is highly rated in terms of the percentage of households within the specified distance of social amenities, including sources of supply for drinking water, health centres, primary schools, markets, post offices and bus routes. 24

It is important to remember that general studies of Kenyan income distribution have established that unequal income distribution is a serious problem. It seems that the bottom twenty-five percent of the population has six percent of national income, while the top
and in particular, among the Kikuyu, Leys provides the historical context when he writes that:

What is more, the inequality which existed in Kikuyu country had always existed, and in roughly the same form, i.e. there had always been a few "big men" and a larger number of landless dependants (the "ahoi" of traditional Kikuyu society). 29

Although the "ahoi" may have averaged roughly fifty percent of the population in traditional Kikuyu society, it should be noted that "... the traditional culture still operated to give most of the landless some accepted social status and a minimum garden plot with which to support life." 30 Relying on I.L.O. and Government of Kenya data, Leys concludes that a majority of the peasant households in Kikuyu country in the mid-1960's still shared a common poverty. 31

To what extent are economic inequities a part of the peasant sector? The statistical analysis of Muranga District will provide indicators of those inequities.

Statistical Analyses of Farming in Muranga District

During 1971-1972, S. M. Kimani and D.R.F. Taylor were responsible for planning and directing a survey of farmers in Muranga District, Central Province. The main purpose of their project was "... to examine the role of growth centres in rural development." 32 This project was primarily concerned with two basic questions:

What is the role of the growth centre in rural development and how can the efficiency of such centres be improved? 33

The study area was thought to be representative of a densely settled agricultural area. The data collection was extensive, based on interviews with 5,142 farmers.
The following statistical analyses are based on the Kimani-Taylor survey. It is believed that the survey data have a high degree of accuracy, with some allowance for the withholding or altering of information by farmers interviewed, and the possibility of coding and entering errors. Unless otherwise indicated, all income figures are in Kenyan shillings (20 shillings = 1 pound), and represent profits over one year.

Based on the concern of this paper for the need to develop approaches to integrate poor peasant farmers into regional and national development networks, original statistical analyses were done to identify the distribution of cash income within the district, the trend in changes in personal income among farmers, and the reasons for the changes occurring. An arbitrary decision was made to create three income groups: poor (no reported cash income to 1,500 shillings), middle (1,501 to 4,000 shillings), and rich (4,001 shillings and more). Each completed analysis included a breakdown of the information into these three groups. The distribution of crop acreage and livestock according to income group was also analyzed.

In Muranga District in 1971, 5,142 farmers representing 5,142 households consisting of 42,171 people, were interviewed. Using the amount of 1,500 shillings as the transition point from a range of "poor" incomes to "middle" incomes, 82 percent of the population, or 4,184 farmers, were living in poverty (table 8). Middle income farmers (1,501 to 4,000 shillings) accounted for 13 percent of those interviewed, and rich income farmers (4,001 shillings and more) accounted for 5 percent. The reliability of these statistics is
TABLE 8
DISTRIBUTION OF FARMERS INTERVIEWED BY INCOME AND SEX

<table>
<thead>
<tr>
<th></th>
<th>Distribution of farmers</th>
<th>Distribution of farmers as %</th>
<th>Distribution of farmers in each income group by sex</th>
<th>Distribution of farmers within each income group by sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor  Middle  Rich Total</td>
<td>Poor  Middle  Rich Total</td>
<td>Poor  Middle  Rich</td>
<td>Poor  Middle  Rich</td>
</tr>
<tr>
<td>All farmers</td>
<td>4,184 680 277 5,142</td>
<td>82 13 5 100</td>
<td>-</td>
<td>100 100 100</td>
</tr>
<tr>
<td>Male</td>
<td>3,127 535 222 3,884</td>
<td>61 10 4 75</td>
<td>80 14 6</td>
<td>75 79 80</td>
</tr>
<tr>
<td>Female</td>
<td>1,053 145 55 1,253</td>
<td>21 3 1 25</td>
<td>84 12 4</td>
<td>25 21 20</td>
</tr>
<tr>
<td></td>
<td>Distribution of farmers</td>
<td>Distribution of farmers as %</td>
<td>Distribution of farmers in each income group by sex</td>
<td>Distribution of farmers within each income group by sex</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
<td>------------------------------</td>
<td>---------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Middle</td>
<td>Rich</td>
<td>Total</td>
</tr>
<tr>
<td>All farmers</td>
<td>4,184</td>
<td>680</td>
<td>277</td>
<td>5,142</td>
</tr>
<tr>
<td>Male</td>
<td>3,127</td>
<td>535</td>
<td>222</td>
<td>3,884</td>
</tr>
<tr>
<td>Female</td>
<td>1,053</td>
<td>145</td>
<td>55</td>
<td>1,253</td>
</tr>
</tbody>
</table>
supported by the International Labour Office's review which indicated that 61 percent of the population received less than 1,200 shillings per year, and the study by Tony Killick that indicated that less than 20 percent of the population of Kenya received income equal to or greater than the mean per capita income of 871 shillings per year.

Slightly more female heads of households (84 percent) than male (80 percent) were poor, and slightly fewer female heads of households were in the middle and rich income categories (table 8). In each income group, there is a significant number of female heads of households (poor, 25 percent; middle, 21 percent; rich, 20 percent), indicating perhaps that many male heads of households have left their families for urban employment.

The statistical review also indicates that the average number of people per household is approximately 8, with richer farmers tending to have more people per household with an average of close to 10 (table 9).


\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
 & Total number of people & Average number of people \\
\hline
Entire population & 42,171 & 8.2 \\
Poor farmers & 33,078 & 7.9 \\
Middle farmers & 6,421 & 9.4 \\
Rich farmers & 2,672 & 9.6 \\
\hline
\end{tabular}
\caption{Total number of people, and average number of people per household according to income groups}
\end{table}
Richer farmers also tended to have more people working the land per household, with an average of about 4 compared to an average for the entire population of about 3 (table 10).

**TABLE 10**

<table>
<thead>
<tr>
<th></th>
<th>Total number of people</th>
<th>Average number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire population</td>
<td>16,124</td>
<td>3.1</td>
</tr>
<tr>
<td>Poor farmers</td>
<td>12,557</td>
<td>3.0</td>
</tr>
<tr>
<td>Middle farmers</td>
<td>2,369</td>
<td>3.5</td>
</tr>
<tr>
<td>Rich farmers</td>
<td>1,198</td>
<td>4.3</td>
</tr>
</tbody>
</table>

A partial explanation for the greater number of people working the land of the richer farmers is that there is more land to cultivate. Table 11 reveals that while the average number of acres under cultivation per household is 3.5, for richer farmers the average is 9.2. Poor farmers averaged 2.8 acres per household.

**TABLE 11**

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>41,570</td>
<td>3,746</td>
<td>2,560</td>
<td>17,876</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>2.8</td>
<td>5.5</td>
<td>9.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>
In absolute terms, the poorer farmers are predominant numerically and with reference to total acreage statistics.

To determine the sources of income, crop and acreage data were compiled (table 12). These indicate that the dominant crops in terms of acreage are maize-beans, coffee, fruits-vegetables, wattle, and tea. For each major crop the average acreage under cultivation is greater for the richer farmers. Significantly, an average of 98 percent of Muranga farmers grow the basic food and feed crops, maize-beans. The second most common crop is coffee, followed by fruits-vegetables. For each of these two crops, it is definitely more common for a richer farmer than a poorer farmer to cultivate them based on the percentage of farmers growing each crop. Whereas 77 percent of rich farmers and 71 percent of middle income farmers grow coffee, and 69 percent of rich farmers grow fruits-vegetables, approximately 53 percent of poor farmers grow coffee and 59 percent grow fruits-vegetables.

The acreage devoted to cattle grazing is also significant, ranking only behind coffee in terms of total acreage. As with coffee and fruits-vegetables, it is more common for a richer farmer than a poor farmer to be involved in grazing cattle. In general, there does not appear to be a farming activity that is exclusively reserved for either rich or poor farmers. But richer farmers tend to dominate agricultural activity with respect to acreage under cultivation.

The data from table 13 reveal that not only is maize-beans the most dominant crop in terms of the number of farmers who grow it,
TABLE 12
ACREAGE UNDER CULTIVATION BY CROP AND INCOME GROUP;
AVERAGE ACREAGE UNDER CULTIVATION BY CROP PER FARMER;
NUMBER AND PERCENTAGE OF FARMERS PER CROP AND PER INCOME GROUP

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coffee</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>2,011</td>
<td>974</td>
<td>774</td>
<td>3,760</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>0.9</td>
<td>2.0</td>
<td>3.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>2,219</td>
<td>486</td>
<td>214</td>
<td>2,919</td>
</tr>
<tr>
<td>Percentage</td>
<td>53</td>
<td>71</td>
<td>77</td>
<td>57</td>
</tr>
<tr>
<td><strong>Tea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>855</td>
<td>431</td>
<td>271</td>
<td>1,557</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.3</td>
<td>2.1</td>
<td>3.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>657</td>
<td>208</td>
<td>81</td>
<td>946</td>
</tr>
<tr>
<td>Percentage</td>
<td>16</td>
<td>31</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td><strong>Pineapple</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>24</td>
<td>6</td>
<td>2</td>
<td>32</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>0.9</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>28</td>
<td>7</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Percentage</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Maize-beans</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>5,833</td>
<td>1,310</td>
<td>688</td>
<td>7,850</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.4</td>
<td>2.0</td>
<td>2.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>4,121</td>
<td>664</td>
<td>275</td>
<td>5,060</td>
</tr>
<tr>
<td>Percentage</td>
<td>98</td>
<td>98</td>
<td>99</td>
<td>98</td>
</tr>
<tr>
<td><strong>Sisal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>4.5</td>
<td>-</td>
<td>2.0</td>
<td>6.5</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.1</td>
<td>-</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>4.4</td>
<td>-</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Percentage</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Fruits-vegetables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>1,631</td>
<td>413</td>
<td>269</td>
<td>2,313</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>0.7</td>
<td>1.0</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>2,480</td>
<td>405</td>
<td>191</td>
<td>3,076</td>
</tr>
<tr>
<td>Percentage</td>
<td>59</td>
<td>60</td>
<td>69</td>
<td>60</td>
</tr>
<tr>
<td><strong>Cattle grazing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>4,734</td>
<td>2,336</td>
<td>1,632</td>
<td>8,703</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.7</td>
<td>3.7</td>
<td>6.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>2,717</td>
<td>625</td>
<td>258</td>
<td>3,600</td>
</tr>
<tr>
<td>Percentage</td>
<td>65</td>
<td>92</td>
<td>93</td>
<td>70</td>
</tr>
</tbody>
</table>
Table 12 (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wattle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>1,089</td>
<td>583</td>
<td>537</td>
<td>2,210</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.9</td>
<td>3.0</td>
<td>6.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>562</td>
<td>196</td>
<td>85</td>
<td>843</td>
</tr>
<tr>
<td>Percentage</td>
<td>13</td>
<td>29</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td><strong>Other crops</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acreage</td>
<td>103</td>
<td>27</td>
<td>17</td>
<td>147</td>
</tr>
<tr>
<td>Acreage/farmer</td>
<td>1.0</td>
<td>1.1</td>
<td>2.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>103</td>
<td>25</td>
<td>7</td>
<td>135</td>
</tr>
<tr>
<td>Percentage</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

TABLE 13

AVERAGE PERCENTAGE OF LAND UNDER CULTIVATION PER FARMER BY CROP AND INCOME GROUP

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td>33.8%</td>
<td>41.3%</td>
<td>44.2%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Tea</td>
<td>40.7</td>
<td>41.3%</td>
<td>41.5%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Pineapple</td>
<td>24.1</td>
<td>15.3%</td>
<td>8.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Maize-beans</td>
<td>56.1</td>
<td>38.4%</td>
<td>32.4%</td>
<td>52.5%</td>
</tr>
<tr>
<td>Sisal</td>
<td>27.1</td>
<td></td>
<td>7.8%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Fruits-vegetables</td>
<td>25.2</td>
<td>18.4%</td>
<td>17.1%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Wattle</td>
<td>34.2</td>
<td>29.7%</td>
<td>30.0%</td>
<td>32.7%</td>
</tr>
<tr>
<td>Other crops</td>
<td>23.8</td>
<td>18.0%</td>
<td>17.0%</td>
<td>22.3%</td>
</tr>
</tbody>
</table>
but also that more land per crop is designated for maize-beans on average than any other crop grown. It is important to note that the average percentage of land designated for maize-beans is much greater among poor farmers growing that crop (56 percent) than rich farmers (32 percent). Among those farmers growing coffee, it is interesting that poor farmers allocate less land for coffee (34 percent) than do the rich farmers (44 percent). This is in contrast to the primary food crop, maize-beans, as well as with the fruits-vegetables, pineapple, and sisal crops. Only with tea is there a common distribution of land among poor, middle and rich income farmers.

The data for livestock reveal similar patterns (table 14). In each livestock category, the richer farmer has more stock per household and more rich farmers are involved in raising stock. On a per farm basis among the poorer farmers, the average stock per household for cattle, sheep, goats, and pigs is between 2 and 3. For richer farmers, it is between 4 and 6 for cattle, sheep and goats, and up to 11 for pigs. In terms of absolute numbers, chickens are the most dominant stock. Among all three income groups, it is common for farmers to have cattle and/or chickens, and/or sheep.

Table 15 establishes the frequency of income and the specific contributions of crops and livestock. Significantly, approximately 20 percent of the farmers indicated that they had no income (that is, no recorded profit); 32 percent indicated an income of 1 to 500 shillings; 16 percent indicated an income of 501 - 1,000 shillings; and 8 percent claimed an income of 1,001 - 1,500 shillings. Based on the average household size of 7.9 for poor farmers, it would seem that over 25,000
<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cattle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5,688</td>
<td>2,496</td>
<td>1,460</td>
<td>9,664</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>2.3</td>
<td>4.1</td>
<td>5.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>2,503</td>
<td>615</td>
<td>255</td>
<td>3,373</td>
</tr>
<tr>
<td>Percentage</td>
<td>69</td>
<td>90</td>
<td>92</td>
<td>66</td>
</tr>
<tr>
<td><strong>Sheep</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5,225</td>
<td>1,513</td>
<td>750</td>
<td>7,488</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>2.9</td>
<td>4.2</td>
<td>5.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>1,796</td>
<td>361</td>
<td>148</td>
<td>2,305</td>
</tr>
<tr>
<td>Percentage</td>
<td>43</td>
<td>53</td>
<td>53</td>
<td>45</td>
</tr>
<tr>
<td><strong>Goats</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,219</td>
<td>798</td>
<td>528</td>
<td>4,545</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>2.7</td>
<td>4.0</td>
<td>5.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>1,175</td>
<td>201</td>
<td>101</td>
<td>1,477</td>
</tr>
<tr>
<td>Percentage</td>
<td>28</td>
<td>30</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td><strong>Pigs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>228</td>
<td>87</td>
<td>201</td>
<td>516</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>1.8</td>
<td>2.4</td>
<td>10.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>129</td>
<td>37</td>
<td>19</td>
<td>185</td>
</tr>
<tr>
<td>Percentage</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>4</td>
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<tr>
<td><strong>Chickens</strong></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>18,683</td>
<td>6,948</td>
<td>8,197</td>
<td>33,828</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>7.6</td>
<td>14.6</td>
<td>40.2</td>
<td>10.7</td>
</tr>
<tr>
<td>Number of farmers</td>
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<td>476</td>
<td>204</td>
<td>3,155</td>
</tr>
<tr>
<td>Percentage</td>
<td>59</td>
<td>70</td>
<td>74</td>
<td>61</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>22</td>
<td>18</td>
<td>280</td>
</tr>
<tr>
<td>Average/farmer</td>
<td>5.9</td>
<td>2.4</td>
<td>2.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Number of farmers</td>
<td>41</td>
<td>9</td>
<td>8</td>
<td>58</td>
</tr>
<tr>
<td>Percentage</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 15

FREQUENCY OF INCOME LEVELS FOR ALL REPORTED INCOME, CROP INCOME, AND LIVESTOCK INCOME

<table>
<thead>
<tr>
<th>Income</th>
<th>All reported income</th>
<th>Crop income</th>
<th>Livestock income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of farmers</td>
<td>Percentage of farmers</td>
<td>Percentage of farmers</td>
</tr>
<tr>
<td>No income</td>
<td>1,321</td>
<td>25.7</td>
<td>29.9</td>
</tr>
<tr>
<td>1-500</td>
<td>1,637</td>
<td>31.8</td>
<td>32.8</td>
</tr>
<tr>
<td>501-1000</td>
<td>831</td>
<td>16.2</td>
<td>17.0</td>
</tr>
<tr>
<td>1001-1500</td>
<td>396</td>
<td>7.7</td>
<td>6.5</td>
</tr>
<tr>
<td>1501-2000</td>
<td>263</td>
<td>5.1</td>
<td>4.8</td>
</tr>
<tr>
<td>2001-2500</td>
<td>179</td>
<td>3.5</td>
<td>2.3</td>
</tr>
<tr>
<td>2501-3000</td>
<td>105</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>3001-3500</td>
<td>79</td>
<td>1.6</td>
<td>0.6</td>
</tr>
<tr>
<td>3501-4000</td>
<td>54</td>
<td>1.1</td>
<td>1.2</td>
</tr>
<tr>
<td>4001-4500</td>
<td>57</td>
<td>1.1</td>
<td>0.6</td>
</tr>
<tr>
<td>4501-5000</td>
<td>39</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>5001-5500</td>
<td>25</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>5501-6000</td>
<td>27</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>6001-6500</td>
<td>16</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>6501-7000</td>
<td>20</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>7001-7500</td>
<td>11</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>7501-8000</td>
<td>10</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>8001-8500</td>
<td>12</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>8501-9000</td>
<td>8</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>9001-9500</td>
<td>7</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>9501-10000</td>
<td>12</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>10000+</td>
<td>33</td>
<td>0.6</td>
<td>0.2</td>
</tr>
</tbody>
</table>
people are existing at a subsistence level. Moreover, it is evident that, while a large number of farmers do raise livestock, this may be done so largely to meet household food needs, as approximately 69 percent of farmers do not report an income from livestock.

To establish the sources of income, the data for table 16 were compiled. This information reveals that the most profitable crop is coffee, which generates an average of 897 shillings per farmer. On an averaged basis, tea, cattle, wattle and pineapple are the other important cash crops. It is significant to note, however, that the income generated by coffee production is much greater for the richer farmer (4,084 shillings for one year) than for the poorer farmer (409 shillings). If the average income per year for coffee is divided by the average acreage for coffee, this reveals that poor farmers received 454 shillings per acre farmed while rich farmers received 1,134 shillings per acre farmed. This may have significant implications in terms of the quality of the coffee plants and the farming practices used. This relationship between income group and average farmer income per crop is also true for the other cash and food crops and livestock categories.

At the same time, it is interesting to note that, although richer farmers received greater monetary returns per acre of coffee, the poorer farmers are more dependent on coffee as a source of income. According to the data presented in table 16, an average of 77 percent of the income of those poorer farmers growing coffee is based on coffee, while richer farmers growing coffee receive 61 percent of their income from coffee. This relationship is not as significant for tea. For cattle,
<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coffee</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>409</td>
<td>1,719</td>
<td>4,084</td>
<td>897</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>77</td>
<td>71</td>
<td>61</td>
<td>75</td>
</tr>
<tr>
<td><strong>Tea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>366</td>
<td>1,417</td>
<td>3,072</td>
<td>829</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>55</td>
<td>59</td>
<td>49</td>
<td>56</td>
</tr>
<tr>
<td><strong>Pineapple</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>48</td>
<td>478</td>
<td>233</td>
<td>142</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>12</td>
<td>24</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td><strong>Maize-beans</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>13</td>
<td>78</td>
<td>297</td>
<td>37</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Fruit-vegetable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>19</td>
<td>109</td>
<td>401</td>
<td>54</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Wattle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>83</td>
<td>254</td>
<td>677</td>
<td>182</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>14</td>
<td>11</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td><strong>Other crops</strong></td>
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<td></td>
</tr>
<tr>
<td>Average income</td>
<td>64</td>
<td>202</td>
<td>564</td>
<td>116</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td><strong>Cattle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>79</td>
<td>513</td>
<td>1,874</td>
<td>294</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>12</td>
<td>21</td>
<td>25</td>
<td>14</td>
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<tr>
<td><strong>Sheep</strong></td>
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<td></td>
<td></td>
<td></td>
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<td>Average income</td>
<td>8</td>
<td>21</td>
<td>79</td>
<td>14</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Goats</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>7</td>
<td>22</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Pigs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>71</td>
<td>211</td>
<td>617</td>
<td>158</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td><strong>Chickens</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average income</td>
<td>7</td>
<td>50</td>
<td>520</td>
<td>47</td>
</tr>
<tr>
<td>Percentage of income</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

*Sisal statistics of no significance.*
the relationship is inverse with richer farmers benefiting more from cattle income than poorer farmers.

From table 17 it is possible to observe the income level frequencies for coffee; 85.5 percent of the farmers make less than 1,500 shillings per year from coffee. Given the dominance of coffee as a cash crop among poorer farmers, it is understandable that this percentage is comparable to the general average of 82 percent of farmers relying on an annual income of less than 1,500 shillings. Nine percent of the coffee farmers indicated that they did not have a coffee income, which is slightly less than the general average of 26 percent of the farmers with no income. The percentage of farmers with a coffee income at 1,501 to 4,000 shillings was 9 percent, and the percentage of farmers with coffee income of more than 4,000 shillings, was 6.5 percent. The general average for all farmers for these income ranges was 13 percent and 5 percent, respectively.

Table 18 represents comparable data to table 17 for tea. Again a significant number of farmers, amounting to 70 percent, made less than 1,500 shillings. This statistic is not as significant as the comparable statistic for coffee, given the secondary importance of tea as a cash crop. It does indicate, however, that a greater percentage
<table>
<thead>
<tr>
<th>Income Level</th>
<th>Distribution of Growers</th>
<th>Distribution of Growers as %</th>
<th>Breakdown of Each Income Level by Income Group</th>
<th>Breakdown of Income Levels Within Income Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Middle</td>
<td>Rich</td>
<td>Total</td>
</tr>
<tr>
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<td>267</td>
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<td>1-500</td>
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<td>32</td>
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<td>1,341</td>
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<td>79</td>
<td>8</td>
<td>656</td>
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<tr>
<td>1,001-1,500</td>
<td>82</td>
<td>113</td>
<td>13</td>
<td>208</td>
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<td>164</td>
<td>21</td>
<td>185</td>
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<td>27</td>
<td>6</td>
<td>33</td>
</tr>
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<td>60</td>
<td>32</td>
<td>92</td>
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<td>7</td>
</tr>
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<td>49</td>
<td>54</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
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<td>23</td>
<td>23</td>
</tr>
<tr>
<td>5,001-6,000</td>
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<td>0</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>6,001-7,000</td>
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<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>7,001-8,000</td>
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<td>0</td>
<td>11</td>
<td>11</td>
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<tr>
<td>8,001-9,000</td>
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<td>7</td>
</tr>
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<td>9,001-10,000</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>2,219</td>
<td>486</td>
<td>214</td>
<td>2,919</td>
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<tr>
<td></td>
<td>Distribution of growers</td>
<td>Distribution of growers as %</td>
<td>Breakdown of each income level by income group</td>
<td>Breakdown of income levels within income group</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------</td>
<td>-----------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>Middle</td>
<td>Rich</td>
<td>Total</td>
</tr>
<tr>
<td>No income</td>
<td>191</td>
<td>9</td>
<td>4</td>
<td>204</td>
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<td>1-500</td>
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<td>4</td>
<td>291</td>
</tr>
<tr>
<td>501-1000</td>
<td>166</td>
<td>47</td>
<td>11</td>
<td>224</td>
</tr>
<tr>
<td>1001-1500</td>
<td>30</td>
<td>58</td>
<td>6</td>
<td>94</td>
</tr>
<tr>
<td>1501-2000</td>
<td>0</td>
<td>40</td>
<td>7</td>
<td>47</td>
</tr>
<tr>
<td>2001-2500</td>
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<td>28</td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>2501-3000</td>
<td>0</td>
<td>5</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
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<td>3</td>
</tr>
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<td>3501-4000</td>
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<td>4</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>4001-4500</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4501-5000</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5001-6000</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6001-7000</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>7001-8000</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8001-9000</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>9001-10000</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>657</td>
<td>208</td>
<td>81</td>
<td>946</td>
</tr>
</tbody>
</table>
of poorer farmers receive a more limited crop income when compared to
the richer farmers. Approximately 12 percent of the farmers had
incomes of more than 1,500 shillings.

To understand some of the local dynamics in income distribution,
the farmers' comments on reasons for change in their cash incomes
over the past few years were compiled (table 19). There is a signifi-
cant division of opinion on whether cash incomes had increased or
declined. Forty-seven percent said income had improved; 32 percent
said it had declined. Within the income groups it is among the poorer
farmers that the greatest number of farmers, equalling 37 percent of
poor farmers, agreed that their incomes had declined. Indeed, while
the total number of farmers that stated farm incomes had declined
was equal to 32 percent of total farmers interviewed, 94 percent of
this group, or 30 percent of the total farmers interviewed, were from
the poor income category. Within the middle and rich income groups,
the consensus is much clearer that income had generally increased. It
is important to note, however, that more poor farmers thought that
their incomes had increased than had decreased.

The primary reasons given for improvement in cash incomes
(table 20) are better agricultural and veterinary services (46 percent)
and new or better cash crops available (33 percent). For all three
income groups, the percentage of farmers that identified better
services and new or better cash crops is comparable: 47 (poor),
42 (middle), and 50 (rich) for services; 32 (poor), 35 (middle) and
32 (rich) for crops. The secondary reasons given for improvement in
cash incomes (table 21) also give priority to better services and new
<table>
<thead>
<tr>
<th></th>
<th>Distribution of change</th>
<th>Distribution of change as %</th>
<th>Breakdown of each change category by income group</th>
<th>Breakdown of change categories within income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich</td>
<td>Poor Middle Rich</td>
</tr>
<tr>
<td>Improved</td>
<td>1,633 537 234 2,404</td>
<td>32 11 5 47</td>
<td>68 22 10</td>
<td>39 79 83</td>
</tr>
<tr>
<td>Declined</td>
<td>1,523 99 30 1,652</td>
<td>30 2 1 32</td>
<td>92 0 2</td>
<td>37 15 11</td>
</tr>
<tr>
<td>About the same</td>
<td>862 40 11 913</td>
<td>17 1 1 18</td>
<td>94 4 1</td>
<td>21 6 4</td>
</tr>
<tr>
<td>Don't know</td>
<td>159 4 2 165</td>
<td>3 1 1 3</td>
<td>96 2 1</td>
<td>4 1 1</td>
</tr>
</tbody>
</table>
**TABLE 20**

**PRIMARY REASONS GIVEN FOR IMPROVEMENT IN CASH INCOMES**

<table>
<thead>
<tr>
<th></th>
<th>Distribution of reasons</th>
<th>Distribution of reasons as %</th>
<th>Breakdown of each reason category by income group</th>
<th>Breakdown of reason categories by income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Middle</td>
<td>Rich</td>
<td>Total</td>
</tr>
<tr>
<td>Better agricultural &amp; veterinary services</td>
<td>778</td>
<td>227</td>
<td>116</td>
<td>1,112</td>
</tr>
<tr>
<td>New or better cash crops available</td>
<td>527</td>
<td>191</td>
<td>75</td>
<td>793</td>
</tr>
<tr>
<td>Transportation improved</td>
<td>20</td>
<td>19</td>
<td>4</td>
<td>43</td>
</tr>
<tr>
<td>Marketing systems improved</td>
<td>31</td>
<td>9</td>
<td>7</td>
<td>47</td>
</tr>
<tr>
<td>Loans available</td>
<td>12</td>
<td>9</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>Better weather conditions</td>
<td>108</td>
<td>42</td>
<td>19</td>
<td>169</td>
</tr>
<tr>
<td>Better soil conditions</td>
<td>140</td>
<td>39</td>
<td>4</td>
<td>183</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>3</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>
### Table 21

**Secondary Reasons Given for Improvement in Cash Incomes**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Distribution of reasons</th>
<th>Distribution of reasons as %</th>
<th>Breakdown of each reason category by income group</th>
<th>Breakdown of reason categories by income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich Poor Middle Rich</td>
<td>Poor Middle Rich Poor Middle Rich</td>
</tr>
<tr>
<td>Better agricultural &amp; veterinary services</td>
<td>287 120 51 458</td>
<td>13 6 2 21</td>
<td>63 26 11 20 23 23</td>
<td></td>
</tr>
<tr>
<td>New or better cash crops available</td>
<td>472 158 80 710</td>
<td>22 7 4 33</td>
<td>67 22 11 33 31 36</td>
<td></td>
</tr>
<tr>
<td>Transportation improved</td>
<td>59 32 11 102</td>
<td>3 2 0.5 5.5</td>
<td>58 31 11 4 6 5</td>
<td></td>
</tr>
<tr>
<td>Marketing systems improved</td>
<td>59 19 12 90</td>
<td>3 1 1 5</td>
<td>66 21 13 4 4 5</td>
<td></td>
</tr>
<tr>
<td>Loans available</td>
<td>35 17 14 66</td>
<td>2 1 1 4</td>
<td>53 26 21 2 3 6</td>
<td></td>
</tr>
<tr>
<td>Better weather conditions</td>
<td>191 54 20 265</td>
<td>9 3 1 13</td>
<td>72 20 8 13 10 9</td>
<td></td>
</tr>
<tr>
<td>Better soil conditions</td>
<td>268 100 29 397</td>
<td>12 5 1 18</td>
<td>68 25 7 19 19 13</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>69 18 6 93</td>
<td>3 1 0.5 4.5</td>
<td>73 20 7 5 4 3</td>
<td></td>
</tr>
</tbody>
</table>
or better cash crops. Important secondary reasons include better soil and climatic conditions. As with the primary reasons, the breakdown of the reason categories reveals a comparable weighting given by the income groups.

Table 22 contains data relevant for understanding what factors were attributed for declines in cash incomes. The distribution is quite even among the reasons given. In order of numerical weighting, farm size too small to be viable (18 percent), poor soil conditions (17 percent), and inadequate agricultural and veterinary services (16 percent) ranked one, two and three. The only weakly represented category was poor transportation with one percent. As might be expected, a much greater percentage of poor farmers attributed greater importance to the problem of farm size (20 percent of poorer farmers as compared to 3 percent of middle income farmers and zero percent of richer farmers). Poor farmers also gave more emphasis to poor soil conditions and availability of cash crops than did their richer counterparts. The inadequacy of services was more evenly represented. Richer farmers, on the other hand, gave greater emphasis to the weaknesses of the marketing system (52 percent) than did the poor and middle income farmers (11 and 24 percent, respectively).

The secondary reasons given for decline in cash income (table 23) were, in order of numerical weighting: poor soil conditions, farms too small to be viable, and no loans available. Poor farmers consistently gave more emphasis to the problems of soil conditions and farm size, and richer farmers gave more emphasis to loan availability.

Given the important role of cooperatives in rural development,
<table>
<thead>
<tr>
<th></th>
<th>Distribution of reasons</th>
<th>Distribution of reasons as %</th>
<th>Breakdown of each reason category by income group</th>
<th>Breakdown of reason categories by income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich</td>
<td>Poor Middle Rich</td>
</tr>
<tr>
<td>Inadequate agricultural &amp; veterinary services</td>
<td>242 13 6 261</td>
<td>15 1 0 16</td>
<td>93 5 2</td>
<td>16 13 21</td>
</tr>
<tr>
<td>Cash crops not available</td>
<td>187 3 2 192</td>
<td>11 0 0 11</td>
<td>97 2 1</td>
<td>12 3 7</td>
</tr>
<tr>
<td>Poor transportation</td>
<td>9 4 0 13</td>
<td>1 0 0 1</td>
<td>69 31 0</td>
<td>1 4 0</td>
</tr>
<tr>
<td>Poor marketing system</td>
<td>165 23 15 203</td>
<td>10 1 1 12</td>
<td>51 11 7</td>
<td>11 24 52</td>
</tr>
<tr>
<td>No loans available</td>
<td>143 24 3 170</td>
<td>9 2 0 11</td>
<td>84 14 2</td>
<td>9 25 10</td>
</tr>
<tr>
<td>Poor weather conditions</td>
<td>127 12 1 140</td>
<td>8 1 0 9</td>
<td>91 9 1</td>
<td>8 12 4</td>
</tr>
<tr>
<td>Poor soil conditions</td>
<td>266 10 0 276</td>
<td>16 1 0 17</td>
<td>96 4 0</td>
<td>18 10 0</td>
</tr>
<tr>
<td>Farm too small to be viable</td>
<td>294 3 0 297</td>
<td>18 0 0 18</td>
<td>99 1 0</td>
<td>20 3 0</td>
</tr>
<tr>
<td>Other</td>
<td>91 5 2 98</td>
<td>6 0 0 6</td>
<td>93 5 2</td>
<td>6 5 7</td>
</tr>
</tbody>
</table>
### Table 23

Secondary reasons given for decline in cash incomes

<table>
<thead>
<tr>
<th></th>
<th>Distribution of reasons</th>
<th>Distribution of reasons as %</th>
<th>Breakdown of each reason category by income group</th>
<th>Breakdown of reason categories by income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich Total</td>
<td>Poor Middle Rich</td>
<td>Poor Middle Rich</td>
</tr>
<tr>
<td>Inadequate agricultural &amp; veterinary services</td>
<td>129 12 3 144</td>
<td>9 1 0 10</td>
<td>90 8 2</td>
<td>10 17 13</td>
</tr>
<tr>
<td>Cash crops not available</td>
<td>150 4 0 154</td>
<td>11 0 0 11</td>
<td>97 3 0</td>
<td>12 6 0</td>
</tr>
<tr>
<td>Poor transportation</td>
<td>29 5 3 37</td>
<td>2 0.5 0 2.5</td>
<td>76 14 8</td>
<td>2 7 13</td>
</tr>
<tr>
<td>Poor marketing system</td>
<td>95 11 2 108</td>
<td>7 1 0 8</td>
<td>60 10 2</td>
<td>6 15 8</td>
</tr>
<tr>
<td>No loans available</td>
<td>197 16 9 222</td>
<td>14 1 1 16</td>
<td>89 7 4</td>
<td>16 22 38</td>
</tr>
<tr>
<td>Poor weather conditions</td>
<td>91 11 2 104</td>
<td>7 1 0 6</td>
<td>60 11 2</td>
<td>7 15 8</td>
</tr>
<tr>
<td>Poor soil conditions</td>
<td>262 5 1 268</td>
<td>19 0.5 0 19.5</td>
<td>96 2 0.5</td>
<td>21 7 4</td>
</tr>
<tr>
<td>Farm too small to be viable</td>
<td>234 2 1 237</td>
<td>17 0 0 17</td>
<td>99 1 0.5</td>
<td>18 3 4</td>
</tr>
<tr>
<td>Other</td>
<td>84 6 3 93</td>
<td>6 0.5 0 6.5</td>
<td>90 7 3</td>
<td>7 8 13</td>
</tr>
</tbody>
</table>
data were tabulated regarding cooperative membership and income group (table 24). Three thousand, seven hundred and thirty-four farmers,

<table>
<thead>
<tr>
<th>Number of memberships</th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,813</td>
<td>662</td>
<td>269</td>
<td>3,734</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of total farmers</th>
<th>64.6%</th>
<th>14.7%</th>
<th>9.7%</th>
<th>79.7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>% by income group</td>
<td>74.3%</td>
<td>17.5%</td>
<td>7.2%</td>
<td>100%</td>
</tr>
<tr>
<td>% within income group</td>
<td>67.3%</td>
<td>96.0%</td>
<td>97.1%</td>
<td></td>
</tr>
</tbody>
</table>

or 73 percent of those interviewed, were members of cooperatives.

Ninety-seven percent of richer farmers were members, compared to 67 percent of poorer farmers. The absolute number of poor farmers is much greater (75 percent of members) due to their numerical predominance.

It is important to note that membership in coffee cooperatives is mandatory for all coffee growers.

This statistical review of farming in Muranga District has revealed the following information about an area which has been a leader in agricultural growth in Kenya:

1. Poor farmers are predominant. Eighty-two percent of Muranga farmers earn less than 1,500 shillings per year from farming.

2. Farmers with incomes of more than 1,501 shillings, and especially those with incomes of more than 4,001 shillings, have larger households than poor farmers, and also have more land and more people working the land.

3. Coffee, the dominant cash crop, is grown by more rich farmers than poor, and on larger acreage by rich farmers than by poor.
4. Richer farmers benefit significantly more from their coffee crops than do poor farmers, but poor farmers are more dependent on coffee as a source of household income. Nine percent of coffee growers received no income.

5. Almost all farmers grow maize-beans, but poor farmers allocate more of their total land to maize-bean cultivation than do richer farmers, reflecting the disparity in total farm sizes.

6. More rich farmers than poor raise livestock, and rich farmers have more livestock per household than do poor farmers.

7. There is not an exclusive crop grown or livestock raised per income group.

8. The distribution of income among coffee and tea farmers closely parallels the general distribution of income.

9. More farmers experienced improved cash income over the past few years than experienced declines or no change.

10. Poor farmers represented a significant proportion of those who did not have an improved income or who did not know if their income had changed.

11. The key to successful changes in income would appear to have been through providing better agricultural and veterinary services and through introducing new or better cash crops, regardless of income group.

12. For poor farmers, the keys to overcoming declining income would appear to be through increasing farm sizes, improving quality of the soil, improving the quality of agricultural and veterinary services, and making cash crops available.

13. Most farmers are members of cooperatives, but predominantly the richer farmers.

14. A significant number of farming households are represented by women.

It is significant that in an area that has benefited from government investments in agricultural development that such a large proportion of the people (82 percent) receive a proportionately minimal percentage of total farming income. It is also revealing that in a district that has benefited from land consolidation, so many farmers have marginal sized land plots.
All farmers interviewed seem to have taken advantage of the introduction of coffee as a cash crop. A relatively small number of farmers, however, would appear to have consistently taken the greatest advantage possible of the innovation. Yet it is the poorer farmers who are more dependent on coffee as their source of income.

It is noteworthy that the greater percentage of farmers felt that their cash incomes had improved over the past few years. It is also noteworthy that of those farmers experiencing a decline in income, the greater percentage were from the poor income category.

Extension services would appear to be the key to stimulating agricultural development in the district. The analysis indicates that more remains to be done to reach the many farmers seemingly still outside the extension network. Serious consideration needs to be given to those poor farmers who claim that small farm size and poor soil quality are important factors restricting their incomes. Given the large numbers of farmers involved in cooperatives, these also appear to have a function in local agricultural development and should be given continued consideration. The significant number of female farmers cautions against traditional extension methods focussing on male farmers.

In chapter two, the responsiveness of peasant farmers to change was established. In chapter three, the case for area specificity in planning was argued. In particular, emphasis was placed on development centres and the need for local input in planning. A review of rural development in Kenya established that inequities are known to exist and that government commitments have been made to resolve these and to
meet the basic needs that exist. The statistical analyses of this chapter confirm the degree to which such inequities exist within a particular district.
NOTES


4Ibid., p. 207.


6Ibid., p. 117.


10Ibid., p. 119.

11Ibid., p. 119.


21. Ibid., p. 201. The details of this domination are given in Ibid., pp. 201-03.


26. From Ibid., p. 23.

27. Ibid., p. 41.


29. Leys, Underdevelopment, pp. 188-89.

30. Ibid., p. 189.

31. Ibid., p. 188.


33. Ibid., p. 4.
CHAPTER VI

CONCLUSION

The meeting of human needs and the fulfilling of human desires are priorities that should not be compromised. It is with this spirit of dedication to people that peasant farming has been studied and the reality of the poverty of peasants within an administrative district documented.

This thesis has presented arguments in support of focussing national development efforts around the rural sector and, in particular, in favour of the needs and potential of peasant farmers. Peasant farmers have been referred to as a neglected majority. Their economic rationality and responsiveness to innovation under the right conditions have been articulated. The productivity of small landholdings has also been explored and presented in their favour. The strength of the local community has been established, providing a potential challenge to the diffusion of innovations, but a strength for social development under stressful conditions.

A regional approach to planning, with emphasis on the informal sector and the small scale environment, has been considered as essential to meeting local level needs. Specific concern has been expressed that spatial systems should be built upon traditional spatial patterns and should directly involve local people. Based on these propositions, the concept of development centres has been considered and found to provide the crucial link between local and
national level development priorities. Development centres also provide the spatial framework for local participation in development and the foundation for self-sustaining locally appropriate development efforts, as well as providing a local level service function.

The existence of extreme rural peripheries was recognized, and policies of selective spatial closure were examined and found to have potential given certain conditions. In general, the thrust of this paper has been for a reformist approach to development, with an emphasis upon the alteration of spatial and administrative systems rather than their abandonment.

The review of Kenyan efforts at development, and in particular rural development, revealed in part a nation struggling with the vestiges of the colonial period. The poverty and the unequal distribution of resources, and the dendritic pattern of spatial development, were but a few of the serious consequences with which the independent government has had to deal. It was also revealed that the government has chosen to emphasize growth over social welfare, developing the modern formal sector at the expense of the traditional informal sector.

A commitment to political and administrative centralism has had serious effects on the development of local level potential for development. The rural development planning and extension systems were reviewed and general recommendations made in favour of more decentralized systems designed to reach peasant farmers and based on local level participation as key components. The Harambee movement was seen to offer a ray of hope for effective local participation. It was also
noted that Kenyan spatial policies have been based on a hierarchy of
growth centres, resulting in the concentration of development in
urban centres. Moreover, conflict between the centre and the periphery,
reflected in political, administrative and economic decisions and
structures, continues to distort national economic realities in favour
of those with power and positions to protect.

The government's willingness to implement reform measures has
been tested and found suspect. The review of the Special Rural
Development Programme revealed problems of commitment and organiza-
tion capability. The consequences of recent commitments to meeting
basic needs on a national scale will provide further evidence for
consideration.

A case study of farming in Muranga District was presented.
Muranga is a district that is well integrated into the Kenyan socio-
economic mainstream, having benefited from agricultural reforms both
during the colonial period and during the post-independence years.
The statistical analyses documented that poor farmers were predominant,
with eighty-two percent of farmers earning profits of less than
1,500 Kenyan shillings over one year. Significantly, twenty-six
percent of the farmers in the district reported no recorded profit,
and thirty-two percent reported profits of one to five hundred
shillings over one year. As might be expected, it is the poorer farmers
who operate the smallest plots of land and must designate the greatest
percentage of crop land for subsistence crops. Also, the category of
poorer farmers was earning significantly less profits than were the
richer farmers per acre of the most profitable cash crop, coffee. It
was also noted that for most farmers, rich and poor, the key to successful changes in income would be through providing better agricultural and veterinary services and through introducing new or better cash crops. Improvements in coffee growing methods among poor farmers would seem to be a crucial element given their dependence on coffee as a source of income. Poor farmers are also more likely to benefit from increasing farm sizes, and improving soil quality.

The documented reality of Muranga District is poverty in an area known for its economic strength. It is to identify clearly such significant discrepancies and to permit their resolution that area specific planning, based on participation from local people, is required. This paper has dealt primarily with local level particulars that are economic and social in nature. Consideration must also be given to ecological uniquenesses.

As well, the many aspects of planning for rural development must be integrated into a recognizable process. Mbithi and Barnes have identified the key components as being:

1. Greater local level data generation;
2. Local level participation in planning and implementation;
3. Training for local involvement;
4. More efficient dissemination of information;
5. Increased coordination of activities; and
6. More attention to the question of equity.

The combination of these elements should facilitate effective planning and evaluation for the benefit of the area involved, as local perceptions, felt needs and resource constraints become critical elements for consideration and action. A crucial factor will be the training for local involvement of the people and of those administrators and extension agents involved. The people will need to be challenged to
take initiatives and trained to understand the interrelationships involved in development. Government staff will need to be taught to listen to local representations and to take an active role in facilitating decision-making processes at the local level. Generally, the central government role would be to support local level initiatives with the resources required, as well as undertake national level projects, ensure interregional equity, and seek to establish and maintain the national economic balance. Thus such movements as the Harambee self-help movement would be encouraged, but the national guidelines in terms of approval systems and accountability procedures would also be communicated and regulated.

To design a specific strategy to attack the documented inequities in Muranga in order to test the central arguments of this paper would be a challenge beyond the capabilities of this paper. Some specific recommendations have been made by Kimani and Taylor regarding the function and location of growth centres, and Thomson has concluded that market centres are the appropriate level for the diffusion of innovations and the gathering of local information. There is potential for further work in the area of exploring the possibilities for designing the components and implementing a decentralized agricultural strategy and of monitoring and evaluating its impact over time. In this way, it would be possible to answer the question of how low-income Kikuyu in Muranga would respond to extension methods aimed specifically at their needs and to planning approaches relying on their specific input. It would also provide the opportunity to study in detail the strengths and weaknesses of the central concepts
introduced in this thesis. For example, what is the long-term potential for the Harambee movement among Kikuyu? How responsive are they to group extension methods? Such involved long-term studies require not only academic and bureaucratic guidance and cooperation, but also political cooperation.

The prospects for the Government of Kenya deciding to relinquish power to the regional level and to encourage development at the local level are mixed. Specific measures, such as the Integrated Agricultural Development Programme and the commitment to basic needs given in the 1979-1983 Development Plan, appear to give credibility to the government's expressed concern for the poor.

On the other hand, the state has effectively eliminated local level political representation, replacing it with a centralized administrative system. Given the economic domination by the élite, and the minimal political consciousness vis-à-vis the centre among the mass of people, the prospect for a strongly unified peasant political movement is unlikely at this time or in the near future. The population growth rate (3.9 percent per year, compared to African average of 2.6 percent, and world average of 1.9 percent), which continues to place pressures on the land, and the increasing numbers of unemployed educated people are factors contributing to a potential for conflict. The strength and relative cohesion of the ruling class over the last decade, during which extra-democratic means were used to remove all forms of opposition, indicates that centralized authority will continue to dominate Kenyan political, social and economic development in the early 1980's.
The change in Kenyan leadership, following the death of Kenyatta in 1978, to Daniel Arap Moi, may augur well for reform in favour of the poor. Moi has shown a willingness to initiate educational reform and to place strict conditions on land plot allocation. However, although Moi may be creating a political basis for appealing to all Kenyans, his power base will remain within the political and economic system that has operated to restrict the overall improvement of life for most Kenyans.

Decentralizing power and encouraging local level participation will not overcome all rural development problems. Power can corrupt at any level, and left unchecked, local elites can have a devastating impact on local development prospects. Decentralizing power must be balanced by national government involvement ensuring that poor, lagging regions are not left strictly to their own resources. And development from below efforts can be coopted by centralist forces. However, the disparities in Muranga District point to the need for alternate solutions. The poor of this world cannot wait forever for the opportunity to exercise their abilities for self-development.
NOTES


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Public Documents


Unpublished Materials


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