

**THE IMPACT OF RURAL-URBAN MIGRATION ON
RURAL FARM PRODUCTION CAPACITY- THE
CASE OF NYERI DISTRICT.**

BY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER
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This Thesis is my own original work and has not been presented for a degree in any other university.

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Dedicated to:

My children, Macharia, Ngatia and Wandia who in the most delicate years of their lives had to do without their mother all too often and to Karanja Macharia, for love and encouragement.

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ABSTRACT

The study aimed at an assessment of the effects of the rural male out-migration on the rural family's farm production level.

The problem of rural male out-migration is traced back to the pre-colonial, colonial and neo-colonial era in Kenya and is seen as a creation of the process of the development of a capitalist economy.

The research instrument was a standardized interview schedule made up of both closed and open-ended questions. It was interviewer-administered to 132 randomly sampled female 'heads' of households. In the absence of an existing sampling frame, a 'census' was first carried out. A target population of 1056 households was compiled.

The assumptions on which the study was based were:- That remittances by the migrant male head of the household would lead to a declined farm production capacity; secondly, that the control in and of the rural resources by the wife of the migrant would lead to an improved farm production level and thirdly, that the changes in the division of labour would influence negatively the family's farm production capacity. These were tested using percentages, contingency tables and Pearson coefficients.

Only the second of the assumptions proved true. Women who take over managerial farm functions were found to do it efficiently leading to a rise in the farm production level. It was largely indicated that farm production may achieve greater enhancement where and when the female 'head' is left to control the rural income and other resources. Clearly, the farm production capacity had risen in both expansion and output, where the female 'head' budgeted and operated

her own bank account, had secured an off farm job, had procured a loan or some sort of credit facilities and/or was in charge of cooperative affairs (financial and non-financial) with the exception in some instances of cash crop farming. It was found that direct access to and control of income and other rural resources by women particularly in the absence of the male heads of households is of paramount importance for the development of a sustainable farm production capacity and family socio-economic status.

Whereas a slight improvement in the level of farm production was indicated where remittances were available, any negative effect on the household's farm production capacity was disproved. Despite the fact that they were receiving regular remittances from the urban-based head of household, the households still saw the need to carry on and step up their level of farm production.

Changes in the division of labour did not negatively affect the household's level of farm production either, contrary to one of the study's hypothesis. Not many households were able to revamp their sources of labour through hired labour or the contribution of hosted dependents for obvious reasons. Whether they get overburdened or violate sex-role taboos, the women are able to sustain and even improve the level of farm production despite the loss of their husband's labour.

The stage for this study is set in the historical materialist approach through two of its concepts, namely the modes of production and the reproduction of labour. They have been here employed to highlight the level of intensification and distribution of labour by the females in the absence of their male counterparts, thus ensuring the sustainability of their households.

Through the dependency and underdevelopment theories therefore, it is found that the rural communities in Kenya serve to subsidize the development of capitalism at their own expense in that the typical migratory worker in Kenya

spends most of his lifetime in capitalist employment whereby he sustains himself through the bachelor wage that he is paid. During this time, his wife and non-working children are sustained on the basis of the small plot of land that he left back at the rural end. This implies that capitalism need not develop on the ruins of the pre-capitalist modes of production. As is found in this study, the latter's existence can in fact prove 'functional' to the extractive needs of the peasant production and reproduction of labour and thus 'cheapening' the cost of wage-labour in peripheral capitalist economies.

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CHAPTER ONE

INTRODUCTION

Problem Statement

Migration is not a new phenomenon in Africa. Population movements in Africa have always existed in the form of conquests, slow peaceful shifts in search of greener pastures, better soils, and better hunting grounds. It also took the form of massive fleeing of people from their tribal homes to evade captivity by slave traders. The shipping of slaves from the continent to Europe is yet another example of these movements (Gugler 1965, Hance 1970, Monsted & Walji 1978, Huntington 1974).

In most parts of contemporary Africa, migration of people towards cash employment is a familiar phenomenon over the world where western industrialized nations have come in contact with the more tradition-bound people through the integration of Africans to a European-dominated world economy based on the capitalist mode of production. The problem of rural out-migration therefore continues to plague Africa's development process.

Basing the argument on some recent U.N. information, Rhoda (1980) predicts that labour migration from the rural areas will account for a loss of somewhat more than 25% of the rural population in Latin America and nearly 40% in Africa and other developing countries of Asia during the next decade.

At the dawn of independence in Kenya, 480,700 or 25% of the adult population were engaged in paid employment, 45% in Agriculture and forestry, 29% in private industry and commerce, and 26% in public service. About one third i.e. 157,000 were in the 14 largest towns (Soja 1968). Urban centres were already prominent having been developed solely through external influence

either as commercial, administrative or mining centres for European colonialists. In contrast to the prevailing level of productive forces, they maintained high standards and their development was unrelated to the surrounding rural areas as they were largely involved in the international import-export trade systems though ironically it was in goods produced by or grown on African soil that they traded.

As areas of apparent difference they continued even after independence to attract many rural dwellers despite an evident lack of opportunities in the urban areas (Khasiani 1968). Nairobi, an employment centre to all other regional groups, attracted and continued to attract sizeable numbers of long distance migrants. It grew about nine times in less than 50 years from 108,900 in 1944 to 970,000 in 1987 in terms of population.

The problem of rural-urban migration according to various scholars such as Byerlee et al (1976), Lipton (1980) and Mitchell (1969) amongst others can be distinguished at three levels; the rate, the concentration and the composition. The rate, it is argued may be too high for economic and social reasons due to the fact that ".....differences in birth-rates and death-rates between various parts of the surface are often rather small in comparison with differences in migration rates" (Michro-Approach-3 1974:7)

The composition is of importance in the problem of rural-urban migration in the sense that migration tends to be selective of material that would otherwise initiate social change and economic development in the rural areas. Migration literature has it that the young educated male predominates in migration flows. In 1962, according to Huntington (1975), there were 162.7 African males for every 100 females in the towns in Kenya and 950 African males for every one female in the rural areas. This suggests that sex is concomitant

with education. Rempel (1974), working with the 1969 census data, showed that of the 15 years and older category, just under 8% of the males and a little more than 5% females were enumerated in a district other than their place of birth. He therefore concluded that areas from which migrants originate exemplify a female dominance.

Thus rural-urban migration depletes the rural area of the segment more responsive to change, (Lipton 1980, Caldwell 1969, Todaro 1971, Rempel 1974) further fuelling the social and economic differentiation between and within the rural and urban areas.

As for the concentration of rural-urban migration, it

".....is the major contributing factor to the ubiquitous phenomenon of urban surplus labour and as a force which continues to exacerbate already serious problems of urban employment caused by growing economic and structural imbalances between rural and urban areas".

Todaro (1976:2)

It causes the mushrooming of slums in urban areas and adds to the problems of thuggery, prostitution and vandalism, not to mention the unhealthy living conditions the migrants are offered. There is also the inadequacy of basic necessary goods and services in the urban areas which can stretch beyond certain limits. Urban labour supplies continue to swell while the rural areas are depleted of valuable human capital (Todaro 1976). The growth rate of urban job seekers, already at historically notable levels, rises due to the predominance of educated people in the migration streams. The importance of and magnitude of rural-urban migration is therefore being recognised as a problem in most developing countries of Africa (Kenya is no exception as is evident in the Development Plans (1974/83) and 1984/88) by planners and policy makers (Byerlee

et al 1976, Mitchell 1965, African Perspective 1978/1, Rhoda 1980)

The Kenya government acknowledges that the greatest potential for national output lies in the rural areas where over 80% of the National population resides (Development plans 1979/83 and 1984/88). It identifies the small farmer and landless rural worker who often has to supplement his income through off-farm duties with some family members working full-time away from home as a target group of the nation's poor. It embarks on improving this group's income by way of extension services and strengthening the co-operative movement, the pricing policies, the terms of trade, the rural access roads, crop research and agricultural credit. It also promises to make yield-increasing inputs more accessible and to supply water and electricity to the rural dwellers.

Rural development is viewed as an antidote for excessive migration and hence the decentralization of rural development planning implementation and sharing of information between the various arms of the government. These are the aims of the District focus for rural development based on the principle of complementary relationship between the ministries, their sectoral approach to development and the districts with their integrated approach to addressing local needs (Makhoha 1985, Development plans 1979/83 and 1984/88, Republic of Kenya 1984). This well indicates that the government is aware of the problems caused by the influx of people to urban areas and seeks a more equitable distribution of national resources. Rural areas need to become more competitive, they should also get more industries with high income elasticities (Birgsten 1978). The system aims at a dispersion of industries and rural-non-farm activities for the establishment of a more reasonable balance between rural and urban development. This aims at making the rural areas and the semi-urban areas more attractive to live in, consequently easing the migration flow to major centres (Makhoha 1985,

Republic of Kenya 1979/88 and 1984/88, 1984). It seems that the survival of the non-capitalists mode of production as a system of production that is functional to the dominant capitalist mode of production is a necessity.

Numerous studies carried out in Africa have identified economic factors as the dominant variable explaining the migration decision.

As far back as 1947, Schapera observed that,

"..... a far more universal cause and certainly the most important of all is economic necessity. The majority of men sought work abroad (in the mines, plantations and industries) in order to be able to pay taxes and other goods and some gave as their sole reason poverty, that is lack of a source of income."

Schapera (1947:121)

The rising level of wants among the members of the rural communities is evident; those whose needs and wants can be met in the village stay while those unable to satisfy the needs at home adequately, move. Studying the Ngoni and Ndendeuli in 1955 Gulliver wrote:-

"...although money could be increased by hard and consistent work at home, the Ngoni feel it is easier to earn it through labour migration because of the low agricultural standard here. Ngoni migrate because of the need for money; other causes of migration are relatively unimportant and generally of the 'last straw' type i.e. difficulties which affect the individual in the family or social life which go to tip the balance and induce a man to leave his home for a spell at a particular time"

Gulliver (1955:32)

Mitchell (1965) studying urbanisation in Southern Rhodesia, argued that the basic factor for migration although not sufficient was economic necessity.

He further posited that even for cases of individual migration, economic factors were the most important causes of migration. The "push and pull" factors are the main underlying force in these transformations. That is, " the 'push' is from traditional agriculture and the 'pull' is exerted by the employment

opportunities and high wages within modern employment." (Birgsten 1978:228)

This is as a result of regional disparities that lead in turn to different effects of development amongst regions. In towns jobs generally provided an income far in excess of what is possible in the rural areas and a more secure return than farming (Rempel 1981, Brown 1980, Birgsten 1978, Caldwell 1969 and Gugler 1965). It must be pointed out that there are differentiations even within the peasantry itself, there are rich and poor peasants. Some are able to accumulate capital and for instance buy more land or increase its acreage while others are landless having been rendered so firstly by colonization. Others continually sell their pockets of land to the more capitalistic farmers to make ends meet, thus causing partial de-peasantisation that leads to wage labour for existence.

Lewis in Todaro (1971) observes that, in Nigeria for instance, urban wages are much more than twice a farmer's income.

In Kenya, average earnings of an African employee in the non-agricultural sector rose from £92 in 1960 to £180 in 1966, registering a growth rate of 11% p.a. while in the small farm sector over the same period, estimated family income grew at a rate of only 5% p.a. from £67 in 1960 to £77 in 1966; thus urban wages rose more than twice as fast as agricultural incomes. In 1966 average wages in the urban sectors were 25% higher than average family income. Ghai (1968:200) quoted in Todaro (1971).

As a result of the findings of the Integrated Rural Survey of 1977, that 41% of the families engaged in small-scale agriculture, of less than Ksh.2,000 per family in the year 1974/75 and that another 14% had between Ksh.2,000 and Ksh.3,000 per family, the government states that "Incomes of even that order of magnitude are not sufficient to provide more than the basic necessities of life"

(Development Plan (1978/83:11)). Thus the inadequacy of income is the most obvious reason for rural-urban migration.

It is appreciated therefore that a large, growing, population becomes both a liability and an asset, but the nations output of goods and services should grow at a faster rate than that of the population if any improvement is to be registered (Development Plan 1984/88). But Kenya seems to be "..... a nation that invests too much in education and too little in job creation" Development Plan (1984/88:58) a situation that leads to the production of many school leavers who will remain unemployed. This indicates that there has not been proper coordination between investment in goods and services in relation to the rate of population growth or of the economic sector vis-a-vis the institutional growth such as in education.

Thus in areas where the resources cannot support such a population increase, some people are forced into urban employment. Migration to urban centres has both adverse as well as positive effects on the 'sending' area and to the national economy as a whole. These range from disruption of the family, distortion of the division of labour, poor farm production, the overburdening of women to the underdevelopment of the rural area relative to other sectors in the economy.

These occur despite the fact that a considerable flow of cash and goods is maintained between the urban and rural areas. The way remittances are dispensed of can determine to some extent the negativeness or positiveness of its effect on the rural people. If it leads to the preservation of the female-dominated subsistence sector (non-capitalist production), it implies that capitalism can never become an exclusive, 'pure' mode of production in Africa and will always

remain articulated to the non-capitalist or pre-capitalist production systems, thus always underdeveloped in its form. In addition to remittances, most urban workers maintain strong ties with the rural areas, for social security in the event of old age, retirement or failure in towns and most importantly for purposes of land rights. As Gugler (1968) asserts, "No where in the world can a man get adequate compensation for vacating a farm in the traditional African Society" (Gugler 1968:13).

The man in the traditional African society (pre-capitalist) was the head of the household, he spearheaded the decision making, he controlled the family income and almost dictated what was to be grown in the family farm and how the surplus and the profits made from the sale of the produce were to be invested and credit facilities secured. Most importantly, land ownership was vested in men; women were exempted from owning land, as a matter of custom.

It is thus seen as necessary to investigate the impact of the migration of the male head of the household on his family. The research aims at answering the following question(s):-What are the effects of the migration to an urban area of the male head of household, on his family's farm production capacity? Specifically, what happens to the family structure, the utilization of available resources, the household's division of labour and the labour productivity of the family in relation to its farm production level?

The adaptability of the rural community to the new division of labour (after the semi-proletarianization of the man as the woman remains in the rural areas to carry on with subsistence production) by sex, the arrangements for mutual cooperation at the community level as well as the control maintained over the migrant both in terms of retaining a certain number within the community at

a given time, form the issues under investigation in this study.

Econ-Historical Background

An Introduction

The background attempted here is intended to show how the rural-urban 'syndrome'¹, essentially an expression of the uneven development in the country emerged. The question of selective exploitation of resources, the market-oriented (export) nature of production in the colonial economy are highlighted. The formation of enclaves of modern industries in the new artificially cultivated urban centres and their organic linkage with the rural sectors, which provide sustenance for both the thriving urban population and the export market are also brought out. The discussion ultimately seeks to show that rural-urban migration in itself is a process that reveals the subtle but valid truth about the so-called dual economy².

¹ 'Syndrome' because it may pass the descriptive test but fail the analytical one as the role of women in making possible the 'depression' of wages in the capitalists sector is indisputable.

² The dual economy model sees the economies of underdeveloped countries as being divided into two broad, largely independent and radically different sectors. On the one hand, a modern, industrialized sector and on the other hand, a traditional, economically backward sector. The "modern", "capitalist", "industrial" sector is said to be receptive to change; is market-oriented and follows profit maximizing behaviour while the "traditional", 'feudal', 'agricultural' sector is stagnant, practises subsistence-oriented production, little of its output passes through a market; the leisure preferences of the producers are high and they do not follow maximizing behaviour. The two sectors are said to be poorly articulated. This lack of integration is said to constitute a major obstacle to the social-economic development of the countries in question. However, some scholars for instance A. G Frank have argued that "the sectors are in fact well-integrated given the overall domination of the economy by

The whole of the colonial period and the exploitative activities that prevailed then cannot be adequately covered here but the discussion seeks to illustrate the contradictions in the development of the European capitalist mode of production and the relations during the time.

The colonial period in general was one in which the expanding system of industrial capitalism established its dominance over the largely pre-capitalist (non-industrialized) African economies. AT the same time the existence of elements of capitalism prior to colonialism cannot be denied.

In Kenya, colonization by British interests towards the end of the 19th Century had fundamental implications for its future economic, social and political development. It marked the historical point at which the penetration of International capital occurred and the incorporation of the country into the world capitalist structure was mediated and initiated. The present International structure or division of labour between Kenya and the developed countries of Europe and America can be traced to this historical relationship and interaction with international finance capital.

The establishment of the dominance of the colonial state and the creation of capitalist agriculture based on white settlement served to pave the way for the emergence of the capitalist mode of production.

Priorities for the process of capital accumulation revolved around the creation of an internal labour market and the provision of adequate means of production and reproduction for the settlers. An external market for commodities

external capital and which is then manifested by the penetration of capitalism into even the remotest corners of the Third World" (Long 1977:71). For a fuller discussion of the Dual economy model, see:- Seidman s (1972), Mafeje A. (1973), Todaro (1977).

already existed and the task of the colonial administration was to extend and reinforce commodity production firstly at plantation level and later, on the basis of peasant production.

This process inevitably interacted with previously existing forms of production and space utilization to produce an uneven regional development of the territory as well as a class structure depending on the type of landed economy (given the cash crops) and the pre-existing social division of labour in the areas which were under demand. The articulation of the dominant with the subordinate pre-capitalist modes of production i.e the superimposition of the capitalist mode of production on the traditional one, led to the spatial development and class formation of the colonial and post-colonial Kenya. By way of consolidation and expansion capitalism established its dominance in Kenya. Through political and economic forces working within Kenya, the inhabitants were integrated to the local centres of international and domestic capital which in turn integrated the territory into the world economy.

Colonization in Kenya further entrenched itself with the building of the railway between 1895 and 1901. This development ushered in a new phase in the relationship between the hinterland and the imperial forces at work then. Besides paving the way for the development of a capitalist economy in the hinterland, it gave the rationale for the establishment of one. It was argued that to pay for its construction (which was considered high), the railway should 'capture' those countries through which it passes.

The big question before the colonial administration and the British government between 1900 and 1903 was how best to initiate and realize a capitalist economy in Kenya. Was it by encouraging indigenous capitalist agriculture or was it through migrant settlement in the highlands? Most

colonial administrators subscribed to the latter and as a result Sir Charles Elliot the first Commissioner of the East African protectorate (later renamed Kenya) invited whites from Great Britain, Canada, Australia and South Africa to settle in the Kenya highlands (Brett 1973). It is this gesture that set in motion forces that later transformed the African social and economic life and also ushered in conflicts characteristic of Kenya politics for the whole of the colonial period.

Those who took up this invitation would need land on which to settle, hence the necessity for land alienation. Ten years before the 1st World War and after the 2nd World War, a great deal of land was alienated for European settlement. The justification for this was the allegation that there was more land than the local people could ever need or put into good use. By 1934, about 2000 settlers occupied about 5.1 million acres of high-potential agricultural land; the White Highlands. This led to pressure on land in that the land on which Africans grew their own crops (designated the 'reserves') was greatly reduced. Some of the Africans were rendered landless. By 1951, over 7.5 million acres (about 20%) of the colony's valuable arable land was owned and cultivated by a small proportion of the European community that had grown to about 10,000 by 1921 and 30,000 by 1948 (Brett 1973, Bennett 1965, Zwanenberg 1972). Despite their small number, they exercised economic and political power completely disproportionate to their numerical strength and the economic system they established bore fundamental consequences for the development of the whole country.

The mere provision of land did not satisfy the expectations of the settlers. As Brett (1973) suggests, such people could not be 'dumped' in the bush. They expected to be provided with an infrastructure and other basic

amenities; roads; railways, doctors, schools and clubs to lead a proper British way of life. First and foremost, they were not going to soil their hands tilling the land, so a supply of cheap labour and an infrastructure to support the development of the land were required. The colonial state was not able to guarantee land, labour and infrastructure without resistance from the indigenous people and the various segments of the metropolitan power. From 1903 upto and even after 1952 settler politics revolved mainly around the question of the control and influence of the colonial state, an important prerequisite for the accumulation of capital. The settlers therefore had to wrestle state power from the colonial state and orient it towards meeting the needs of the development of capitalist agriculture in the highlands. The efforts to make the enclave the dominant economic centre did not succeed fully but they managed to establish a hegemony exemplified in the economic and political policies and decisions made in the inter-war period and to some extent immediately after the 2nd World War. The state was biased in the settlers' favour and was committed to their economy. As a result the development of the whole of the colonial infrastructure (railways, roads, agriculture, marketing) was orientated towards serving the White Highlands (Brett 1973).

Labour policies and regulations that emerged during this period indeed were meant to meet the demands of the settler community for a cheap, regular and reliable supply of labour. The colonial state played an important role in the creation of this labour market which was critical to the emergence of capitalist relations of production.

Through their political organizations and their elected members of the legislative council, the settlers were able in the end, to influence the colonial governors to come close to making Kenya part of the imperial structure despite

resistance from the indigenous people, Asians and some humanitarian groups in Britain (Benett 1965).

Contrary to what they practised, they maintained that their policies were aimed at preserving the Africans' traditional way of life and protecting him from indebtedness. On this, The Devonshire White Paper of 1923 stated that the interests of the 'Native' were paramount and where conflict(s) arose, the African's view should prevail. A similar statement was made in 1952 after 'conflicts' of interest arose as a result of the usurpation of land owned by Kikuyu peasants and which subsequently led to the Mau Mau rebellion of 1952. All the same, the settlers' interest remained well served. The indigenous people had lost their land and were now increasingly called upon to sell their labour for a meager wage. A contradiction between the settlers backed by the colonial state and the British imperial power on the one hand and the African peasantry backed by the emerging labour class on the other ensued. This was a dynamic force, instrumental in the changes which occurred in the 1950s and 1960s. As the policy of land alienation continued so did the need for more and more permanent, mobile, regular and reliable labour.

Techniques of Labour Recruitment

There existed in the traditional African economy, considerable surplus productive capacity in the form of surplus land and labour time (Bernstein 1973). State power in the hands of the colonial administrators had to be used to break the backbone of the African subsistence economy as well as destroy their resistance towards providing labour power. Land alienation was neither 'incentive' enough for exploiting the production capacity of the peasants nor

for raising the productive absorption of the surplus produced in the traditional sector. It was also not sufficient by itself to induce African to move into wage labour.

It was the responsibility of the colonial state to provide them with cheap labour for the development of their farms, so the settlers believed and argued. Merely encouraging the Africans to leave his home area and sell his labour power was not enough (Clayton and Savage 1974). To break up his resistance, a series of fiscal, administrative and legal measures were instituted. The creation of a 'free' labour market where capitalist productive zones and relations were fully developed was their aim. In the years between 1903 and 1929 the issue was the search for expedient and effective measures to drive the Africans out of the reserves' and into settler farms and enterprises.

Fiscal Measures

Taxation measures were first used to raise revenue for the colonial administration. Between 1910 and 1922 increased Taxation was used primarily to drive the African out of his home and onto European farms and commercial enterprises by increasing his cost of living (Clayton and Savage 1974). A poll tax was instituted on male adults who were not paying the already existing hut tax, and those who had not been compelled into wage labour by the need for money (Dilley 1966). The tax collectors (colonial administrators, District Commissioners, District Officers, African Chiefs and headmen) did this work as they encouraged Africans to sell their labour power; they were therefore also labour recruiters.

The amount payable for poll tax almost trebled from Ksh.6.00 to Ksh.16.00

between 1910 and 1920. An average labourer had to work for two months in one year to earn it. It reduced slightly in 1922 but increased in 1925 when local authorities got the power to raise funds for local development. Indirect taxes were also paid through acquisition of imported commodities (Kenya Colony Protectorate Native Affairs 1924).

Taxes had an adverse effect on the pre-capitalist economy. They removed adult males from production in their home areas and transferred money earned in wage labour back into the European enclave through the market economy. Brett (1973) observes that, a situation whereby Africans paid as Europeans received, was created through this transfer of labour from African areas to European areas. The result of this was the underdevelopment of rural areas and development of settler capitalism in colonial Kenya.

Legal Measures

Clayton and Savage (1974) cite a number of legal measures enacted between 1906 and 1924 to regulate and stabilize the labour force. The Masters and Servant Ordinance of 1906, amended in the late 1920s to become the Employment of Native Ordinance made it punishable for the African to break his contract and leave his place of employment. The Kipande System of 1915 under the leadership of the chiefs enjoined compulsory recruitment of the African to work for the European for a minimum of one month in a year. The Native Labour Ordinance of 1912 authorized compulsory recruitment of labour for public projects (roads, bridges etc.). More often than not, the chiefs and headman charged with this task did not stop to differentiate between public and private needs for labour. They used force sanctioned therefore by the colonial administration. The use of force in

recruiting labour at this time was necessitated by the fact that capitalism as a social system of production was still unaccepted and less secure.

The Resident Native Ordinance of 1918 served to regulate the relationship between the 'squatters' and the settlers and to make the squatters a cheap source of labour on the farms. They were resident for at least 180 days in exchange for cultivating and grazing 'privileges (Zwanenberg 1972).

In 1920, all African males were registered and were also expected to carry, besides their identity cards, their employment history cards. This made desertion easily detectable and those not working could be easily traced and made to work.

In 1919, a circular was released asking all government officials to exercise every possible 'lawful' influence to induce adult males including women and children to go into wage labour. This was the East African labour circular No.1 Nairobi 23rd October, 1919 issued by the Chief Native Commissioner, John Ainsworth.

An outcry against compulsory labour recruitment from both inside and outside the country led to the amendment of most of these regulations, but only on paper. The practice continued as legal and administrative measures were combined.

Participation of Africans in the 1st World War (1914-1918) and the 2nd World War (1939-1944) further fuelled the creation of a labour market. After the wars, labour got better organized, strikes were used to change unsuitable working conditions in addition to the more passive forms of resistance of the early period.

From less than 100,000 in 1914, African participation in the capitalist labour market increased to about 119,000 in 1922 and to a maximum of 160,000 in

1929 i.e. by an average rate of about 43% per annum. The economic depression of the 1930s led to a decline from the 1929 figure to 157,000 in 1930 and 141,000 in 1933. Thereafter the figure increased from the 160,000 of 1929 to 183,000 in 1938, 240,000 in 1943 and 282,000 in 1948 (Clayton and Savage, 1974).

Table 1.1:- The Estimated Monthly averages for Registered Adult Male Africans in Employment from 1922 to 1940.

Year	Number	Year	Number	Year	Number
1922	119170	1928	152274	1936	173000
1923	138330	1930	160076	1937	183000
1924	133840	1930	157359	1938	182964
1925	152400	1931	141473	1939	239610
1926	169000	1932	132089	1940	239610

Source: Native Affairs Department, Annual Reports, as reported in Clayton and Savage. (1974:153-200)

Though the accuracy of these figures is suspect, a definite trend is repeatedly observed in this period. There is a definite increase in the participation of Africans in the capitalist labour market (European farms, plantations and enterprises). In 1927, 48% of adult African males worked on farms, 13% in railway and labour construction and maintenance, 10% in commercial enterprises in towns and 8% in government departments (Clayton and Savage, 1974). This only changed in the 1950s when the commercial and industrial sectors recorded more growth and observed an increasing number of African labourers. Central Province (Kikuyuland) was one of the most important labour recruitment areas at the time. Others were Nyanza and Western Province, known as Kavirondo at the time (Clayton and Savage 1974)

The Labour Market for the Capitalist Economy

The creation of a labour market in Kenya had notable, far-reaching, and lasting consequences for the social, economic and political development of the African people.

Easy access to the World Market, political power, International capital and agricultural technology and services were the necessary prerequisites for capital accumulation in the colony. By mid-1930s about 544 miles had been added to the main railway line of 587 miles originally constructed to serve the white highlands. Brett (1973) observes that, 73% of this (latter extensions) passed exclusively through the European settled areas, 21% through the African areas to reach centres of European settlement and only 6% to facilitate African agriculture. This undertaking was basically financed by both the imperial government and Magadi Soda, a private multinational concern, which did so for its own 'selfish' reasons.

For roads, the pattern was similar. The allocation of funds favoured European settled areas. In 1931 European Councils got £37827 while Africans relied on communal labour and funds from local Native Councils for roads programs. Between 1925 and 1950 they spent an annual average of 13% of their revenues on roads. This increased from £249 to £85752 in 1950. (Native Affairs Report, 1925-1951). The railway and roads were very important for marketing of the settlers produce. Commodities like coffee, sisal, tea, pyrethrum, maize, milk, wool etc. were produced for sale in the world market. This infrastructural development went along way in enhancing the capitalist economy in Kenya.

Sources of money for the development of the settler enclave in 1925 were mainly the Imperial government through colonial grants and loans (infrastructural

development). Rich farmers like the well known Lord Dalamere, used their own capital to develop their farms; companies like Brooke Bond invested through their subsidiaries based in the colony, (the investment in Kenya was part of their world wide operations) and finally International banks and merchants who provided credit facilities for commodity production and marketing for instance Barclays Bank, Standard of South Africa etc.

The depression in the 1930s however caused some defaulting on credit and mortgage and for these facilities therefore, limits began to be put on the settlers (Zwanenberg, 1972). This saw to the establishment of a land Bank in 1930 for the support of settler capitalism. In its first ten years of operation it spent 40% of its credit helping settlers discharge existing mortgages to International Banks.

The process of capital accumulation among settlers through investments in the marketing and processing of agricultural commodities was greatly enhanced by the intervention of international capital in the commerce and industrial sectors. The commercial sector's operations mainly based in the white highlands complemented each other in strengthening the emergence of the capitalist mode of production. Africans participated through sale of their labour power while Asians (most of whom had come during the building of the railway) occupied middle level positions and provided semi-skilled and skilled labour and capital for business and trade.

Coupled with the cited infrastructural development, it would be important to point out here the role of Asian capital in facilitating the capitalist mode of production in colonial Kenya especially at the commercial level.

Asian settlement is closely aligned to the penetration of European capital in the interior and is juxtaposed between the indigenous people and the

colonizing Europeans (Clayton and Savage, 1974). Asian capital and labour, made a significant contribution to capital accumulation especially where European skills and capital were absent or limited. But a contradiction occurred in that as it helped 'modernise' the reserves by encouraging commodity production and consumption of imported goods, it blunted the entry of Africans into the commercial sector until after independence. Overall, this emerging economic order warranted a reorganization of the African household in terms of production and the previous domestic division of labour.

In sum, the removal of adult males from subsistence production in the 'reserves' adversely affected the whole pattern of the division of labour in the African household. Emphasis in education was placed on male children and this further contributed to these changes in division of labour. The changes were manifested in the increased roles of women in terms of subsistence production for the market as well as the assumption of more power in the family though it may have seen to the sinking of women into more oppressive domestic roles in some cases as advanced by Stitcher (1975,1976).

The division of labour by sex characterized by female production of subsistence foodstuffs and male semi-proletarianization, facilitates the extraction of surplus from non-capitalist modes of production i.e the regeneration of the labouring power of the family as a whole as well as the worker. It allows the payment by capital of a male wage rate insufficient for familial maintenance and reproduction. The articulation between the capitalist mode of production and the pre-capitalist one based on the familial division of labour by sex thus allows the wages paid to depeasantized workers in the capitalist enterprise to be less than the cost of production and reproduction of

labour power (Deere 1979).

Critical to this transformation was how land alienation, the growth of the population, participation in the labour market and the emergence of new needs and values influenced Africans to adopt new production methods in the reserves.

Though they were denied equal economic opportunities, Africans were not allowed to grow cash crop, keep cattle, sheep or goats or even to secure loans to enable them make agricultural improvement- they were able to utilize the opportunities available in the colonial economy while still furiously agitating for an expanded participation in commodity production.

Though extended in the 1920s it was not until the 1950s that full participation of the African in commodity production was fully allowed and it was only then that it made an impact on the export of agricultural commodities. The African could now grow coffee, pyrethrum, tea and keep dairy cattle for the production of milk for the dairy industry. This, needless to say, caused a dramatic transformation of household production.

There was also now a more liberal attitude towards African agriculture leading to an increase of its share of export earnings. This continued into the 1950s and 1960s (Low and Smith 1976).

The upward rising of European contribution to the export trade continued until the 1960s when increase in the peasant household production of coffee, tea and pyrethrum started to overtake estate and large-scale farm production. Some of the land in the White Highlands at this time had been turned into smaller units for African settlement.

It is here that one observes a further momentum in the transition from pre-colonial economy to colonial economy in which some segments of indigenous peasant producers are transformed into not only a labouring class but in which others

move into petty trade and commodity production. In essence this period witnesses the systematic incorporation and integration of the African 'reserves' into the settler 'enclave', the process that bore underdevelopment and differentiation in the African areas. The colonial economy was viewed as dual with the settlers enclave and towns as distinct and separate entities from the African 'reserves' which were supposed to develop at their own pace, unaffected by the policies followed by the settlers and the colonial administration. The interaction of the two sectors and particularly the reliance of the capitalist sector on the African reserves was a hard reality. Settlers depended on the colonial administration for economic support, the latter in turn depended on the settlers for the provision of export crops obtained through the settlers' exploitation and expropriation of the indigenous peasantry i.e both their labour and produce, at prices which hardly paid for the costs of production of either. (Zwanenberg 1972, Nyangira 1975, African Perspective 1978/1)

The Effects of Socio-Economic Disparity

The increasing land pressure caused by colonial alienation and restrictions, the income and wealth disparities between the Europeans and the Africans led to the Mau Mau revolt and consequently the state of emergency in 1952. The government was now forced to think of African agriculture to take the 'sting' out of the rebellion. Africans were allowed to grow cash crops, were given extension services selectively, land consolidation and registration were carried out while minimum wages were legislated. Education for Africans was government-supported and the framework for industrial unions were laid down. These came about as a result of the Swynnerton plan of 1954, which in itself

expressed the colonial anxiety with the rising African protest and rancor for self-determination.

That uneven development in Kenya resulted from the establishment of the process of capitalist accumulation and its articulation with the pre-capitalist mode of production in the period between 1900 and 1951 is now clear.

The Post-colonial Era

At independence, there were clearly income and social differentiations between the well-to-do and the poorer groups in the regions; between peasants and urban labourers and between urban labourers and those in the informal sectors. i.e. intra and inter-regional inequalities had emerged. The infrastructural distribution reflected this pattern too as urban growth and communication patterns existing in Africa today were shaped according to the needs of colonialists. This was to determine the spatial distribution of industrial activity later on.

These disparities saw to the continuation and perhaps the speeding up of male migration. Independence further fuelled the influx of the Africans to towns as the new government removed restrictions on movement not to mention the high wage positions previously held by non-citizens which had to be filled by citizens. (administrative and technical posts in different urban centres). Migration was now even more economically motivated, and individual rather than group-oriented.

This kind of migration situation leads to a break-up of the rural areas' isolation and self-sufficiency, and its becoming increasingly integrated into the national economy with resulting changes in the country-side.

It has been suggested that African governments are prepared to carry forward this state of affairs as long as the benefits continue to be shared with the African elite (Langdon in Birgsten 1978) and in this sense neo-colonialism still perpetuates and aggravates Africa's underdevelopment. One of the ways in which this happens is through Transnational Corporations (TNCS)³.

Justification

Migration on the scale that is evident in Africa today is of great socio-economic importance. It is imperative that we comprehend the consequences of internal migration for a better understanding of the development process. To influence the development process in socially desirable ways, more appropriate policies need to be formulated.

Despite the widespread recognition of migration as a problem, research has not emphasized appropriate policy formulation for dealing with the problem. The underlying theory and methodology used has led to it having little emphasis on policy. This has been of a descriptive nature leading to too much data on the characteristics of migrants but very little on policy that is more appropriate to a dynamic solution to the problem. Many of the studies have used census data generally limited to information of current rates of migration and therefore provide no value for such important variables as income.

Empirical knowledge on the effects of rural-urban migration is very inadequate as most studies are restricted to determinants of migrants. So, the dominance of economic considerations in the migration decisions is made clear but

³ This is further tackled in the theoretical framework section in Chapter 2 of the study.

the process and net effects are not adequately understood. The impact of rural-urban migration on the individual is obscure, but even more insufficient is information on the actual impact on the family, the village and the rural area. Little is known on the process itself, on the transfer of resources between the rural and urban areas and on the use of remittances on non-agricultural investment, agricultural production and consumption needs. This study will attempt to address some of these.

Farming systems in Kenya involves the division of labour along sex lines, with the men performing the heavier tasks and the women the more routine but back-breaking tasks such as weeding. It becomes necessary therefore to examine or perhaps re-examine the contemporary roles and situation of women and the impact of innovations on their role. Emphasis should be placed on the full utilization of human resources and attention paid to prevailing division of labour, or else the introduction of technological advances may impede rather than enhance development. Failure to re-organize and 'modernize' the tasks of women may contribute to the growing rural-urban imbalances, starting with a fall in the level of farm production in the rural area (Gugler 1972). It is thus felt that, the division of labour by sex borne out of male migration places women in a situation that warrants a lot of attention.

Based on a better understanding of the effects of the process of migration on different regions of the demographic profiles, economists and regional analysts will be better able to channel development to the more needy locations and regions and the right segment of the society at the right time.

As pointed earlier, the decision to migrate is often familial rather than individual. Family members view an urban job held by a family member as security in old age. To the family, migration is a good investment and all await

anxiously to share its rewards. But the wages in town are too low to take care of the whole family due to the high costs of food, housing and other necessary amenities. In addition, one would have to forego the rural subsistence income and more importantly the land, were he to move with the entire family. (Weisner 1969, Ferraro 1971, Ross 1968, Huntington 1975, Byerlee 1972, Gugler 1968, Nyangira 1975, and Van Velsen 1960).

Despite the fact that, migration has made the rural family and kinship structures so unstable (the man has no choice but to move alone as before.) The extended family is also rapidly dwindling as argued by Mbithi (1984). In view of the above, this study chooses to focus on the nuclear family, the man, his wife and offspring(s).

The family is still the most fundamental social unit in society and perhaps the most stable institution. It is the most resistant to conquest or to peoples' effort to re-shape it (Mbithi 1984, Goode 1984, Development Plan (1979/82). It is made up of groups of individuals and the families in turn make up the society. If individuals do not fulfil their familial obligations, society loses its strength and stability.

The production of commodities, the protection of the old, the young and the sick, have to be met if society is to continue to operate. In a capitalistic society the family's major roles are those of production and reproduction. Thus the family's dominance is an incontrovertible fact in any society in the world. The role of the family however has not been static. Mbithi (1984) advances that, the role of the family is changing extremely fast especially in the relationship between men and women. Their roles he argues have gained ascendancy over family activities. His position is that migration splits the family and has serious repercussions for the man-woman relationship.

The Government, also appreciates that, "The migration of males disrupts normal family life and removes the father from his children for prolonged periods" Development Plan (1979/83:16).

It is further argued that the family is the pivotal social unit and has the responsibility of improving the quality of life, of socializing children and increasing population i.e. production and reproduction. The government thus affirms to strengthen the family as a social unit by supporting family oriented activities to ensure the beneficial effects of the change that may accompany modernization and development.

Research Area

Rural male out-migration from the Central Province is dominated by 3 districts:- Murang'a, Kiambu and Nyeri. The Kikuyu of Central Province predominate in the migration flows. Huntington (1975) quoting the 1969 Census data showed that, Kikuyu male population dominated in Nairobi. The population of Nairobi he says was made up of 43.4% Kikuyu males in 1962 and 46.9% in 1969; This predominance can be attributed to the geographical proximity of the Kikuyu areas to Nairobi as is posited by Soja (1968). The Kikuyu given their history of land alienation, were the first people to respond to non-farm economic opportunities. The Nyeri District in 1979 had 234,405 males as opposed to 252,072 females (District Development Plan 1984/88). This may be attributed to the loss of many males of productive ages in the freedom struggle for independence in the earlier days and currently, to migration of males in search of wage labour. As a result the extent of labour participation and the occupational distribution of women underwent considerable change. Females now

constitute the main source of labour.

Rempel (1974), also basing it on the 1969 census, advances that the Central province accounts for 40% of the total number of migrants to Nairobi. Our own research site Nyeri District according to him had an out-migration (as a percent of population born in the District) of 32.9% of males and 27% of females. Central Province is the source of 27% of the total male out-migrants. Earlier on, he found that, 27% of the male out-migrants from Nyeri go to Nairobi and 37.28% to other urban centres of the Central Province's Districts (Rempel 1974). According to Soja (1968), the Kikuyu were the first to experience the full impact of European penetration into the highlands as they were situated on the doorstep of Nairobi encircled by the White Highlands. They spearheaded and dominated therefore the urbanization process, firstly due to their geographical proximity and secondly their inherent characteristic of social and political organization not to mention their emphasis on achievement and individual initiative (Soja 1968). These characteristics according to Nyangira (1975), seem to augur well with the 'modernization' process. It is alleged that these factors (causally related to rapid social change) were much more developed amongst the Kikuyu than among the other tribes, a contention capable of generating a lot of debate. According to Soja (1968) and Nyangira (1975), the traditional differences in social and political organization of the people of Kenya largely determines the varieties of responses to modernization. Due to historical factors as narrated earlier in this chapter, these areas were drawn into the system of 'modernity' faster. For instance, land reform, one of the most important aspects of modernization, spread from the Kikuyuland to other sections of the country (Soja 1968). These could explain the predominance of the Kikuyu in the modernization process.

An even better explanation is as posited by Rempel (1981);

"It is the ethnic groups with the best access to Educational opportunities and who are under the greatest pressure of land that show propensity to migrate."

Rempel (1981:92)

Others assert that the quality of land governs migration and that the areas losing population to the urban areas are the most densely populated:- Western, Nyanza, Central and Eastern provinces. Indeed the Central Province is occasioned by a high birth rate and low death rates leading to considerably high population growth rate (Statistical Abstract 1986)

Nyeri District suffers from land shortage (it is the stronghold of small producers) and hired labour is rarely used. (Clayton 1963). Family labour is the primary source of labour and migrant men often have to go back during labour peaks. Land-holdings range from 0.4 to 8 hectares but agriculture is said to be relatively 'modern' and yields generally high.

The Nyeri Kikuyu therefore exemplify all the characteristics necessary for migration. For some of these, for instance, education, it is described as one of the most highly literate and educated sector of Kenya while population pressure on land is widespread. The above led to the choice of Nyeri as the focus of this study. Additionally, it is an area well known to the researcher, a typical medium-high potential area from which generalizations about other rural areas can be made. It offers thus a good representation of the Central Province. One therefore need not overstate the relevance of Nyeri as a study area as far

as the problem of rural male out-migration is concerned.

Objectives of the Study

The Objectives of the Study are thus as follows:-

1. This study will enable us to join the numerous scholars who have attempted to identify the cost(s) and/or benefits of rural out-migration to the rural areas and to the country as a whole. It takes advantage of the importance of a single social unit in society:- The family, to bring out some of the consequences of rural out-migration on the rural society and their implications for National Development.

It will address itself to various questions:-

(a) Does male rural out-migration always spell problems or suffering for the family or does the family stand to gain; if so in what ways? That raised, is the family welfare capable of adjusting?

(b) On the Division of labour, is the gap left by the removal of the man tolerable or does it become dysfunctional? How does the question of the inevitable changes in the division of labour along sex lines affect farm production? Is the absence of the male labour in subsistence production felt and what are its effects?

(c) What role does remittance play to enhance the family's Farm production level? The remittance of income by urban migrants to rural areas has

been widely-noted but rarely measured in Africa. This study attempts to examine their size, consistency and their specific impact on farm production. Do they lead to the erosion of the value of land by offering an 'alternative' to subsistence ?

(d) Does the control of family income by the wife in the absence of the male head of household mean improved farm production capacity or misuse, leading to a collapse of subsistence production and a consequent lowering of the standard of farm production or loss of value for land ?

(e) Who supports who between the migrant (employed by the capitalist in the urban area) and the rural-based subsistence producing wife given the depression of wages in the urban sector ?

2. By so doing, the study hopes to generate some useful insights for policy-makers and planners to enable more accurate predictions on regional resource allocation as well as better informed regional policies. Problems of labour, the division of labour, the value of remittance, decision making and the control of income in the rural home vis a vis the family's subsistence-producing capacity will be addressed in the process of which may emerge policy recommendations towards this widely acknowledged problem.

CHAPTER TWO

REVIEW OF LITERATURE

In this section of the study, a review of the literature related to the aspect under examination is attempted. This chapter firstly plays the role of facilitating the formulation of the study's hypotheses and secondly, that of familiarizing the reader with the problem studied.

It is vital that we point out here that the literature on migration is enormous, organising it presents a formidable task. Because of this, we have concentrated rather strictly to those factors that have direct and/or close relevance to the question under study. Other factors for instance, the causes and determinants of migration have been well told in the works of other scholars and need not be vigorously repeated here. They have however been briefly touched on in certain sections of this study.

Migration is simply the movement of individuals or groups of people for varying duration from one social, ecological or economic field of action into a new environment with different conditions. In circular migration, (the nature of which constitutes our study), permanent ties are maintained between the two economic systems between the urban and rural community, with periodic migratory movements between the two (Graves and Graves 1974).

The dominance of economic factors⁴ in the migration decision is indisputable. Indeed, Birgsten (1978) refers to rural-urban migration as cash migration. Men migrate in search of an alternative source of income for the rural-based family. Most migrants aspire to achieve a higher income level in the urban area (Todaro 1976, Caldwell 1969, Rempel 1981, Brown 1980, Gugler 1965,

⁴ This has also been discussed in Chapter one of the study.

Byerlee et al 1976, Birgsten 1978, Gulliver 1955 and Schapera 1947) to name just but a few. In adherence with this finding, Abbot (1974) sums it as follows:-

".... so that they can earn money that is now a necessity if they are to have the things they want and need, pay their taxes, educate their children and maintain a high personal status amongst their age mates"

Abbot (1974:85) [Unpubl. Thesis]

The necessity of money for reproduction is an aspect brought to the Africans in the process of and as a result of the integration of African economies to those of the west especially through the process of colonization. This entailed the transformation of the pre-modern societies of Africa into the type of technological and associated social organizations that characterize the 'advanced' economically prosperous and politically state-nations of the western world⁵.

Migration decisions are often familial other than individual (Ross 1968, Weisner 1969, Ferarro 1974, Byerlee et al 1976, Du Toit and Safa 1974, Caldwell 1969, Todaro 1976). This further supports the notion of the economic imperative as active and necessary but not sufficient in the migration decisions. Other important factors include the presence of kith and kin in town (Caldwell 1969, Ishumi 1984, Rempel 1981, UN 1974, Byerlee et al 1976). Two-thirds of those who migrate receive support from relatives and friends themselves earlier migrants. The possibility of a higher income in town however overrides most other reasons particularly that of the presence of Kith and Kin in town.

The young, educated, male predominates in migration flows (Rempel 1974, Lipton 1980, Caldwell 1969, Todaro 1971, Byerlee et al 1976 and Huntington

⁵ The integration of the African economies into the world capitalist economy and its effects on these has been discussed in Chapter 1 and in more detail in chapter 2 under the section; Theoretical Framework.

1975). As far as the effects of rural-urban migration on the rural area in general are concerned, this selectivity carries very important intimations⁶. One of these is the fact that, the rural area is stripped of the more active strata, the faction that would otherwise spearhead and mobilize the much coveted social change and economic development. Thus, after the migration of the young and educated male, the rural area consists of an old, female-oriented population that is characterized by a high dependency ratio. According to Mbithi (1974) and Rempel (1974 and 1981), children aged 15 years and below make up 50% of the population. In effect, a population less innovative and less receptive to change, technology and new farming methods even if these were to be channelled from the urban areas not to mention the high dependency ratio prevalent. In addition, this selectivity exacerbates the inequality between and within households, villages and regions. On Sierra Leone and Papua in New Guinea, Byerlee et al (1976) and Lipton (1980) respectively, support this strongly arguing that, the poor are 'pushed' off as the better off are 'pulled', often assisted by education, kith and kin support during migration and during the job search, and by the bigger rural surpluses generated by village inequality. The better off are able to invest in education for their children, the first to migrate, financing the education of their siblings to facilitate their migration.

The migration of the poor on the other hand is an escape from a village that harbours inequality, that is bound to weaken and render them poorer. Often, the migration of the poor culminates into whole-family migrations. Due to the high levels of education they attain, the better-off are able to enjoy chain or circular migration. They can better use contacts, they remain undeterred by

⁶ The effects of rural male out-migration on the rural area have also been briefly touched on in Chapter one of the Study.

distance, are more receptive to useful education at an even lesser cost not to mention that they are able to survive in an alien environment. Indeed as advanced by Rhoda (1980), migration seems to be positively correlated with family income level such that as a rural family income increases, it experiences higher rates of rural-urban migration.

Agreeing with this, Rempel (1981) argues that, contrary to common expectation, (that the poorest households with severely constrained opportunities and/or very low net returns on labour employed, produce a high rate of migration) some of the poorest regions provide a relatively low proportion of urban immigrants in Kenya. He hinges his proposition on the differences in goals and aspirations of households and the importance of accessibility to incomes for the realization of the same. The importance of income in the rural family's endeavours is here underscored. Both accessibility and constructive use of income are of great importance. Where realization of income is limited, it is those households suffering severest limitations that will migrate. This is because a household's aspirations are determined by its position in the community. In this sense, in a village with a fairly equal distribution of income and limited contact with external sources, the aspirations differ minimally if at all.

Urban dwellers live in a dual system. Gugler (1982) states that, "... for the typical migrant, a rural-urban move does not represent a complete break with the rural area." Quoted in Rempel (1981:137).

Literature abundantly advances that migrants maintain strong ties with the rural areas. Sabot (1979) asserts that, the strength of the rural ties is not the same for all groups. The distance between the rural area and the urban area may sometimes affect this strength particularly in respect to visits to and from

(Parkin 1975). Letters, gifts, visits and money indicate the existence of these ties or links. There is a general consensus as to the reason for retention or formation of ties. The inseparability of man and land is seriously underscored in the literature (Elkan 1960, African Perspective 1978/1 and Rempel 1981) are among the many scholars who talk about this. In the absence of social security schemes and/or compensations for unemployment for the migrant in the urban centre, the rural area remains the ultimate security in case of the souring of things in the urban area. Perhaps, more important is the retention of indirect usufruct over the land should urban life fall or become unbearably unsatisfactory or upon retirement. Indeed, Ndegwa and Powelson (1973) argue that, the separation between wife and husband is only tolerated for the sake of survival. This therefore emphasizes on the importance of land as social security (Van Velsen 1960, Watson 1958). In Africa, land ownership is one of the most important criteria determining an individual's identity and home. It assures his financial existence, family and social status. Land remains the sole source of income and guarantee of survival. Few of the migrants if any consider the urban area as their permanent home. It is often a place purposely for making a good income (Johnson and Whitelaw 1974, Caldwell 1969, Monstead and Kongstad 1980). The economic imperative therefore is the basis of most migration decisions as well as urban stay.

The incidence of severed ties cannot be totally ruled out (Caldwell 1969, Parkin 1975, Abott 1974). Placing a lot of emphasis on town life may lead to what Van Velsen (1960) refers to as 'detrribalisation' which could have serious repercussions for the migrant. It would entail the relinquishing of one's rights to the inheritance of his father's land, his one and only retreat from the insecurities of urban unemployment. Ferraro (1971) and Rempel (1981) however cite

examples of existing substitutes for some of the existing rural ties. For instance, concubines are often kept in place of the migrants' rural-based wives.

There are some (few) who on the other hand do not hope to return to their rural homes. They shudder at the mention of the rural area and are more committed to town life (Abbot 1974, Caldwell 1969).

But as Migot (1977) asserts,

".... the majority of urban migrants in Kenya do at no time have the illusion of severing their residential ties with their rural homes."

Migot (1977:117)

In addition to the economic reasons discussed above, migrants have sentimental attachments to their rural homes:-

".... Born and bred in the village many remain attached and often feel indebted to their parents and more distant relatives."

African perspective (1978;71)

Urbanites remain attached to the villagers with whom they have grown up and in the eyes of whom they enjoy a considerable amount of prestige. It follows that the city is ".... not considered a desirable place to celebrate major thresholds in the social cycle" (Ross 1973:84 in Rempel 1981:137). On this, Parkin (1975) also states that,

"The more committed he is to his family or lineage the more unlikely he is to migrate permanently and the shorter the time he will spend away from his domestic circle. But the weaker the attachment, the more likely he is to migrate either permanently or for protracted periods of time."

Parkin (1975:162)

Marriage for the African man contributes greatly to this commitment especially if and when the migrant's wife and off-springs reside in the rural area. Without examining more critically the population composition of the rural

area, after a substantial withdrawal of the able-bodied young enlightened males, Byerlee and Eischer (1972) argue that ties act as catalysts for the process of social change and development in the rural area.

Ties are a good medium of resource between the rural and urban areas as Caldwell asserts;

"In economic terms, the most important aspect of rural-urban migration is the counterflow of remitted capital and goods which characterize the migration stream."

Caldwell (1969:152)

This further marks the continued commitment of urban dwellers to the rural areas. There exists rural-urban and urban-rural transfer of resources, the former to a lesser extent. Rural dwellers hardly have anything to send to their urban kin (Rempel 1981). After financing the migration trip and giving to the migrant what meager savings that may be available from the rural areas at the onset of the journey there is not much else to be looked forward to from the rural end. There is however the occasional gift of food from the rural area which becomes more regular when there is food shortage in towns. Byerlee et al 1976, Byerlee and Eischer 1972 and Bairoch 1973, charge that, the rural area may be obliged to support the migrant with whatever meager resources, especially financially, during the job-search period. Lipton (1980) gives hint that this support may be severely limited to the better off villagers and is not therefore an aspect general to migration.

The primary aim of remitting is to improve the well-being of extended kin, to make the villages a better place to return to. The most important flow is thus constituted by individual migrants. The habit of remitting is widespread in the African continent.

On the Tonga of Nyasaland, Mabogunje (1970) found that,

"Total money sent home to the District is quite an amount larger at times in proportion to the population In 1953 it was £1 per head of 50,000 population compared to the 10,000 males absent."

Mabogunje (1970:272)

On Malawi, Monsted and Walji (1978) argued that,

".... the income from migrant workers constituted the third most important source of foreign currency (after tobacco and tea)".

Monsted and Walji (1978:142)

Anywhere in the world, however, International migrants transfer larger amounts of cash to their home(s) than internal migrants. Over 1/2 of international migrants typically remit between 20% and 35% of their earnings (Lipton 1980).

In Sierra Leone, the working population according to Byerlee et al (1976) remits about 50% of their earnings to the rural areas. For Kenya, the figure stood at 20% as of 1971 (Johnson and Whitelaw 1974). This is because, migration in Kenya is commonly that of the male head of household leaving the rest of his family in the rural areas to live off subsistence agriculture such as is the focus of this study.

The migrant is compelled by duty to remit a share of his income to support his rural-based family. Rempel (1981) argues that, having left the wife and children in the rural areas, the migrant must remit substantial amounts to support them. In Sierra Leone, income transfers are mostly intra-urban according to Byerlee et al (1976).

Concerning remittances in Kenya, a 1971 survey by the Institute for Development Studies under the auspices of the then Nairobi City Council, which was confined to low and middle income areas of the city of 1140 migrant males who had some sort of income in December 1970, found that 88.9% remitted regularly out

of Nairobi. The average amount remitted was Ksh. 85.70 p.m. The monthly income of the sample was Ksh 411.50 p.m. so that about 20.7% of the same urban wage bill was transferred to the rural areas (Johnson and Whitelaw 1974, Knowles and Anker 1977, ILO 1972). Implicitly, urban-rural income transfers in Kenya represent about a fifth of the urban wage bill and consequently the rural income is increased by about only 20% by the institution of remittances. This is too small a percentage to argue for necessity and/or sufficiency of remittances for the reproduction of the rural household. As opposed to the study at hand, this was an urban-based study. One should also give room for deflations as well as inflations. Apprehensive of the fact that they may appear unreasonable and/or irresponsible, many men may have inflated the size and regularity of their remittances. This is a common occurrence during research undertakings especially where income and other financial matters are concerned.

One might also note that the study was carried out way back in 1971, many changes have taken place in the country's Social, economic and political spheres. What with the ever-rising rate of inflation and that of the population? Chances are that it would be less than 20% today. Indeed Johnson and Whitelaw (1974) seem to be acknowledging this;

"The amount remitted is systematically related to income and other social-economic variables."

Johnson and Whitelaw (1974:7)

Rempel (1981) and Sabot (1979) agree with this position, in asserting that the proportion of income remitted varies inversely with the level of income, the level of education and the length of urban stay. The commitment of the migrant to the rural area, the possession of productive land there are also important factors, the latter of which Kershaw in the Review of African Political Economy

(1984 Double issue No. 27/28) argues that, it is the men with very little land that migrate first. Studying the Kikuyu, he found that it was the men with less than 2 acres of land that predominated migration flows. Monsted and Walji (1978) on the same assert that, 7% of all migrants in Kenya are completely landless. The proportion is too small for one to argue for a complete polarization of the landed and the landless in rural Kenya.

Rempel (1981) and Sabot (1979) therefore posit that the longer a fairly educated migrant stays in town the higher his income becomes but (ironically) the less he remits and the less frequent his visits become. He may even sever ties as a result of the high income with which he develops the means to become socially and economically secure and may in fact be able as argued by Mbilinyi (1974) to maintain a wife in town as well as one in the rural farm. This would further erode the need to maintain strong ties with the rural areas.

Through their effects on the economy of the rural area, the impact of remittances on the family's farm production may be determined. Agricultural production is the mainstay of the rural areas and as stated before, access to cash is absolutely important to both the reproduction and the production process. Further more, in most developing countries the larger proportion of the population resides in the rural areas. In Kenya the figure stands at 90% or thereabouts.

Caldwell (1969) suggests that, together with remittances, more knowledge, skills, ideas and techniques (preferably in farming) and ways of living may be channelled to the rural areas. One cannot help but wonder how practical this is, particularly with reference to farming techniques, given the fact that, the migrants are ideally no longer much of farmers and may not be sensitive to agricultural concerns. Secondly, on arrival in town, migrants have the difficult

task of first looking for employment. Indeed, Ndegwa and Powelson (1973:13) state that "migrants more often than not walk into unemployment". Some may end up never obtaining any and may opt to become 'self-employed' as shoe shiners, illegal liquor brewers, beggars and other such 'occupations'. Vandalism, thuggery and related 'professions' also become the order of the day (Thornborrow 1964).

Squire (1981) like Gugler (1968) asserts that people only move when they are assured of a job in town but the latter hastens to add that those awaiting the rising of opportunities may return to the rural areas after having tried their luck in town without success. This implies that even those still resident in the rural areas envision their migration some day. Even from one's own casual observation, Ndegwa and Powelson (1973), Todaro (1971, 1976) present a more agreeable picture. That the town according to the migrants, yields the best opportunities possible, that can lead to the achievement of a far higher income than can ever be obtainable from agriculture. Such that, though the potential migrants may be well aware of the minimal chances of employment in the city, they still prefer to 'walk into unemployment' as the better of the two evils (Ndegwa and Powelson 1973). After all, the agriculture they leave behind is not without risks, examples of which are crop failures, famines and price fluctuations amongst other things (Gugler 1965:13)

Remittances

The effects of remittances on the rural areas have been documented as widely varying. Johnson and Whitelaw (1974), Rempel (1981), African perspective (1978/1), Lipton (1980) seem to suggest that the welfare of the village may record some improvement. Byerlee and Eischer (1972) argue that the drain of the

educated youths from the rural areas is offset by the institution of remittances. Rempel (1981) talks of better housing, better health care, and more access to consumer goods while Johnson and Whitelaw (1974) see an increase in the aggregate rural income by 20% by the institution of remittances and also imply that a fairly significant increase in rural welfare is felt. Considering that the income in town is undergoing serious inflation, and is less and less able to provide all the means of life for the migrant, it is unlikely that 20% of it will increase rural incomes by any notable margin.

The African perspective (1978/1) posits that remittances are aimed at improving the well-being of those members of the extended family in the village and/or those likely to return later. Improvements, they hold, make the village a more comfortable place to visit and ultimately return to. Lipton (1980) writing about Papua New Guinea, is of the opinion first and foremost that, net emigration is concentrated on particular areas, groups and seasons and therefore a small national flow may considerably help to redistribute resources among and within rural communities and between rural and urban areas. If the net remittances are substantial, the villagers at home may achieve a given level of living especially if they put more effort into the production endeavour whereby remittances become ideally supplementary. This is however likely to exacerbate income inequalities in the rural area due to the fact that, the better off households and villages often are at an advantage over the poor as argued by Lipton (1980). Johnson and Whitelaw (1974) question the distribution of modern sector jobs across family units. As implied by the foregoing discussion, the welfare of the individual seems to depend on the number and closeness of relatives working in the 'high wage' sector. This aspect has seemingly become as important as that of the availability and distribution of land.

Most of the above-named scholars also suggest that remittances are beneficial to the rural area in that school fees for the youth are paid for, and later on their trip to town financed (their migration is made possible) by earlier migrants which is often all they seriously wish for.

On the other hand, most rural families tend to over-rely on this influx of cash and goods from the urban areas for their day to day subsistence. Monsted and Walji (1978) wrote that, in South Africa there were 500,000 foreign male labourers who had left their families behind as a result of migration, the economies of Lesotho, Malawi and Swaziland became excessively dependent on the income of these foreign workers.

In Malawi, the income from migrants constituted the third most important source of foreign currency after tea and tobacco. Indeed in Swaziland, in a survey of roles, tasks, needs and skills of rural women, conducted by the government through UNICEF and the Ministry of Education in 1978/1979, remittances were found to be the most largely subscribed to source of income. That is, most women depended for financial support from their working husbands and other members of the family, although a good number grew crops for sale.

Kerven (1979) studying the Tati people in Botswana found that agriculture was supporting only a quarter of the population while the other three-quarters depended on the remittances of absentees. Ironically enough, agriculture, according to her is dependent upon and subsidized by urban wages. The poorest 50% of the households in Botswana according to Brown (1980) in Robertson (1984), depended on cash transfers of income while in Transkei only 10% of households produced enough food from their farm to feed themselves. Instead, two-thirds of all food consumed was imported from outside. Brown (1980) stresses on the fact that it is only in female-headed households that show excessive reliance on

migrant workers income. Indeed earlier, Gugler (1965) stated that;

"Many rural areas have become dependent on this influx of cash and goods derived from wage labour to sustain subsistence level."

Gugler (1965:19)

One needs note that the areas cited above are dry, labour-exporting regions of Southern Africa where the women have little success in agricultural production even though land is plentiful and that most of them also have a socio-economic rural scene that continuously propels male out-migration.

According to Pala (1976), in areas such as Maragoli in Western Kenya, many families depend on cash remittances from absent members working in urban areas in order to procure basic food supplies. Remittances are therefore central to the production process as they serve to subsidize and supplement agricultural production.

When and if remittances fail or are too low, it is the family's farm production capacity that is likely to shoulder the bigger drawback. It would be especially so if the migrants and the potential recipients of the remittances mutually understand and agree that remitting is done only when money can be spared after the urban areas' expenses are taken care of. This is the view of Rempel (1981) and Kayongo-male and Onyango (1984). The cost of living in the urban area is normally very high in developing countries so that remittances are made at the stake of the migrant's survival.

All this indicates that migration should be seen as part and parcel of a particular kind of rural economy (the position of agriculture and political pressures) and not in isolation.

Besides causing dependence, remittances also lead to a shift in demand in the consumption pattern(s) of the rural people. According to Gugler (1965), this shift often leaves basic needs unsatisfied. It dates back to the time of the

integration of the African economies to the western economies through imperialism, colonialism and neo-colonialism which brought about the use of cash as a medium of exchange. Most economies of Africa have had to gain access by making major changes in their economic life.

Gugler (1965) asserts that,

"With the contact with the outside cultures established, the spread of new aspirations in sub-saharan Africa has been spectacular."

Gugler (1965:136)

Such that remittances are not used for the maintenance and continuance of agricultural production but for the purchase of food and other 'important' subsistence items (Van Velsen 1960, Johnson and Whitelaw 1974). The demand for rural products declines as the thrust of productivity falls due to the 'raised' cost of living. This picture is no doubt depressing as one may then conclude that remittances do nothing for the villages' productive investment and little tend to conserve traditional values and status at the expense of efficient production.

Lipton (1980) warns of the risk of associating particular changes in the spending behaviour of the rural dwellers (shift in rural tastes towards consumer durables) with sources of extra money such as remittances. The way in which money sent to the rural area is disposed of is the best measure or means of evaluating the effects of labour migration on the rural area. For instance, people may change from the use of breast milk to cow milk or to tinned baby milk to feed their babies but this should not necessarily be attributed to the availability of remittances.

The most striking feature of remittances however is that they are basically used for day-to-day time consumption rather than the maintenance and continuance of subsistence production (Caldwell 1969, Lipton 1980, Richards 1929, Byerlee et

al 1976, Rempel 1981, Van Velsen 1960). Indeed, Lipton (1980) posits that in India, 90% of remitted money is conspicuously consumed to reinforce status particularly by the better off households, building houses and educating other members of the family to facilitate migration. In his study in Sierra Leone, Byerlee et al (1976) observed that remittances were mostly used for consumption purposes and that only one-half of it was used for hiring labour and for the purchase of small equipment while the rest went into school fees and medical expenses.

Investments are hardly made except by the better-off households and when they are, they are often outside or in mere capital transfer rather than capital creation like buying more land to expand farm production or hiring labour and mechanizing the farm. Yet it is extensively argued in the literature on migration that migrant workers only work in town long enough to equip their farms and make them better-yielding and that in fact they may appear to have limited wants to ensure they achieve their goal.

"The fruits of their work in town come to them not in the form of an immediate increase in consumption but rather in the higher yields of better-equipped farms."

African Labour Conference (1961:301)

Cadwell (1969) also suggest that,

"The great majority of intending migrants award the highest expenditure priority to the establishment of a firm base back in the village to which they might well return later."

Cadwell (1969:124)

This implies that helping to enhance agricultural production in the rural area would be one sure way of establishing a firm base in the rural areas.

studying the Tonga of Nyasaland, Van Velsen (1959) observed

that,

".... however long they have lived in the towns they continue to take an active interest in what goes on at home because sooner or later they intend to return."

Jaap Van Velsen (1959:265)

Gugler (1987) when re-visiting of 'Life in a dual system' in Enugu Nigeria came up with a similar assertion. Much as those he studied seemed dedicated to an urban life, they were equally committed to rural retirement and burial and thus kept ties with the rural areas alive for one, through remittances but as said earlier, this also depends on the political affiliations and the security 'enjoyed' by the migrants in the urban areas of the particular country.

Of Kenya, Rempel (1981) argues that, remittances may not be beneficial to the welfare of the rural area because of the mere fact that the sender may not be in a position to control the utilization of the money. He therefore implies that, for it to be put into constructive use, its use must be supervised and controlled by the migrant. It is an indisputable fact that, many rural-based families tend to resort to unwise consumption of this money at the expense of farm production. It must however be appreciated that, the way remittance is spent by the rural household first and foremost, depends on the economic status of the family more than anything else.

It has also been argued that only a few households receive remittances and the amount remitted is also small. According to Research Report No.70 of (1983), remittances are notable by their absence. Monsted (1978) agrees with this, saying that,

"Among the peasant households, only 1/2 of the women receive regular contributions to support the family."

Monsted (1978:9)

In some (several) instances, migrants may not consider it their obligation and responsibility to pay for the regular cost(s) of supporting their families but may leave this to the woman who more often than not, has not the means to do so. On this, Michael (1964) stated that,

"Migrants usually keep all the details of their income secret from their wives and make payments more for specific needs than as a regular monthly allowance"

Michael (1964:106)

Writing 16 years later, Brown (1980) agreed with this proposition,

"The male migrant workers may not remit enough and not regularly leaving women with the chief responsibility of raising the children but without the secure means of doing it".

Brown (1980:5)

Rempel (1981) and Allen (1976) attempt to justify this by arguing that the wages of most men are too low and that the family back home understands or is supposed to accept that money can only be sent after the migrant has covered all his urban living expenses, such that he may have very little or even nothing to send home in the end.

".... he will not have money to spend in any case because his costs for food and housing will be relatively high and his wages low."

Allen (1976:36)

Despite this excuse, failure to remit would entail a breach of faith as per the initial intention of the migration in that, the improvement of the family's welfare as promised at the onset of the move seems 'forgotten' and the migrant becomes more concerned about his own welfare. It is also easy for the migrant to succumb to the temptations of town life - alcohol, concubines, night clubs etc (Kayongo-male and Onyango 1984).

In India, Lipton (1980) not only saw small net remittances, relative to village income but also their concentration on the richer village households which are already unlikely to suffer from capital constraints. Positive remitting here is disproportionately limited to the better off households which are the source of most migrants anyway, further exacerbating intra-rural inequalities. Besides this, rural women are financially dependent on their husbands and/or sons who are wage earners (Brown 1980). Because of the unreliability and irregularity of remittances, women face insecurities in their lives and their children run higher risks of malnutrition in Kenya (Kayongo-male and Onyango 1984).

In the face of such irregular and unreliable remittances and the fact that they lead to dependence and to shifts in demand for the rural populace as is suggested by the above discussion, the women's role in improving the rural area may not be of much significance.

Women perform many vital economic and Social functions. This is because they form the backbone of the non-monetized production unit Crehan (1983) and Boserup (1970). The role of women in food production for instance need not be overstated.

"Africa is the region of female farming par excellence. Nearly all the tasks connected with food production continue to be left to women".

Boserup (1970:19)

Yet not only are they economically weak and peripheral, their position as dependents is insecure, as Brown (1980) puts it. They also reap few economic rewards. According to Lewis (1984:170), African Women are "the invisible farmers of African agriculture". Under the circumstances described above, they often have to look for other means of survival particularly in the absence of their male

heads of household. They turn to non-agricultural work, selling their labour and thus their own farm work time. They may also get engaged in petty trade and may re-invest the meager profits earned into the purchase of those things that they may need but cannot grow - soap, Kerosene, salt, cooking fat etc. Pala (1976) justifiably asserts that farm produce can be sold in small quantities freely without consulting the man and the women would be at liberty to spend the income thus earned in any way deemed best. Pala (1976) also found that Digo women generally only engage in very limited forms of trade, selling rice cakes, cooked fish and other prepared food. Hay (1976) observed that Luo women of Kowe in Seme location were primarily involved in local trade in grains and other food stuffs including fish and chicken. The little that is earned is normally used very sparingly sometimes for projects as important as the education of the children (Pala 1976). Indeed in Kenya, according to Monsted (1978), women contributed to the childrens' school fees in more than 40% of the households even in cases where the woman was not a permanent trader. Mullings (1970) brings out the fact that, such women in Senegal, were only able to educate their children to lower status jobs but some of them seemed to have gained in wealth and influence. In Africa, women are seen to sacrifice a lot for the sake of their childrens' education. One way of doing this is by going easy on their own needs in order to invest their meager savings in school fees even when they are receiving no or negligible remittances and subsisting on very small land holdings. Hay (1976) and Pala (1976) argue that, due to the absence of adult men in the rural area today, most women in the rural areas are forced to sacrifice even more for the sake of their childrens' future.

Other adaptive measures that women take include, keeping strong ties with their kin as a source of financial assistance and reassurance, in a bid to

utilize all the sources of support available to them. Some of these are customary law, natal kin, marital kin (including children) and self-help organizations (Research report No. 70 1983, White 1984).

In western Kenya, wives of migrant men lived in their absent husband's households, subordinate to their mothers-in-law. As is often the case, relationships with in-laws obviously turn brittle. Pauperized Kisii women took off to their parents homes after disastrous marriages, when their husbands' low wages failed to make up for the mother-in-laws' labour demands and animosity while frustrated women ran off with migrants heading south in Upper Volta. In Nigeria, they persevered however unhappy until/unless they were driven off (White 1984). Such oppressive conditions of living may not be favourable for effective farm production.

The Control of Income and Other Rural Resources by the Rural-based Women

Matters are made even more complex for the African woman by the fact that women in the traditional African society were never entrusted with the control of resources in the farmstead. In Kenya, Pala (1976) observed that control of income for instance rested with men who themselves were residing several miles away an observation widely corroborated in the literature on migration (Henn 1984, Government of Swazi 1978/79, Hay 1976, Feldman 1984, Mabogunje 1970) to name but a few. This is generally the dominant trend in Kenya today. The man controls the purse strings and is the main decision-maker in as far as the households budgetary tasks are concerned.

As yet, most women are illiterate despite a notable higher rate of school enrolment by girls. Their wages everywhere in the world are lower than those of

men and they do not have much say in money matters due to this mere fact. Men detest and regard as illegitimate the control of farm resources by women. Upon the migration of the male head of household, not only does the woman take over the control of income, she may also become the de facto decision-maker in the household (Pala 1976, Wesley Editorial Committee 1977, Research Report No. 70 1983, White 1984).

In a study of Kikuyu families, Kershaw (1984) found that farm decision-making had actually shifted to women. This entailed a reduction of the men's decision-making role as White (1984) advances. As to whether this means rewarding, re-dedicating and/or motivation of the women towards their farm production tasks, is the big question.

Suffice it to say here that,

"women who take over managerial farm functions on the farm after labour migration may command a higher status than previously".

Research Report No. 70 (1983:19)

On the other hand, this may prompt them to look for other means of survival outside the farmstead other than concentrating or increasing their efforts on farm production.

The retention of the control of income and other resources by men residing perhaps thousands of miles away, firstly, indicates a deeper struggle by men to retain control over female labour (Government of Swazi (1978/79). Secondly, it is facilitated by the fact that in most traditional African Societies, Kenya included, women do not own land, they cannot inherit, buy or even alienate land and only gain allocation through their relationship with men (Fisher 1950, Kenyatta 1953, Feldman 1984, Mbithi 1974, White 1984, Mbilinyi 1974, Government of Swazi 1978/79, Boserup 1970). The effects of land adjudication and measures

of registration have further concentrated land in the hands of men on the basis of private ownership thus even tending to erode automatic rights of access to female members of former landholding groups such as lineages (Okoth Ogendero 1977). In essence, this means that they have no other way of supporting themselves and have to depend on their husbands even for the development of their farms. They cannot secure a loan with which to institute improvements as the land (would-be security) is vested in the man's name. He at the same time is reluctant to 'risk' the farm on a loan for fear of losing it in case of default in loan-repayment. Any change that is to be brought in agriculture therefore must meet the husband's approval. To most women this situation presents a real obstacle to progress in the different activities (Government of Swazi 1973/79).

Access to cash is an absolute necessity for the production process, so is land yet female-headed households have less land and may subsequently reap lower yields (Lewis 1984). This is basically because women face political barriers to ownership of land, credit and membership in the cooperatives and also access to agricultural extension services. In Kenya, a quarter of the households are female-headed, yet only 5% of the women own land in their own names (Crehan 1984). Although households do not always become female-headed due to the migration of the male head of household, this fact tells us that the rate of male migration is quite high in Kenya and this kind of proportion goes for all the factors associated with it. Compounding this even further is the fact that most women accept this state of affairs as their lot;

"But working with money tended to be a characteristic of the elite and it was not something the women could count on".

Hay (1976:6)

As a result, women's agricultural production will always suffer as

decisions about major changes in crop production, livestock and other important aspects to improve their production are in the hands of migrants who may not be around when problems arise let alone when the need to make changes is felt.

In addition to this, the domestic duties of women have tended to restrict their access to the few economic opportunities that do exist so that whether as commercial farmers or wage employees men have been better able to grasp such opportunities while women continue to service them by food growing, domestic labour and child care (Feldman 1984). Implicitly, the lack of independent access to cash and control over land most increases the dependence of women on men.

The Division of Labour

One other way of measuring the effects of migration on the rural household's farm production capacity is by looking at the division of labour.

".... a clearly defined and specific division of labour is an unalterable fact of nature".

Crehan (1984:55)

Indeed in the second volume of Platos "Republic", Socrates outlines a community in which all individuals are equal and each one practises a different trade according to talent and ability. (Aldo Martinus 1973). This is the ideal typical or utopian community hardly found anywhere in the world.

Due to man's heterogeneity of specialization there is always inter-dependence upon each other in any society. In the case of economics not only is production enhanced it is also speeded up and made cheaper. The process entails a fragmentation of labour and anticipates leading to an extreme hierachisation of tasks.

Based on this we find a division of labour along sex lines in the

traditional African society dating back to the colonial era. Biologically, the man is taller, heavier and more muscular and possess a greater capacity for massive physical exertion. On the basis of this, the man is apportioned the heavier and harder tasks. The woman is said to be physically weak and to possess a weaker rationale and less stable emotions. It is also alleged that she is not capable of handling the tasks requiring a stronger physique, a logical mind and/or disciplined emotions. On the basis of these, she is apportioned the lighter tasks. Inevitably most of those apportioned to the man include those that confer prestige, power and other 'rewards'. Nommand (1973:3) however shows that there is much more to it than merely the biological make up of the two genders. Every society redefines and elaborates upon its definitions of sex rules by stereotypes. Division of labour is therefore also rooted in custom and tradition and therefore more of a tradition than anything else. Division of labour along sex lines differs from tribal group to tribal group and adherence to it is in varying degrees of strictness, give the geo-physical environment of the group. Everywhere, a woman's major role pertains to the economics of consumption. It centres upon the care of the household and maintenance of food for the family. In Africa, 69-80% of all agricultural work is done by women (Jacobs' 1984)

In Nigeria house building, hunting and warfare are a man's responsibilities (Nommand 1973). He asserts also that amongst the Yoruba of West Africa the men are entirely responsible for cultivation while women do most of the day in day out jobs like sowing, weeding, and harvesting in addition to the more time-consuming work of converting it the raw form into into edible food.

The Bemba men fell trees while the women pile up the branches for burning (Nommand 1973). They the burn the branches to make ash fertilizer, perform animal husbandry and are also preoccupied with trade. The men engage in full-time

farming in the form of plough agriculture associated with market exchange system (leaving the rural area following the footsteps of their fathers). The foregoing discussion implies that women's economic participation in the periphery (satellites) of the world capitalist system has been conditioned by the requirements of capital in the wage labour-force thus directly in the production process; in the periphery, capitalist expansion tends to intensify women's labour force in non-capitalist modes of production. It does not mean therefore that women's labour force is unimportant in the periphery, rather the majority of Third World women are basically rural-oriented and their economic participation is particularly notable in the rural areas where they participate in subsistence agriculture and petty commodity production as well as circulation (Deere 1979). A clear understanding of the articulation of the modes of production within a given social formation is a necessary prerequisite in studying women's work and its significance in the development of female social status.

The division of labour by sex as discussed above characterized by male semi-proletarianization and the production of subsistence by females allows for the payment by capital of a male wage rate insufficient for familial maintenance and reproduction. The wage is in this way less than the cost of production and reproduction of labour power. The value of labour power is thus lowered within the periphery either to enhance peripheral capital accumulation or is transferred to the centre via unequal exchange and other forms of surplus extraction. Women's production of foodstuffs within the non-capitalist mode of production thus lowers the value of labour power, indirectly enabling surplus extraction for capital accumulation. Women's agricultural participation help maintain the cheaper labour force for capitalist expansion and accumulation. Boserup (1970), comparing women's agricultural participation in Africa and Asia, illustrates how

division of labour by sex contributes towards the maintenance of the cheapest labour force for the export economy given the demographic and ecological conditions that influence the type of cultivation. Van Allen's analysis of the effect of modernization on African women gives suggestion on how the development of African export economy has depended on the development of rural women (Allen 1974). Low wages and high profits have been achieved due to the contribution of women to the family's subsistence production.

The profits extracted from Africa,

".... would not be possible except for unpaid labour of wives of their African workers, who feed, clothe and care for themselves and their children at no cost whatsoever to the companies. Far from being a drag on the modern sector then as it is sometimes claimed, the modern sector is dependent for its profits on the free labour done by women."

Van Allen (1974:65)

One also needs to note that the agricultural division of labour by sex is not just responsive to the capitalists desire to maintain a low wage, rather intra-familial labour deployment is responsive to the need to attain subsistence in the face of rural poverty which in essence is but a reflection of the overall pattern of peripheral capitalist development. This is characterized by the growing lack of access to the means of production for subsistence which forces the peasantry into wage labour despite the inability of the capitalist economy to absorb the available labour supply. Division of labour by sex thus reflects a familial reproduction strategy to these overall social-economic constraints. They are not conscious of what the capitalist system is doing to them, but are merely responding to growing limitations on their ability to survive.

Within a social formation, once the capitalist mode of production becomes dominant, the articulation of modes of production must affect capital

accumulation by increasing the rate of surplus extraction. This factor is examined more closely in the next section of this study that basically addresses itself to the theoretical framework.

Suffice it to summarize here that, the external cost of rural skill drain falls overwhelmingly on the country side. As argued by Lipton (1980) and Byerlee et al (1976), the villages' labour, land and capital is reduced by labour migration and if the family is to survive some temporary and perhaps permanent measure must be employed.

Few households can afford to spare any money to hire labour. Hiring of labour increases costs of production through supervision, credit for wages or simply reduced average labour productivity. Lipton (1980), Monsted (1978) found out that it was in the poorer households that women bore a larger burden of work since richer households were able to feed and hire labour to either supplement or replace family labour. On the other hand a total shift from family to hired labour while perhaps increasing the power of employment, wage or prestige of the labourers may reduce the incentives to heavy and efficient labour input especially if many of the supervisors are women who may not easily command the respect of labourers used to taking instructions from men. It must be appreciated however that, if the labourers come from a lower social strata (which be the case often) they are likely submit to female supervision or command. The fact that hiring labour means an introduction of inexperienced man/hours by new members which would expectedly lower output per worker and per man/hours should also be borne in mind (Lipton 1980).

Most African traditional societies have therefore reverted to cooperative work groups known as Ngwatio or Gwita Wira in Kikuyu. (Stamp 1975, Kenyatta 1953, Fisher 1950). The groups normally consist of kin, affine, friends and

neighbours who are rewarded with food and drink produced by the beneficiaries. Watson (1958) and Read (1942) argued that patrilineal groups survived better the hustles of migration because basic village groups were related and thus were corporate in coordinating their absences from home so that traditional life and agricultural actually thrived in conjunction with the migrant system. The migrant's wife eagerly takes her place in the cooperative work parties to ensure the cultivation of her absent husband's fields in return for assistance in her fields. Gugler (1965) This means that those tasks that can only be performed by men are left for men (those still resident in the village) Indeed Van Velsen (1960) wrote on the Tonga of Malawi who organize to leave at least one man in each hamlet or embarked on seasonal migration whereby a man helped in the cultivation or harvesting and then returned to his place of work.

Amongst the Ngoni of Tanganyika, a man would help in cultivation work during the wet season, during harvest and fairly afterwards and perhaps having already arranged for the next wet season, he returns to his place of work (Gulliver 1955). There would be peaks of absenteeism and those periods which the man could not afford to be away. It is important to note the impracticability of this kind of arrangement in present day Kenya. The Ngoni normally migrated to nearby sisal plantations. It may in fact not be possible even in present day Tanzania. Cooperation in rural production reaches beyond the nuclear family and the range and degree varies. For instance there is also the institutionalized co-operation which is chiefly found among women who are close friends helping each with garden work and seldom with domestic work.

Lipton (1980) came across irreversible forms of adaptation in Papua New Guinea where the villages have changed from labour intensive to pasture. It is costly to reverse, not to mention the reduction of calorie output per acre.

Other tolerable adaptations would include less labour-intensive annual or seasonal crops, an altered seasonal pattern or a change in the balance of current inputs. Richer families he argued may purchase more land, employ labour-saving techniques for instance, flanked by remittances they could purchase labour-replacing capital e.g tractors. They are also in a position to borrow finance, and thus invest. Poorer families can do none of these.

However, they could counteract things by migrating to nearby places, visiting over the weekends, changing existing or potential crop structures, adapting new crops and/or varieties which permit the spreading of labour peaks and may even increase total output while reducing seasonal labour input.

But the overall picture is less heartening. Changes in the division of labour can be seen to have a negative impression on the rural family's farm production capacity due to loss of the much needed male labour. This is contrary to the belief that the rural area has a surplus of labour poorly utilized. Lewis (1959) for instance, in discussing the dual economies with which he characterizes most developing countries, a traditional overpopulated sector with a zero marginal labour productivity a situation that leads him into classifying this labour as "surplus" in the sense that it can be withdrawn from the agricultural sector without any loss of output. But even from one's own casual observation the situation is as purported by (Todaro 1976,1971) i.e. it is the urban area that has surplus labour as the rural areas keep loosing out to the urban areas. Even in this context it would be seemingly right to expect the rural areas main occupation (agriculture) to suffer from this massive loss of labour.

THEORETICAL FRAMEWORK

The search for a macro-theoretical framework capable of ordering the wide range of comparable observations on economic development and social change of Third World countries has been a major pre-occupation of social scientists over the past two or more decades. This search has led to massive amounts of literature on the development and under-development of Third World countries. To make matters more complex, there is such a great range of variation among contemporary under-developed societies that they cannot simply be described and/or analyzed by a single model.

As such, it is not that we have found here the ultimate theoretical framework upon which the problem of rural male out-migration vis a vis rural subsistence production can be analytically and/or descriptively evaluated. It is merely an attempt at the examination and assessment of the modernization and underdevelopment theories and their analytical and descriptive utility for comprehending the afore-mentioned problem; a type of social transformation occurring among rural populations of Third World countries.

Modernization is a word that has been used to describe two interrelated phenomena: process and theory. Daniel Lerner, a strong proponent of modernization theory defines it in explicit terms as, '..... the process of social change whereby the less developed societies acquire characteristics common to the more developed societies" (Lerner 1968:387 in the Encyclopedia Social Sciences).

He argues that the use of this term is rationalized by the need to search for a new name to describe the old process i.e. imperialism. It is a process activated by both international and inter-societal forces and/or communication. Nyangira (1975) calls it the process by which institutions are adapted for

purposes of creating modernity. It influences a wide scope of the life of the individual and society and thus is complex. Modernity he asserts, is indicated by urbanization, per capita income, education, communication and transport system. He and Soja (1968) concur on the assertion that the individual is the most important aspect of this process whose aim first and foremost is actually to make him (man), modern. The individual must be the one to work towards change (either willingly or through internal or external stimuli). It therefore involves profound changes in the individual and group. 'A transformation of the individual's psychological traits and subsequently values, attitude, wants and aims is thus called for. He must feel the need to exploit opportunities and engage in activities profitable to him for the purposes of achievement. According to Long (1977), Wilbert Moore (1963) is of more or less a similar opinion. He holds that the concept of modernization denotes a "total transformation of a traditional or pre-modern society into the type of technological and associated social organization that characterize the 'advanced', economically prosperous and relatively politically stable nations of the western world" (Wilbert Moore 1963:89 in: Long 1977:9) It implies therefore the transformation of the 'traditional' into 'advanced', 'modern' or 'capitalist'. Smelser (1963), basing his assertions on structural differentiation argues that a developed economy and society is one highly differentiated structurally and an underdeveloped one is one relatively lacking in differentiation, implying therefore that change centres on the process of differentiation. Differentiation here denotes the process by which specialized and autonomous social units are established in all spheres of human life - the economy, the family, the political system as well as the religious institutions.

As a theory, modernization is an embodiment of those ideas that seek to explain the causes and remedies of backwardness, thus an ideology of development.

Before colonization, there was widespread belief that the colonizers were both developed and modern, an example to the rest of the world. On the other hand, the colonized territories and peoples were seen as backward, primitive and therefore uncivilized, unmodern. Indeed, one of the justifications for colonization was that there was need to bring up these backward peoples to a level comparable, if not equal, to the developed world. As it turned out, colonialism was less than altruistic.

The process of independence and the years immediately after it were seen as a 'transitional' stage, where previously uncivilized peoples were entering a modernizing phase. Afterwards, the catch-phrase of 'nation-building', which is still common in many African countries, was used to mean the various attempts to modernize in such an image. The persistence for many years of a global dichotomy or polarization of the world between developed - undeveloped, civilized - backward, modern-traditional etc. was the result of the belief that, Europe, especially Western Europe, the so-called imperial powers, and later the United States of America comprised the developed, civilized modern world, whereas Africa, Latin America, Asia and the Far East formed the backward, primitive and pre-modern world.

Following this belief, the process of modernization became almost synonymous with such terms as Europeanization, Westernization and even Anglicization. For the backward peoples, development became imbued with an aspiration component and the yearning or striving to resemble the modern world. There arose a general feeling and need to acquire similarities (socially, economically and politically) of achievement analogous with those observed in all

the modernized societies. Such similarities according to various of its proponents could only be achieved, it was felt, through concerted efforts by forces working both from within and without the backward societies.

In the late 1950s and early 1960s, modernization had become a subject of academic debate where economists, political scientists, anthropologists, sociologists and even psychologists made various contributions. In this debate, the economists led in arguing that economic development was actually the most important element of modernization. Thus, economic performance became the yardstick for measuring the degree of modernization in any society. W.A. Lewis for example, stated that, economic performance was the 'growth of output per head of population' (Lewis, 1959:9). According to this school of thought, a modernizing society is one that produces a social environment in which rising output per head is effectively incorporated.

For a rapid economic growth to take place in the pre-modern societies, several things must happen as precursors to the modernization process. Firstly, such societies must have a new orientation, they must be able to understand and appreciate the 'rules of the game', i.e. they must undergo a transformation in achieving new, development-oriented behavioral patterns or traits, especially those related to wealth generation, thus capital accumulation. Secondly, they have to undertake the re-shaping and re-sharing of all social values such as power, respect, affection, well-being, skill, enlightenment, etc. Thirdly, they must cultivate the will to modernize, a will that is mostly politically motivated and sanctioned.

There is not really consensus among social scientists as to what constitutes modernity. However, as mentioned earlier, the main argument revolved around economic decisions on investment and resource distribution among various

sections of the population. This is because, it is only with a sound economy that any nation can effectively address the key areas of any modernization effort such as, population growth; urbanization rates; family structures; socialization of youth; education of the citizenry, mass media and so on.

There are five generally held criteria of modernization or modernity according to Lerner (1968:387):-

:-economic growth that is capable of increasing both production and consumption regularly.

:-a measure of public participation in the polity, where democratic representation is paramount.

:-diffusion of secular-rational norms in the culture, for example, a shift from ascriptive to achievement orientations.

:-an increment of social mobility (physical, social, psychic).

:-transformation of personalities, from self - to - other - seeking characteristics.

It is therefore possible to understand why modernization was taken to mean Europeanisation whereby, 'pictures of modernity' have always been relayed or transmitted from the west to the modernizing nations. No wonder that, for the above things to happen, they had to be catalysed from outside, through the injection of foreign capital, manpower, technology etc. Many modern states have since been apparently 'spending' huge sums of money and other resources in an endeavour to help modernize the backward nations. For instance, as early as 1968, the USA was spending as much as \$3-4 billion annually on modernization efforts abroad. The net effect of such 'help', when judged against the net outflow of resources from these 'recipient' countries, is questionable, however.

such money and other resources (loans, grants, personnel, packages etc), in a word, foreign aid, was and is still meant to transform the recipient countries from their traditional, archaic leanings, ideologies and institutions to new, modern societies. It therefore became fashionable to consider the persistence of traditional societies, mannerisms and orientations as the root cause of backwardness and an obstacle to progress. Modernization was then taken to mean the collapse or demise of traditional society through rational planning and policy formulation. It is ironic to find that development efforts on the part of these rich nations often end up reinforcing the structures of backwardness e.g small family farming.

Various models have been put forward in an attempt to explain modernization. These models fall within economic, socio-cultural, political and psychological domains. To begin with, W.A. Lewis (1959) postulates as stated earlier, that modernization must be seen as economic growth in terms of 'aspiration and metric achievement'. D.C. McClelland (1961) talks about 'achievement-aspiration ratios' in other words, the relationship between what is aspired for and what is achieved. Seymour M. Lipset (1960) sees modernization in terms of 'social and institutional change'. This is a socio-political perspective. And lastly W.W. Rostow (1960)¹ talks about 'self-sustaining growth' in what he calls the five stages of economic growth and development. For

¹ For a detailed discussion of The Stages of Economic Growth as advanced by Rostow see: P. Wosley (1970), W.W Rostow (1960).

Rostow (1960), development occurred in stages. Basing his theory on economic history, he distinguished the following stages:-

- :- the traditional age
- :- pre-take-off period
- :- the take-off stage
- :- maturity stage
- :- the age of mass consumption

In the first stage, traditional modes of production and values prevail. The tools of production are rudimentary and limited in quantity. The techniques used are not science-oriented. Perhaps due to these, output remains at a basic level, innovations are few, but increasing with time. Agriculture remains the dominant sector and feudalism as well as other non-capitalist systems of production may prevail. The society in this period embraces division of labour based on age, sex, family, clan and such other traditional structures. These structures determine the mode of property ownership.

With time, people improve on their methods of production and new products come up. These call forth more innovations. Values and needs of the people change 'for the better' and they desire to break away from the traditional society. New religions come up, new methods of trade are described, and the structures of traditional society start crumbling down. People become more adventurous and with time move towards the 'take-off' stage. During this transitional period, the economy becomes oriented towards industrialization. The social overheads get mapped out and the agricultural sector slowly becomes modernized. The economy experiences faster growth relative to the growth rates of the traditional society. The whole structure of the society including its values, expectations,

attitudes, division of labour, etc., undergo major changes. These changes spell out the transition to the take-off stage.

While the force behind these changes may be generated internally i.e from within the society, external factors may come into play and cause change. Factors such as war, modern education, demonstration effect, etc., instigate change. Irrespective of the source of the force behind the change, when it occurs, it spreads like a bushfire, according to Rostow. People become more enterprising and endeavour to increase investments. In spite of this, an economy will only enter the take-off stage when radical changes occur in a way that they build up and strengthen the "social overhead capital". That is, when a good amount of capital formation has occurred. Necessary also is a revolutionization of technologies such as those used in agriculture and an increase in the "production and marketing of natural resources for exports" which go to finance imports. Rostow emphasizes the importance of ploughing back the profits arising from these changes which in our view may not be possible in view of the fact that this is financed by foreign investment. Until and unless investments rise well above population growth, and stand at 10 per cent or more of the national income, the take-off stage is not achieved.

Once the foundation for take-off is laid, growth takes place in a 'geometric' progression. The take-off is a short term period lasting not more than three decades and follows radical changes of the pre-take-off period. These changes, if effective lead to an expansion of the modern sector especially with respect to industries.

During the take-off, much of the development is concentrated in the leading sectors which could narrowly be viewed as the agricultural, industrial and the transport sectors sometimes referred to as the leading sectors. But what

constitutes leading sectors in a given time may not of necessity hold at another point in time. The sectors involved keep on varying with time and with the development stages. A growing and effective demand is crucial during the take-off stage to ensure a market for the goods produced. There is also a need to ensure that investments in the leading sectors are substantial so that the sectors can have the necessary capital for the production of goods that lead to growth in other sectors and for innovation. Investments depend on savings and a cultural change of attitude towards savings is thus required in order to raise investments.

If economic growth is sustained for a long period extending well over four decades, the economy can be said to have entered the maturity stage. In this stage, workers are highly skilled, urbanized and organized and production is very efficient. The yearning for change is ever stronger in this stage. Technological innovations and development introduce new products and new techniques of production. Such sustained economic growth ensures that an economy attains stability to withstand any internal or external shock.

Closely following the maturity stage is a period of high consumption of consumer durables. Life is very urbanized and people are migrating to cities at an ever increasing rate. Welfare improvement preoccupies the state during this stage. This concern leads to a distribution of income that is more equitable. The economy tends towards full employment and the maximization of leisure consumption increases the welfare of the population.

Features associated therefore with modernization or modernized states include:- industrialization; rising national incomes and per capita media; power sharing; participation in policy-making; party membership; voting on the basis of universal suffrage; authoritativeness and legitimacy; empathy, need

achievement orientations and taking account of all the diverse cultures, that make up a nation and all other "local-temporal" variants.

The concept of modernization is deeply rooted in the structural functionalism of American social science which developed in the concrete, historical, political and ideological context of the United States becoming the dominant western power and using this dominance to attempt to check communism as well as to maintain its hegemony in the underdeveloped countries of Asia, Africa and Latin America (K. Kinyanjui 1979).

American capital played a leading role in the reconstruction of war-ravaged western Europe and stepped into positions formerly occupied by the retreating colonial powers in the face of the nationalist struggles. In this way, she became the dominant economic and political power in the second World War and in the post-war era.

In the process of 'rescuing' the newly independent countries from the state of underdevelopment, and ushering them into the industrial-technological age, it became the dominant western power later spreading its wings to the countries of the Third World (Africa, Latin America, Asia, and the Far East). America's efforts were based on abstract models of modernization and human capital. In the latter, the importance of investing in the development of human resources as a means of overcoming underdevelopment in the Third World was emphasized. This emanated from the general belief that these countries were poor not because of the nature of the international economic relations but because of the internal characteristics, specifically, their woeful lack of human capital. A radical structural change for the better in this respect was necessary. As Wallerstein (1979) suggests, investing in the development of skilled manpower in Third World countries, for instance, was meant to lead to what had already taken place in

western Europe. Rostow (1960) advanced that for this to happen, foreign capital had to be channelled into these countries.

Social theories evolve out of the existing bodies of theory as well as in the prevailing social, economic and political contexts. The modernization approach attests to this fact; it is founded in the classical economic theory. It is generally held by the proponents that, if allowed to take its own course, the system of large scale farming will expand and become the exclusive form of production whereby the accumulation of capital will occur at one end as the marginalization of labour (de-peasantisation) occurs at the other, with peasants selling their pockets of land as well as labour increasingly to large scale farmers for survival. Indeed, Smelser (1963) identifies this (commercialization of agriculture) as one of the processes of economic development. This occurs, according to him, in relation to other processes such as, the modernization of farming techniques from simple traditional tools and techniques to the application of scientific knowledge; industrialization as characterized by a transition from the use of human and animal power to machine power, and urbanization as characterized by changes in the ecological dimension and the movement from farm and village towards the growth of large urban centres. These may occur simultaneously or at different rates. This way, the traditional sector is gradually absorbed by the modern capitalist sector and thus modernization is said to have occurred or to be occurring⁸.

Suffice it to state here that, whatever the definition, basis or foundation of the process of modernization the most important thing to note is the essence of the concepts and underlying assumption of all existing variations, that is,

⁸ Basing their analysis on the resilience of the non-capitalist modes of production in the Third World, some scholars have argued that this is not an inevitable process.

the transformation of underdeveloped countries into the images of western industrialized societies in values, norms, institutions and political orientation. It is assumed here that 'traditional' is the original state of all societies and Third World countries will follow a similar development path as was followed by western industrialized countries. In Wallerstein (1979) and Rostow (1960) one also notes that precision in the description of the desired end is not called for.

The theory has generally been challenged and criticized on the basis of its ideological orientation, empirical usefulness and explanatory ability. While it is beyond the scope of this piece of work to go into the specific criticisms levelled at it, suffice it to mention a few of them here.

First and foremost one notes that, whereas the western experience was of an industrial revolution from within, that of the Third World was brought about by the impact of western technology, the transfer of social and cultural skills from outside rather than from within, mostly initiated by the process of colonialism and by political superimposition through colonialism.

A.G. Frank (1969:94) although writing basically on the Latin American case, stresses that, Rostow's perspective attributes a history to the developed countries but denies all history to the developing and yet goes ahead to predict a future for the latter similar to that of the former. This is a crucial omission on Rostow's part, since it is the very history of these 'backward' countries which show how certain features of 'backwardness' were built in e.g during the colonial period.

Wallerstein (1976) also points out that, Rostow's stages are ethnocentric (eurocentric), ideological in their western assumption, pluralistic and biased in their insistence upon a continuous progression through historical stages. He

observes that the fact that Great Britain successfully went through these stages to become developed does not indicate that all other countries could or should do the same. One could not agree with him more. Each national unit has its own history, culture, and social systems upon which its development should be modelled. As Rodney (1976) states, systems and structures in Africa and in other Third World countries are always changing, yet models linked with this approach tend to be ahistorical. The modern world, he argues, did not come out of nowhere; it involved the transformation of a particular variable of redistributive mode of production found in feudal Europe. The development of capitalism, does not and cannot therefore occur in the same way everywhere. One has to look at the historical, economic and political conditions of the country in question because historical, political and economic specifications give utility to the emergence of propositions.

The role of imperialism⁹, colonialism and neo-colonialist domination in the emergence of these countries and their problems are some of the important aspects often either totally ignored or given very little attention. The modernization approach in this sense fails to put the problem of development of Third World countries in the international context where this process is taking place. This in general according to Kabiru Kinyanjui (1979), has tended to render studies carried out in this perspective, ahistorical even apolitical due to its failure to capture the dynamic relationship between the international economic structure and the national economy on the one hand and the implication of this politico-economic system on national development on the other.

⁹ Imperialism refers to specific forms of aggressive behaviour on the part of certain states against others. i.e political control or influence by one political community over another. It often entails the enlargement of the former's empire by way of subordination of the latter.

In the end, the essence of the development of capitalism as a world phenomenon that has far-reaching consequences on the development of the countries and their respective institutions has not been fully understood and/or revealed. Various theories, however, have come closer than others, especially those that have tried to get away from the linear evolutionist classical economist theories, which appear to form the framework for the modernization outlook.

The theory also fails to look at poverty as, part of a dialectical relationship i.e. appropriation of one class by another and an explanation as to how poverty in the first place comes about is not provided. Describing the peasantry as lazy, lethargic and lacking in initiative, the theory reduces the question of development to an administrative, technological question rather than that of exploitative power relations. As the peasantry is bulldozed into production for the world market, agricultural development becomes a technical question in its assumption that, the foundation for development can only be laid by the new and modern techniques that require improvement (to meet the expansion of the agricultural sector). It seems wrong also to contrast African societies (observed as static, changeless, motionless (Vidrovitch Coquery 1976) and geared towards customs, subsistence and a fixed village economy) with dynamic western societies which tend to obey the laws of the market place much more exclusively and proclaim the latter to be the model to be emulated. In the end, the analysis of such 'pure' poles at either end of the world seems in itself to be lacking in creditability.

A more devastating and far-reaching challenge is hinged on explaining causal relationship between the expansion of western capitalism and the process of underdevelopment in backward countries. It was spearheaded by (Frank 1967; 1969), whose approach and those of other Latin American scholars came to be known

as the Structural Dependency approach. As a result of their critique, the Dependency theory has gradually emerged as a major alternative to the 1960s paradigm (modernisation theory). A. G. Frank was responsible for condensing the essential argument into a succinct polemical form through his work 'Development of underdevelopment' (1966). He criticized the notion that economic development occurs in a succession of 'growth' stages as advanced by Rostow (1960) in which today's underdeveloped countries are depicted as undergoing an original stage of history through which the non-developed countries passed long ago. Yet, historical evidence shows, claims Frank, that underdevelopment is not an 'original' state or even traditional and that neither the past nor the present of the 'underdeveloped' countries resembles in any important respect the past of the now 'developed' countries. The developed countries were never underdeveloped though they may have been undeveloped.

Based on the historical evidence found in the underdeveloped countries, Frank underscores that within the world-embracing metropolis-satellite structure the metropolis tends to develop progressively just as the satellites tend to become underdeveloped. Satellites, being dependent, experience their greatest economic development if and when the ties to their metropolis are weakest e.g. during the 2nd World War and the depression of the 1930s when Latin American countries experienced greater levels of prosperity. When the metropole asserts itself after such world crisis the recently industrialized parts suffer sharpened and renewed strains of underdevelopment. This opposes the generally accepted thesis that development therefore follows from the greatest degree of contact with and diffusion of capital and/or culture from the metropole (developed) countries. The regions which are most underdeveloped and feudal-seeming today are the ones which had the closest ties to the metropolis in the past. They are the

regions, Frank says, which were the greatest exporters of primary products to and the biggest sources of capital for the world metropolis and which were abandoned by the metropolis when business for some reason fell off. Thus in contrast to the development of the world metropolis which have not been anyone's satellite, the development of the national and other sub-ordinate metropolis is limited by their satellite status. Frank aims at showing that the incorporation of the countries of the Third World into the world economy, has transformed the countries in question into capitalist economies and the integration of these supposedly capitalist economies into the world economy is achieved through an interminable metropolis-satellite chain in which surplus generated at each stage is successfully drawn off toward the centre. The satellite status therefore that generates underdevelopment whereby there is no real sustained development. In other circles, it has been argued that underdevelopment is due to the survival and persistence of archaic institutions (pre-capitalist) and the lack of internal accumulation in regions that have remained isolated from the main-stream of world history. They further argue that underdevelopment was and still is generated by the very same historical processes which generated economic development in the developed countries. Hence the developed 'sector' of the world and the underdeveloped sector of the world are diametrically-opposed to each other.

Frank's critics however argued that, integration into the world market economy did not automatically turn a society whether backward or feudal, wholly capitalistic and therefore one cannot characterise a society simply by looking at the sphere of commodity exchange; one must also look at the relations of production (Laclau 1971). In other words, the character of the indigenous production process and the manner in which it was shaped to serve the requirements of capital, should become the central focus. The link with the world

market economy thus should not be transformed into a decisive criterion in defining the form of society, as both feudalism and capitalism are after all, modes of production (Amin 1974). While Cardoso (1972) appreciated that both are determined by international forces, he emphasized that the internal structures are as important as the external ones in causing underdevelopment.

It is not possible to evaluate the specific terms, strengths and weaknesses of this debate here but one needs to note that the exploitation of labour and surplus extraction from the periphery (satellite) by the centre (metropole) form the basis of underdeveloping Third World countries. Indeed it has been argued that African and Asian societies were developing independently until they were overtaken directly or indirectly by the capitalist powers whence exploitation increased and the surplus appropriation ensued depriving the societies of the benefit of their own natural resources and labour. As a result developed countries were industrialized; they now have a higher output per man in their mines and factories because of their advanced technology and skills and as their agricultural sector has 'shrunk' in proportion to their industrial base, it is structurally linked to industry, thus contributing to the growth of the domestic market. On the other hand, the underdeveloped countries depend on agriculture as the main sector which portrays a limited technology, while there is little or no indigenous industry, and where the level of productivity in either sector are low, thus limiting the growth of the home market. They are unable to meet therefore the demand for social services by their people :- schools, hospitals, doctors, the infrastructure are few and far between, compared to their large populations. They are poor and technologically backward despite possessing a great wealth of mineral, vegetable and energy resources. Landlessness seems rampant even while land is 'hoarded' by a few elements in such society. This is

accompanied by high rates of unemployment, food shortages, declining productivity, famine and malnutrition. They are dominated largely by monocultural economies - the production of one or two primary export commodities (coffee, tea). These are undervalued due to the gross imbalance in the international market yet they consume a lot of labour-time and national effort.

Such countries thus seem to produce for metropolitan markets for the purposes of boosting the latter's industries, while apparently following their 'comparative advantage' in cheap labour and therefore cheap produce. Generally, they have low per capita incomes, very high mortality rates and low life expectancies. They have high rates of illiteracy, and individuals can not effectively participate in socio-political affairs. There is an institutionalization of rules even though, recruitment is largely by patron-client relationships. A mixture of modern and traditional values is thus prevalent. Social, economic and political roles in the underdeveloped countries are distributed almost exclusively in terms of ascriptive norms. The underdeveloped countries pay little attention to merit in their determination of status at either the social and political levels.

In other words, the pattern of underdevelopment at the periphery of advanced capitalist centres, becomes a self-perpetuating process, reinforcing both the structures and relations of dependency ad infinitum.

The concept of metropole and satellite came into existence when parts of Africa were already caught up in the web of International commerce. Africa and Europe were drawn into common relations for the first time in the 15th century and they have been in contact for the last four and a half centuries. The contention here is that, over that period, Africa helped to develop Western Europe in the same proportion as it underdeveloped Africa. This started with the

internalization of trade in the 15th century whereby Europeans took the initiative and went to the other parts of the world, extending commercial interests abroad as they owned, directed and controlled the majority of the sea-going vessels as they also controlled the financing of the trade between the four continents. At this time, Africans knew little of the network links between Africa, Europe, North and South America. Europeans had a headstart in as far as the international exchange system was concerned. They used the superiority of their ships and cannon to control the mercantilist trade. This control of the sea helped Europe to take the first steps towards transforming several parts of Africa and Asia into economic satellites. On the one hand were the European countries which decided on the role to be played by the African economy and on the other hand, Africa formed an extension to the European capitalist market. Africans were dependent on what Europeans were prepared to buy and sell while the latter exported to Africa goods that were a surplus in Europe, or those that had become unsaleable in Europe and those that were unsafe and/or old. The overall range of trade goods as well as the laws governing trade were determined almost exclusively by the pattern of production and consumption within Europe and mainly in the interest of the Europeans. This as mentioned in the first chapter of the study, marked the beginning of the Europeans' assumption of power to set the terms and conditions of the international trading systems. They determined therefore what Africa should export in accordance with European needs. As a result, Africa initially specialized in exporting captives. Trade between Africa and Europe in the four centuries before the colonial rule virtually comprised of nothing else but the slave trade. The most healthy of Africans of the productive ages were 'bought' by the Europeans from the West and East coasts of Africa and shipped to other parts of the world where they lived and worked as the property

of the Europeans. This marked the launching of Africa's developmental problems in the sense that, one of the most essential conditions for the attainment of economic development, the maximization of the use of the country's labour and natural resources under peaceful conditions, was seriously interfered with and flouted. Slavery prevented even those left behind from engaging in agriculture and industry as professional slave-hunters were always at large. At the time, the mode of production in Western Europe was in a transitional stage from feudalism to capitalism and was therefore at a higher level of productive forces than that of the Africans, a factor which in itself gave them a headstart over humanity elsewhere in the scientific world-view and renewal of production technology. They could make efficient tools, organise their labour and manufacture attractive goods although still of a low quality. Literacy, organisational experience and the capacity to produce on an ever-increasing scale also counted in their favour. Internal exploitation in Africa was prevalent even then as some of the African rulers exchanged their own subjects for these 'attractive' goods, which sparked off in some instances inter-community wars for the sole purpose of capturing prisoners for sale (barter) to the Europeans. Even at this time, there existed thus an 'unequal exchange' in that the goods exchanged were of unequal value in its crudest possible form.

From the 19th century, East Africa was linked to the world market through the agency of British colonialism as explicated in Chapter One of the study. The exchange of products of unequal value produced under different conditions and through different modes of production continued unabated although it was less crude, less assertive and less obvious (Samir Amin 1974). In Kenya, the colonial government played a minimal role in 'development' after the construction of the railway which as mentioned earlier, was developed only for the purposes of

facilitating the export of food crops and raw materials (the first stage of colonialism in East Africa was concerned with the extraction of raw materials and foodstuffs to feed the growing urban population.)

Underdevelopment therefore can be defined as that process which brings about appropriation of a people's material and non-material resources by another people, denying them thus the economic basis upon which independent and self-sustaining development is built. Growth becomes impossible while technological change as a basis for socio-political and cultural transformation becomes stunted. All attempts at industrial transformation are therefore ineffective, so are all ways of diversifying agricultural production which is a vital sector for most developing economies. It is an indisputable fact that the underdevelopment encountered today, is a product of history. It is not easy to formulate adequate development theory and/or policy for the majority of the world's population who suffer from underdevelopment without first learning how their past economic and social history gave rise to their present underdevelopment. Yet, most European historians study only the developed metropolitan countries and pay scanty attention to the colonial and underdeveloped lands (Andre Gunder Frank 1969:94). Thus as Cockcroft et al (1972), has reiterated, no country was ever in an original state of underdevelopment although it could have been undeveloped. The processes of underdevelopment began when the European nations began their worldwide mercantilist and capitalist expansions giving rise to constellations of developing 'metropolis' and underdeveloping satellites at either extremes, connecting all parts of the world system from the metropolitan centre in Europe (and later the U.S.) to the farthest out-posts of the satellite economies.

Underdevelopment thus is the opposite of development which according to

Rodney (1976) is an increasing capacity to regulate both internal and external relationships; to mobilise these so as to fulfil the basic needs of the people. A country is said to be developed if there is a marked decline in the rate of poverty, unemployment and inequality (Dudley Seers 1979). These will however also be found in the developed metropolis. The development of capitalism and world market is seen as a two-fold process: the underdevelopment of Africa, Asia and Latin America is accompanied by the development of Europe and North America. This process creates a situation of dependence between the developed and underdeveloped worlds, which in turn plays a major role in shaping the internal economic, social and political structures as well as conditioning the external relations of these countries which further impede any real development (Celso Furtado 1963).

Dependency, thus is a natural product of underdevelopment and also a prerequisite for its perpetuation whereby the economy of one country is conditioned by the development and expansion of another economy to which the former is subjected (Dos Santos 1973).

Some of the scholars within this debate hold that although it is largely the metropolis that benefits most from these interrelationships, economic development can sometimes occur in the more prosperous of the satellites. But, given the dominance of the centre/ metropolis, the economic development that is likely to occur in the satellites is at best a limited or "underdeveloped" development. It is constantly conditioned by relationships of dependence upon the metropolis. Thus economic development is not autonomous to the region, neither is it self-generating or self-perpetuating.

As is clear by now, the theory also implies an on-going struggle between nations as well as within each nation, the emergence of social classes and their

factions (each with opposed aims, policies and ideologies). These somehow contribute to the maintenance of the apparently unequal relationships between and within nations, thus ties of dependence and domination.

Since the social economic and political conditions of these countries are directly or indirectly controlled and stunted by the dominant position of international capital from industrialized countries autonomous and self-generating development is circumscribed by that very measure. The development of the now underdeveloped countries has been historically conditioned (first under colonisation, then under neo-colonialism) by extraction of their resources and surpluses initially by merchant capital and subsequently by industrial and finance capital. The economies of these countries are as a result subordinated to the developed economies of Europe and North America (Kay 1975, Leys 1974, 1977, Roxborough 1976). This has served to 'block' and distort the path for an autonomous capitalist development by the predominantly unequal relations emerging out of this world-wide phenomenon and which shape the political and economic systems of Third World nations.

The economic and socio-political connections between the satellites and the metropolis create mutually 'beneficial' links between local elites and external interests that give the former a vested interest in the preservation of the status quo i.e the conditions of underdevelopment. After political independence, an indigenous capitalist class emerged to manage and aid the continuation of the conditioning process by acting as intermediaries of metropolitan interests. They continued to pursue a policy of "accommodation" with the former colonial masters in order to maintain access to capital, technology, skilled cadres and markets (Rothchild and Curry 1978). Such institutional continuities are viewed as necessary for economic growth (the immediate goal) by most Third World leaders.

Consequently they reject major structural changes in the inherited economic system so as to avoid a disruption of their valued connections with the west.

According to Frank (1967), the development and expansion of capitalism in the periphery began (and perpetuates) an unequal development of its constitutive parts. Growth is 'unequal' when dependent nations can only grow as a reflection of the expansion of dominant nations and when it is a combination of inequalities plus the transfer of a significant part of the economic surplus in Third World countries to developed countries. Capitalist development thus creates underdevelopment by concentrating wealth at one pole.

There have been agreements, disagreements and controversies concerning the external relationship between the metropolitan countries and the satellite countries, and how it has fundamentally conditioned the internal structures of these countries, thereby affecting the whole process of internal development. There have also been disagreements and controversies on how to characterise the existing modes of production and how to explain the dynamics which account for the internal structure which exists in each national economy (Rodney 1974, Frank 1967, Leys 1974, 1977, Kay 1975). For one scholar within the Dependency school, Dos Santos (1973), dependency as a conditioning situation determines the range of options open to policy makers in Third world countries.

The demand and decisions made by the developed economies of the west become permanent inputs in the national policy-making process, to the extent that African nations remain dependent on foreign trade, foreign assistance and foreign investment for the creation of wealth, and the provision of goods and services even when this trend could be reversed.

Langdon (1976) and Kaplinsky (1978) in asserting the dependency position argue that Kenya for instance, has not developed an autonomous capacity to

sustain capital accumulation through the internal linkages of the various sectors of the economy. Despite the high growth rate in the fields of investment and industrial output, the growth of employment in urban and rural areas lags far behind manpower growth. This is because the growth of a modern import-substituting sector has proven to be capital-intensive and labour-displacing, severely limiting the provision of productive employment even to those educated.

The authors argue that the penetration of multinational corporations into the economy has shifted the basis of metropolitan penetration from commerce to industry. Langdon (1976) goes on to conclude that such penetration generates technological and social dualism between a so-called backward rural sector and the modern urban sector, thus further reshaping the uneven/lopsided social structure in the periphery (Langdon 1980).

Kaplinsky, Leys and Langdon in their various works concur on the observation that because of Kenya's external dependency, the policy decisions of the government are strongly influenced, perhaps even determined, by internal consequences (short-term benefits) of foreign investment, trade and aid. This means that, the resources available to Third World governments to support public policies aimed at providing employment opportunities for instance, depend to a significant degree, on external rather than internal conditions.

The revised version of dependency theory, however, argues that foreign investments are likely to be associated with the intensification of capitalist accumulation in Third World countries (Bill Warren, 1973). Warren sees growth and industrialization in several areas in the Third World as a result of foreign investment juxtaposed with a diminishing rather than increasing control by foreign capital, quite contrary to the observation by Frank (1967), and Santos (1973) that Third World countries have lost control over their economies as a

result of foreign trade, aid and investments.

Swainson (1980) and Leys (1977), the latter having revised his position, focus on what they see as the emergent indigenous bourgeoisie and the state apparatus under its control, and argue that this is a class that developed within Kenya itself and is not a creation of the metropolis. Frank (1969, 1972), on the other hand, chooses to call this class 'lumpen' which eats the crumbs of capitalist accumulation, largely a group that enhances stagnation (inhibits development), rather than energizing the local development of capitalism.

The incorporation of Africa into the emerging world capitalist economy first, directly through colonial administration, then more subtly through free trade largely, ensured that Africans were unfairly allocated the role of producers of raw materials and/or semi/manufactured goods for the dominant economies of the west as well as serve as a market for their industrial goods (Rodney 1974, Amin 1976, Leys 1974 and Arrighi and Saul 1972). The gains from these exchanges are shared among a small African class (who use much of it for importing luxury goods (rather than diversifying investments) from the dominant metropolitan countries. Such incorporation in the international division of labour has deprived Kenya of the resources (human and material) necessary to pursue an autonomous development. Instead underdevelopment is consolidated by Third World governments which are not in a position to bargain for better terms of trade such as prices which are based on the level of different productivities within the developed economies, rather than on the demand of overseas consumers. Another mechanism of foreign control is the granting of 'development' assistance. Aid, specifically, allows donors participation in the decision-making and dependent countries who often have to justify their policies in order to continue the inflow of aid.

In general, neo-colonialism as the above system is called, is the survivor of the colonial system in the newly independent countries. The rulers of the neo-colonies need the approval and ongoing support of the dominant forces in the metropolis in order to survive, rather than the support of their own people. Neo-colonialism represents a new form of alliance between the external and the internal dominant classes, giving rise to new forms of contradiction and structural inequality within the dependent economies.

The emergence of these new alliances continues to shape the internal structures within Kenya as a result of the dominance of social classes tied to foreign interests (Langdon in Kaplinsky 1976, Leys 1974 and Rodney 1974). Inequality in this way is enhanced by the semi-proletarianization of workers in the 'modern' sector who emanate from the mass of people who have to make periodic forays as migrant labourers from the 'rural' sector in order to survive (Arrighi and Saul 1972). The existence of these contradictory social forces constitutes the basis of underdevelopment.

Due to these factors, certain structural characteristics become observable in Kenya:- Agricultural stagnation arises due to the adverse terms of trade, giving rise in turn to rural-urban migration, low rates of surplus production and reinvestment which lead to food shortages and soaring inflation.

Increased migration of labour into urban areas occurs as agricultural terms of trade deteriorate, resulting in the explosive growth of shanty towns in urban centres. The prevailing rural situation which culminates in the migratory push, is the arena of our study.

We now attempt to evaluate the descriptive and explanatory utility of both the modernization and underdevelopment approaches for the problem of rural male out-migration and its impact on the level of family farm production:-

Kenya as an underdeveloped country depends on agriculture. It has little or no indigenous industry and even its agriculture is climate-dominated. There is little mechanisation; it depends basically on rudimentary tools and is basically family labour-oriented.

In relation to basic food requirements, each individual needs a certain quantity of food per day (about 3,000 calories per day, Serageldin 1989) yet according to Rodney (1976) no African country comes anywhere near that figure. Furthermore, the protein content (the most important nutrient for growth and development of the body) is almost nil while persons in developed capitalist countries consume twice as much protein as those in the underdeveloped countries. Food shortages bring up the issue of development strategies and the implications of their trade-off's in Sub-Saharan Africa. There is evidence that food production in Kenya has been given a back seat, relegated to marginal and semi-arid lands and given insufficient scientific attention (Daily Nation (editorial) 15th and 27th October 1987). As with most other aspects, this is partly inherited from the colonial regime. That is, devoting of the best farmlands to the production of cash crops many of which are non-food crops which supposedly earn us the foreign exchange for importing the technology to industrialize and ironically even purchase foodstuffs which we could have produced, in better quality, ourselves. Most of the imported foodstuffs are also beyond the purchasing power of the rural and urban poor, thus accentuating the problem of hunger and impoverishment.

It was argued that, capitalism proceeds from the function of the big holdings, just like industry proceeds on the basis of large scale proletarianization of the masses. This implies that large scale farming is necessarily the more productive and more progressive form of production (an allegation that is seriously debatable). It also assumes that the system of large

scale farming will expand and become the dominant form of production, gradually absorbing thus the traditional sector. The emergent form of production will lead to high productivity, and more capital-intensive methods of production. Larger units of production admittedly have their own advantages. They can take advantage of economies of scale over a range extending beyond the size of the largest peasant landholding. They can also take advantage of advanced technology and a more complex division of labour in the organization of production to boost productivity. Termed efficient capitalist producers, rich farmers may be better able to displace "backward" peasants. They may combine the production of different crops with symbiotic features and complementary requirements for labour and other inputs. They may also be knowledgeable of the relative costs, especially opportunity costs and may save and re-invest part of their income to sustain their own source of livelihood (Cliffe 1976). This argument implies therefore that development is the gradual erosion of the pre-capitalist agricultural base and its social structure through mechanization, use of hired labour (rather than just family labour which is the mainstay of the peasant economy), and production for the market. All this indicates an elite-oriented development whose focus is profit-maximization even as it adopts agricultural innovation.

On the other hand, the Marxist analysis of capitalism and its conclusion about industrial capital cannot be easily transposed in a simple form to the domain of agriculture. The evolution of agriculture cannot be understood entirely in terms of the struggle between big and small holdings or by studying agricultural systems in isolation of or independently of the whole mechanism of small scale production. It has also to be seen as part of the economy in terms of the dominant mode of production which determines the direction in which the

surplus value travels. It would be wiser to analyse the dynamics operating in the economy as a whole, and then differentiate the manifestations expressed by these dynamics in agriculture and industry. Agriculture has its own laws of motion just as the economy in the Third World countries has its own laws of motion (different from the more developed metropolis) and in that sense its development and that of industry are different. It also does not follow the simple formula insinuated here -the disappearance of small scale holding. One needs to look for all the changes agriculture experiences under the domination of capitalist production. Again, both small and medium sized holdings can be equally productive if intensively cultivated. It depends on the 'scale of operations' and not on size alone.

As Kongstad and Monsted (1980) observe, large scale farms in general also occupy a disproportionately large share of fertile land. Transactions in the land market by land purchasers leave an increasing number of families without land (their only means of production). This implies that the livelihood of landless families depends totally on the pay its individual members can obtain from selling their labour, sometimes even to other peasants.

During the colonial period, modernization took the form of new production functions in agriculture and industry as a result of the lateral expansion of the world market. A western alternative to the traditional pre-capitalist society began to be sought. Market growth was seen to be a good thing for national dignity, private profit, entrepreneurship, general welfare and so on.

As observed by Wallerstein (1979) the colonial era particularly, exemplified the essentials of a capitalist world economy. There was the creation of a single world division of labour; production was for profit; capital accumulation for expanded profit, all of which shaped the centre-periphery

relationships across the globe, and which gave rise to internal class differentiation in the peripheral economies as well.

The rural family, in Kenya is the basic production unit.

The family as observed by Shannin (1971:242) determines the division of labour. It is the locus of status and social prestige. The family is the production team and one's position in it (family) determines ones duties and rights within the farm functions. It constitutes a social category of production and exchange and its purpose and organization in the colonial context, increasingly reflects the needs of capital to produce surplus value as cheaply as possible. The internalization of capitalist commodity circuits in the family's cycle of reproduction (purchase of necessities) is therefore a central theme.

Shannin (1971) adds that the basic framework for mutual aid, control and socialization is provided by the family solidarity. The peasantry has its own unique combination of the kind of tasks it needs to perform leading to its many special 'survival' features and its resistance to industrialization and therefore dispossession. But the continued tie to the land by the peasantry is also useful to capital. For example, the burden of reduced world demand is shifted onto the direct producers rather than the owners of the enterprises by the system of semi-proletarianization whereby the wage labourers earn part of their family income in wage labour and the other in subsistence production. Thus the continued ability of the peasantry to produce its own subsistence on small plots of land becomes crucial.

The typical wage worker in the periphery is essentially a migratory worker spending part or even all of his adult working life in cash employment, but spends childhood and probably 'old age' in his rural subsistence community. In his childhood he is sustained by his parents. Then he sustains himself during his

working life but his wife and non-adult children are sustained on the basis of their small plot which produces their means of survival. His real life-income is essentially a composite of what his employer pays which is supplemented by the subsistence economy he has left behind as a semi-proletarianized worker. He is paid by the capitalist employer not what it takes to sustain himself, his wife and the children throughout his employment but only his own sustenance in the marginal conditions of the urban slum (African perspective 1978, Soja 1968, Cliffe 1976, Wallerstein 1979).

This also applies to the small producer who uses family labour and combines traditional and modern agricultural techniques to obtain the highest output per acre. The price of his goods in the capitalist market does not take into account the costs of his own reproduction as he is assumed to be self-reproducing. He is paid enough to keep him motivated to produce for the world market but what he is paid does not constitute the value of that product based on the content of living labour that goes into its making. Wages, the reward of living labour, are based on the prices of food in advanced capitalism. But since this labour is presumed to be self-sustaining in the peripheral economies, wages do not reflect the cost of subsistence and therefore the true value of labour.

Those who purchase these products and of course the capitalist employer are the major drawers of the profits from the depressed prices and the minimum wage which is essentially a bachelor's wage. They draw it from the producers in the peasant economy which operates largely outside the 'purely' capitalist economy, i.e. where petty commodity production is still the dominant form of production, and where the peasant is still both the owner and labourer of his farm. Only thus can export-production be made cheap and surplus labour released for the capitalist market elsewhere, again on the basis of bachelor's wages.

Therefore family production sustains not only his family, but also himself, from time to time, as when he is laid off or unable to meet his urban costs of survival.

The increasing compulsion to earn cash has changed the social relations of labour. Communal grazing, shifting cultivation and the communal ownership of land have been abandoned with the shortage of land in agricultural areas. Bernstein (1976) therefore concludes that domestic communities have been destroyed and have decomposed into individual households as the basic units of simple production. The welfare of the household is a matter of its own effort. The nature and form of the family's integrating to the market take place in a complex pattern of relationship. The position of the families in the emerging structure of social differentiation varies in the geographical areas from location to location in the same region. The division of the family unit into male and female spheres of reproduction also seems to indicate that the individual members of a family unit held together by its patriarchal organization are increasingly being exposed to quite different relations with the market. These relations of labour and exchange can be said to express the stages of transition in which the rural social formations are developing.

The emergent division of labour continues to ensure that some of the means of subsistence are provided for by the family's own subsistence production. For instance, the food costs of the family, the provision for the workers' retirement and recuperation' have to be increasingly met by the small producer's family rather than by the capitalist buyer of their labour and produce (Deere 1979). This is a point which is often not seriously considered by the modernization approach which assumes a linear erosion of subsistence production in the rural sector.

As if to eliminate any productive alternative to labour migration, a contradictory set of forces comes into play to inhibit the full emergence of capitalist commodity production i.e the complete separation of capital from labour, in the countryside. The peasants' production of commodities especially for sale is held in check by various administrative ordinances¹⁰ such as were in force during colonialism in Kenya.

Colonialism and (neo-colonialism later) therefore forced African economies to relinquish the self-sufficiency they once had in the productive sense and socially oriented their economies in quite a different direction, that of permanent dependence. Through the opening up of employment opportunities in the non-agricultural sector and the demand for labour by the colonial administration, by the plantations coupled with the abolition of slavery, wage labour began to rise. This received further impetus with the growing alienation of land and the institution by the colonial government of taxes, leading to widespread monetization of the economy. As the largely subsistence-oriented economies were molded to grow surpluses of non-food crops for the market, various exchanges in the local society became mediated through the cash nexus and the money economy thus became a way of life. Food was sold to pay taxes rather than stored, the barter system was eroded and those with a little money bought up their neighbours' surplus. The money economy thus destroyed all outmoded or backward forms of co-operation and exchange. The market then dominated all forms of

¹⁰ For example, The Masters and Servants Ordinance of 1906 later amended to be The Employment of Native Ordinance which made it punishable for the African to desert his employment. The Kipande system of 1915 which enjoined compulsory recruitment of the African for one month in a year under the leadership of the chief. The Resident Native Ordinance of 1918 regulated the relationship between the squatters and the settlers. For more examples of this kind see Ch.1.

production and those not participating in the market were rendered obsolete. In this period, Africans began either willingly, through force or some sort of inducement to sell their labour to earn money to pay taxes, and purchase 'niceties' i.e consumer and luxury goods. The local populations were exposed to new goods and services, leading to a change in their tastes and values. These could be met through participation in the cash-based market economy. Cash became very important for the reproduction of one's own survival. The dependence of villagers for their livelihood on earnings derived from the sale, and later the export of labour became rife. As observed by Arrighi (1970) in Rhodesia, the expansion of absolute production requires that a steady increase in proletarianization and a decrease in the number of Africans moving into ownership positions, occur. In other words, generalization of export commodity production also meant large-scale movement of rural labour to service this export-oriented economy.

Labour relations in the family raise the question of whether the contribution of the men to the household based on cash crop farming equalizes the value derived by them or whether the husband actually appropriates a surplus from the labour of women and children (Kongstad and Monsted, 1980). Do men in this sense exploit the labour of women while leaving subsistence production and other production activities to the women ?

Indeed as observed by Mbilinyi (1972), the commercialization of agriculture has had mixed effects on women. On the one hand it means production of cash crops and the migration of men into urban areas, both of which serve to increase women's work load. The absence of men changes further the division vitally affecting the position of women. The bulk of development work is also left in the hands of women, children and old people, with the end result of a

deterioration in agricultural productivity. Where this end effect is prevented, it is at the expense of the women's own stamina and health. All this contributes seriously to the unreliability and instability in the systems of food production in Africa i.e. the production system is fundamentally weakened (Mbilinyi 1972).

As production for the market increases, the demands on women to supply more labour increase just as the terms on which they provide labour deteriorates. The returns from the household labour are never shared out equally because men tend to establish control of family income and demand women's labour on an increasing scale (UN 1986). They have to put more labour towards the men's cash crop even as they labour on the family food plots to which the men contribute less and less as the demands and opportunities in the cash economy increase. As men's involvement in the cash economy as a whole rises, that of women in the labour process which fuels this economy rises correspondingly.

Yet women hardly get official support (extension services, credit, inputs, fertilizers and new technologies) to enable them to increase their production, thus often leaving themselves and their children with inadequate food supplies.

Women's property rights in traditional Africa are also withdrawn as land becomes commoditized. The introduction of legal titles to land, often tenable only or mostly to men is one such example. As far as agrarian reform programs are concerned, therefore, women get disenfranchised. Formal institutional structures and official government programs often discriminate against women.

In the efforts to modernize agriculture, there is also the possibility that, new techniques may even further degrade the value of women's labour. Their access to profits resulting from increased productivity (which often requires increased labour inputs and economic commitment) is also severely limited. They have no incentive to work harder for less and less. Modernizing efforts are

primarily aimed at male farmers regardless of who is the tiller at the time or who has the interest in cultivating particular crops.

This male orientation has led to an increasing gap between men's and women's agricultural productivity such that despite evidence that women farmers are responsive to innovation and willingly adopt profitable technology, they have often been relegated to subsistence agriculture using traditional technology, thus obtaining low yields.

The lack of certainty in outputs and income distribution (because of world market prices and varying climatic conditions) of the majority of the agricultural population is aggravated by the continued specialization in primary production of raw materials on an extended basis without innovation or even a rise in the level of technology i.e of the productive forces. In other words, capitalist methods of production have largely eluded the sphere of agriculture.

The big question for us is, what is capitalism doing to agriculture in rural Kenya ? In our own case, what is labour migration (one of the manifestations of capitalism) doing to agriculture in rural Kenya? In what ways is it revolutionizing it, breaking up the old forms and establishing the new "more profitable" forms if at all ? How does capitalism articulate various old forms of production and introduce the capitalist relations of production in agriculture and what is its overall impact on the rural family in Kenya?

In most developing countries, agriculture is assumed to be in a state of a long drawn-out process of transition to capitalism, one that may in fact take centuries. As a matter of fact much of Africa's stagnation is explained away as a transitional stage. The forces that provide impetus for this transition act with a widely varying degree of influence on the different parts of the pre-capitalist economy such that as of now this pre-capitalist economy displays a

phenomenon of a wide array of forms of organization and relations of production. These range from pure capitalist relations on the one hand, to a mixture of pre-capitalist and capitalist relations sometimes in its initial stages even while being dominated by the pre-capitalist or traditional ones. Throughout the transition period there is continuous strengthening of emerging capitalist relations depending on conditions in the rest of the economy.

In pre-colonial Kenya, production had a certain rhythm and logic in relation to the environmental factors and in relation to social requirements of the local communities as reflected in the shifting cultivation, slash and burn cycle and nomadism, all of which allowed for the regeneration of natural resources in proportion to the population supported on the land. There existed communal ownership of land based on an unlimited supply of land though it was more of usufructuary rights rather than ownership per se. But the rapid expansion of culturally- and biologically- foreign crops disrupted this. The soils' nutritive values were sapped and more fertile lands were appropriated by the system. Besides greatly modifying the system of agricultural production this external intrusion disrupted the logic of the existing system in relation to local needs. Land previously communally owned was now a scarce resource due to private alienation and the sale of land for survival (Zwanenberg 1972) i.e. commoditization of land. Labour migration and squatting became ways of adapting to the shortage of land. These factors slowly chipped away at the resilience of African food production which had actually begun to produce a sizeable surplus for the local and long- distance trade. Thus the 'native' reserves or labour reservoirs emerging of the landless and displaced peasants became a crucial adjunct to the plantation economies run by the settler communities.

African production declined as a result first and foremost, of a shortage

of land and labour. The former due to land alienation and the latter due the interference in the division of labour in peasant households by labour migration and declining population. This latter cause was due to high mortality rates, poor nutrition and poor medical facilities within the rural backyards (Zwanenberg 1972). Given the low level of agricultural technology that could not yield any labour - saving devices to reinforce and/or complement the labour process, the low level of production could not be raised.

With respect to land and the division of labour within the family, the relationships of production were held in check by preventing the absolute marginalization of the peasantry that would have provided the rapid growth in proletarianization. The productive forces of the indigenous agriculture were tampered with, it would seem, so as to release a sufficient flow of 'semi-proletarianized' (being still partially tied to sustenance from the land) for capitalist enterprises. Crops grown were modified to allow surplus extraction by commercial and financial capital through the mechanism of 'unequal exchange' i.e via the market (Cliffe 1976).

Even after the attainment of independence, labour - saving technology and innovations could not be internally developed because of the generalized impoverishment of agriculture even with the granting of security of tenure by way of registered titles for individual landholding in the aftermath of the Swynnerton plan in 1954. The farmers could not raise credit or generate incentives as to participate in agricultural extension. In the event, the urban sector and the small industrial sector were the only alternatives for able-bodied men.

The lack of resources, male out-migration, lack of employment opportunities, the shortage of land, further tightened the vicious circle around

agriculture. Solutions sought by the newly independent Governments failed. For instance, instead of first tackling the underlying causes of the labour shortage, new techniques were thrust upon few innovators (the progressive farmers) who could not sustain it in the case of overall declining returns in agriculture.

Female-headed households were excluded from this innovation given the traditional sex bias of extension officers; a factor that is prevalent even now. In addition to this bias, female heads were often too busy to innovate due to the growing responsibilities of both production and reproduction on their shoulders. Thus it would seem that the division of labour by gender, by age and the structure of access to land, control over these resources and the distribution of surplus within the community at large are often not taken into consideration before injecting solutions into the rural processes of life. These solutions may even lead to further decline of the land:labour ratio particularly where the new technology leads to further expenditure both on the part of the government and the individual involved in the innovation. Techniques for improving agriculture are often foreign in context, maintained by foreign expertise, rely on foreign fuels, spares and accessories. Left alone, the local people cannot keep them running. Agricultural machines for instance are foreign manufactured and serviced. As a result of concentrating on the wrong approach to redress the situation, the bulk of the rural dwellers remain resistant to change and development programs planned for them by the urban elites. This approach serves to make them more reliant on the market for their survival and further integrate them into the national economy, yet increased monetization does not mean increased earnings for the peasants, just as expansion of agriculture does not mean better prospects for nutrition. This is where the modernization perspective with its over-emphasis on increased production, defaults in providing both an

explanation and a solution to the problem of underdevelopment.

Thus rural poverty, pervasive and generalized as it is, cannot be rectified in effect by a handful of rural dwellers and farmers. New techniques or aspects of innovation and modernization thrust upon the rural dwellers are not sustained due to the overall declining returns in agriculture. The 'trickle-down' effects of modernization are either too slow or even non-existent. Instead a gradual process of polarisation emerges rather than a clear process of capital formation. In very few places in rural Kenya are signs of the rise of capitalism observable - i.e. the mechanization of agriculture, pervasive use of hired labour, production solely for the market; in their place some feint pre-capitalist and patriarchal elements are observed. For instance, the intensification in the exploitation of family labour reflected in the increased production of cash crops even while there is increased shortage of land and of cash for hiring labour (Kongstad and Monsted 1980). Unpaid family labour is in this way involved in the market economy. This complexity of social relations implies that the family is still the mainstay of the rural labour force.

A compelling feature of our study therefore is that of the rural communities in Kenya serving to subsidize capitalist enterprise at their own expense, i.e. at the expense of their own reproduction or family survival. The migrants' foothold in capitalist employment must therefore remain 'insecure' i.e. they must never become free "proletarians", a class that capitalist employment would have to reproduce as a distinct social class differentiated from the mass of the rural peasantry. Through migration and immiserisation of the peasantry, capitalism exerts its capacity to extract cheap labour; the migrants have to retain ties with the rural areas in order to reproduce his family and probably even himself. Capitalists readily sustain these ties because they make up the cost of living

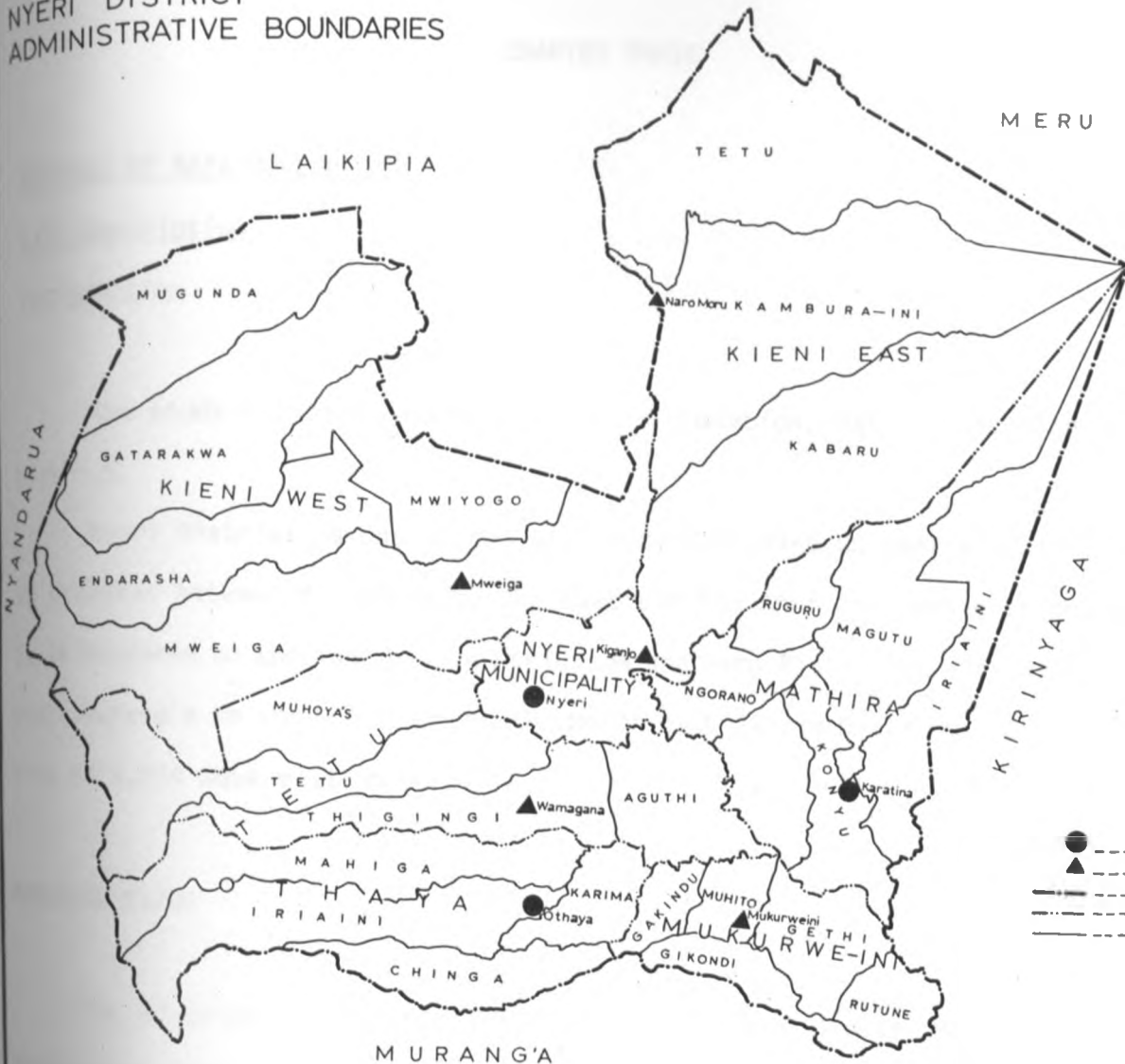
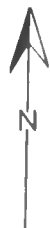
of the migrant. At the rural end, at the same time, the migrant is unable to treat the family farm as an enterprise for re-investment but looks on the land as a basis for his sustenance and also as a commodity in itself (Williams 1976). Today, the smallholder farmer peasants are encouraged by the government to produce more and more for the purposes of exchange. This is because the peasantry is a cheap source of labour as it basically utilizes family labour and the tiny landholding it possesses, thus rendering it unnecessary for capital to divorce the peasantry from its means of production. Furthermore, there is almost a 'zero' cost of production besides reproduction, as even the costs of supervision are generated. We have already seen that these conditions date back to the colonial period in Kenya when the African was transformed from a cultivating herding farmer to a wage labourer and in some instances to a squatter. The commoditization of the economy rapidly accelerated by the colonial state in the interests of monopoly capital, destroyed the self-sufficiency of the pre-colonial societies giving rise to a petty commodity producer firmly integrated into the world market and dominated by monopoly capital. Whether they sold produce on the market from the land or their own labour to an employer to supplement their returns from the produce, rural dwellers in Kenya remained part of the far-reaching economic system beyond their control. They experience the vagaries of the World economic system when they lose their jobs during recessions or when a sudden drop in prices occurs to depress their earnings from export crops (UN 1986).

It is hereby hoped that the above discussion has outlined the problem of rural out-migration of males vis a vis rural farm production and the effects of the policies under the modernization perspective as criticized by the countervailing block of theories known as the dependency and underdevelopment

theories. The latter have been found to provide a better explanation of what is at stake in the rural scenario of Nyeri District, Mathira division of Central Kenya in as far as the impact of capital and its requirements are concerned.

Let it be stated finally that, the debate on these perspectives rages on. Further issues arising from the attempt to analyze a concrete situation will be encountered in the subsequent chapters.

NYERI DISTRICT ADMINISTRATIVE BOUNDARIES



- URBAN CENTRES
- ▲ RURAL CENTRES
- DISTRICT BOUNDARIES
- - - DIVISION BOUNDARIES
- LOCATION BOUNDARIES

5 10 15 KILOMETRES

CHAPTER THREE

METHODS OF DATA COLLECTION

Site Description

Introduction

The study was carried out in Iria-ini Location, Mathira Division, Nyeri District.

Nyeri District is one of the districts that make up Central Province. It is situated between Mt. Kenya to the East and the Aberdare ranges to the west. It is bordered to the East by the Kirinyaga and Meru Districts, Nyandarua to the west, Murang'a to the South and to the North by Laikipia District. It covers an area of 3,284 square kilometers.

Administration

The district is divided into seven divisions namely Othaya, Mathira, Mukurwe-ini, Tetu, Kieni East, Kieni West and the Nyeri Municipality. These are further subdivided into 24 locations and 156 sub-locations. Four local authorities, the Nyeri County Council, Nyeri Municipal Council, Othaya Urban Council and Karatina Town Council, make up the district. Its headquarters are situated in Nyeri Town.

Topography

The elevation of the District rises from 1600 metres to 3000 metres above sea level. The northern quarter of the District is flat, whereas further south the ridge and valley terrain is occasionally interrupted by hills such as Nyeri, Karima and Tumutumumu. An original Savanna and high mountain vegetation giving rise to plantation cultivation and grazing characterizes the district.

The District enjoys a moderate climate with temperatures averaging 24⁰ Centigrade and an average rainfall of about 1000 mm per annum. The two rainy seasons conform to the countrywide pattern with long rains from March to June and short rains from October to November. Periods of drought are common in the northern Kieni Divisions and southern parts of Mukurwe-ini.

Land Use

On the basis of rainfall patterns, temperatures and soil types, land in the district is divided into three categories excluding the forested area.

- (a) High potential, covering Othaya, Mathira, and some parts of Kieni West totalling about 98,927 hectares.
- (b) Medium potential covering the remaining part of Kieni East, North Tetu and Mukurwe-ini about 144,500 hectares.
- (c) Marginal, covering the northern tip of the district about 29,802 hectares.

The district is predominantly an agricultural one. Majority of the people are tied up in farming activities on small farms with the size of holdings

ranging from 0.4 hectares (.98 acres) to 8 hectares (19.8 acres). It is estimated that out of 62,545 households in Nyeri, 61,025 are smallholder with small holdings totalling 119,162 hectares. Thus the average holding for a small holding household is 1.95 hectares (4.8 acres). This has resulted in a high rate of rural-urban migration by the districts's young, educated males. Mixed farming is predominant. The main commercial crops are coffee, tea, pyrethrum, wheat, barley and the subsistence crops grown are maize, pulses, bananas, irish potatoes and cocoyams. Dairy farming with a well developed ranching is estimated to occupy 1,000 hectares with 11,000 cattle and 4,000 goats according to the 1984/88 District Development Plan. Agriculture is relatively modern and yields are generally high.

Commercial activities such as wholesale and retail trades are also an important economic activity though most of the businesses are small scale. The district's industries are mainly light, some of these being Mt. Kenya Bottling Company and Highlands Mineral Water Plant.

Demographic Profile

According to the 1979 National Population Census, the district had a population of 486,477 people at a growing rate of 3.65%, projecting the population as of 1988 to be 695,902 as compared to 360,845 people in 1969.

The most productive and consequently the most densely populated areas are Mathira, Tetu, Othaya and Mukurwe-ini Divisions which make the southern one-third of the District. The average population density according to the 1979 census was 148 people per square kilometre. Out of the total population, 252,072 (51.8%) were female while 234,405 (48.18%) were males. The district suffers from a

shortage of males. Sex ratios reflected by social roles and cultural patterns are important for the planning of services and community institutions. The labour force participation and the occupational distribution of women underwent considerable change, as a result of which females now constitute the main source of labour. .

The district is also characterized by a high dependency ratio. Only 41.7% of the total population were in the productive age group while children up to the ages of 14 years accounted for 51.71% of the total population as of the 1979 census thereby giving a dependency ratio of nearly 4.1.

Sampling

Populations are usually items too big or too inaccessible to enable the whole population to be examined (Harper, 1965) . As explicated by Prewitt (1974) one has to take a group of items from the population for examination. Contrary to what is commonly believed, sample size need not be large where population is large. There are other factors that have stronger bearing. some of these are:-

- :-homogeneity or heterogeneity of the population as far as the characteristic under study is concerned.
- :-number of traits being measured.
- :-time and funds allocated for study.

A good sample is simply one that accurately estimates the distribution of the characteristic under investigation in the study and one that represents the universe well in such a way that statements made of the sample are true of the population Prewitt (1974). Sample surveys are thus useful in the establishment

of the broad contours of a population.

In terms of population, this study chose to focus on the rural-based female-headed household. This aspect had to have occurred due to the rural-urban migration of its male head of household. The households studied were based in four sub-locations of Iria-ini Location in Mathira Division, Nyeri District. The four sub-locations are Kaguyu, Kiamwangi, Kairia and Gatundu. At the time there were a total of 1,056 such families in these sub-locations¹¹.

Sampling Strategy

The sample was obtained through four stages which employed both probability and non-probability sampling techniques. According to Blalock (1981), in the former, each individual in the population has a known chance of being in the sample while in the latter a representative sample can be obtained but the risk errors involved may not be easily evaluated.

In the initial stages of the sampling exercise, simple random techniques were used. Using administrative demarcations, Mathira Division was picked as follows: Six pieces of paper representing the 6 rural divisions, Othaya, Mukurwe-ini, Tetu, Mathira, Kieni East, and Kieni West, were cut up. Each was marked with one of these (the municipality excluded). They were then carefully folded up to avoid their sticking together and put in a container. After shuffling them up, one was picked out, unfolded and read as in a lottery. This was the first stage at which Mathira division was picked.

The second stage entailed picking one of the 5 locations in the division

¹¹ It is explained later in the Chapter how this figure was arrived at.

as it was impossible and impractical to cover the whole division. The process described above was repeated for the purpose of randomly selecting one of the locations but this time with five pieces of paper representing the locations; Ruguru, Magutu, Iria-ini, Kirimukuyu and Konyu in the Division. This way, Iria-ini location was picked. Again the study in terms of funds and time, could not cover the whole location, and so the third stage of sampling became necessary. The same process was repeated yet again with five pieces of paper representing the five sub-locations of Iria-ini; Kiamwangi, Kairia, Kaguyu, Gatundu and Chehe. This time we needed to randomly pick four sub-locations ; the four picked were Kairia, Kiamwangi, Gatundu and Kaguyu. It was envisaged that the target sample of between 150-200 families could not be obtained from a single or even two sub-locations as the sampling frame would also be too small. Thus it was decided that the aspect be studied in these four randomly chosen areas of the location.

The fourth stage was the most taxing and difficult but also the most important.

Preparation of the Sampling Frame

Sampling frames in the form of reliable lists of the people being studied are rarely available as Prewitt (1974) points out, particularly in countries of East Africa where public record-keeping is not well established and when they are, rarely are they up-to-date and/or reliable. This study was no exception and it was due to this handicap that a census of the households falling in the category defined as the population was felt necessary. It therefore became the point at which Research Assistants were recruited. Their role firstly would be to accomplish this task of preparing a sampling frame and later to undertake data

collection.

The criteria for the recruitment of research assistants were as outlined below. These were strictly adhered to, to ensure validity and reliability of data collected.

Criteria for the Recruitment of Research Assistants:-

:-At least Form 2 level of formal education

:-Married women, residing in the rural area's farmstead, and wives of migrants living in any urban area of Kenya. (their data was later excluded from the analysis due to the possibility of subjective input).

:-Ability to speak, read, write and understand the local dialect i.e. Kikuyu.

:-Ability to speak, read, write understand English reasonably well.

:-Ability to understand questions in the Questionnaire, ask, and record responses without distorting meaning either of the question or the response (further training on this was later undertaken).

:-Mature, respectable, confident, sociable and reasonably well-known to local residents especially of one's sub-location of origin.

Due to the stringency of this criteria, it took quite some effort and time to get the research assistants. The chiefs, sub-chiefs, church and village elders were approached to assist in this exercise. As a response to announcements made during the sunday services in the churches, we had a total of 12 applicants from whom 4 were picked. Effort was made to ensure that each of the sub-locations was represented by a research assistant. This was thought to be of importance in both

the census and data collection exercises. Therefore one research assistant, aged 39 years, was picked in Kiamwangi sub-location, the second one aged 37, from Kairia, the third one aged 28, in Gatundu and the fourth one, aged 30, from Kaguyu. For three days they were intensely trained on how to carry out the census. In addition each one assisted us in liaising with her respective area's chief, sub-chief, headman, village and church elders, group leaders. i.e key informants. We thought it wise to notify the chiefs and headmen of our presence and nature of work, in case any of the residents reported of our "interference and prying work" as has been known to happen. At the same time, the assistants were reliable key informants because they were widely knowledgeable about the area and its inhabitants and would provide valuable information.

We then set out to do the census, first all five went around the homesteads together. This was an attempt to expose the research assistants to the practical experience of what they were expected to do. Thereafter, we split up and each went on her own route decided on prior to the exercise to avoid duplication. However the researchers remained in the company of one of the assistants all the time because the latter knew the area better. The main task in this exercise was to do 'a round up' of those homes that had been rendered female-headed by the rural-urban migration of their male heads of household. On locating such a household, we would put down clear information as well as tips that would facilitate easier and faster location of the household during the actual data collection exercise. These were:-

- :-the geographical location of the village
- :-the name of the potential respondent
- :-the name of the absent male head of household
- :-the nearest coffee/tea factory

- :-the name of the area's chief and sub-chief and/or headman,
- :-the church(es) attended by the members of the household
- :-the school(s) attended by the household's children
- :-any other information on the location of the homestead

The presence of the potential respondent was not a necessary prerequisite during the census, anybody in the homestead at the time was sufficient source of the information required. However, where the potential respondent happened to be present more precise information was available. The purpose of study and possibility of a second visit was also communicated to the potential respondent and her attitude roughly gauged. As little time as possible was spent in each homestead.

Work started early, we met each morning at 9.00 a.m. at an agreed on venue. We exchanged the previous days experiences briefly, assistance was sought and given where needed and the days strategy of work laid down. It was here that the question of who would/should go where was sorted out. We set off at 10.00 p.m. Punctuality and dedication by assistants particularly, was emphasized and was realized. The researcher also collected the previous days completed lists for the next stage of work.

Some of the households that were in the target population were already well known to either research assistants and/or the key informants. The names and homes would be traced through the respective research assistant and their homes or place of work visited for verification of the census information. This was an out-of-the-questionnaire exercise that was included basically for the purposes of saving time. Where most of the necessary information was already known, the physical part of the census would be omitted (i.e. visiting the homestead) but

the relevant information of the homesteads involved would be comprehensively included in the list. Where information was felt to be dubious, and/or inadequate a short visit would have to be made to the relevant homestead to confirm, clarify and/or cross-check on it. Care was thus taken not to over-rely on flimsy information from the assistants or the key informants as it was feared that this would present serious problems during data collection as well as data analysis.

In some instances the snowball (mudball) technique of survey research was employed. After getting one of the target families, we would ask to be directed to other such families known to them either as relatives, friends, neighbours, acquaintances or just fellow village mates.

Working through out the week including Saturdays and Sundays (after church services and other Sunday activities) as well as early evening up to 8.30 - 9.00 p.m. on each of these days, we were able to complete the census stage in three weeks.

The general population of the area was not determined (it was not necessary anyway) but in terms of the sampling frame a total of 1,056 families were recorded. On a good day, a research assistant could cover as many as 15 homesteads. Kiamwangi yielded 269 families, Kairia 260, Kaguyu 268 and Gatundu 259.

Though the proportionate stratified sampling procedure departs from the conditions of equal chance of selection as postulated by simple random sampling, it protects the principle of known chance. Having a uniform sampling ratio was thought to have adequately taken care of this because this way each family in the four sub-locations (representing strata) had an equal and known chance of being

selected into the sample, that of, 1:6.

Sample Selection

A sampling ratio of 1/6 was then decided upon as the number of families in each sub-location did not differ markedly from each other. We then made use of random numbers as explained by Blalock (1981) to pick out 1/6 of the 1056 families whereby 176 families were sampled for data collection. The breakdown was as follows:- Kiamwangi 45, Kairia 43, Kaguyu 45, and Gatundu 43.

However, as will be explained later in the chapter, we did not manage to interview all 176 households¹², of the population but we interviewed 132 which represented an 1/8 of the total population but this was considered to be reasonably adequate for the purposes of making generalizations. The researcher refrained from over-replacements in cases where non-response, unavailability/absence of respondents was encountered. This was done to avoid destruction of the sample base. Where replacements were done, precautions were taken to ensure proper representation of each of the 'stratum', such that 36 families came from Kiamwangi, 30 from Kairia, 29 from Kaguyu and 37 from Gatundu. The rate of response was as can be seen poorest in Kaguyu sub-location.

After the census, two of the research assistants were dropped as it proved to be beyond the financial capability of the study to pay all four. Being married women with homes, shambas and children to take care of payment had to be made attractive to enable them to delegate these duties to other people so as to participate in data collection, which we anticipated was going to take a long

¹² Due to some of the problems explained under the section on the problems in the field.

time. The two who remained, the one from Kiamwangi and the one from Kairia were both Form two drop outs having been married at an early age, their children 2 and 4 in number, respectively, were already grown up and going to primary and secondary schools and thus not demanding close care. The two that were dropped had very young children, they were also relatively young themselves and they had to delegate care of the children to relatives for the census undertaking as mentioned above.

Training for Data Collection

Training of the two remaining research assistants for data collection started immediately. It emphasized on the factors that could jeopardize validity and reliability of data collected along with the principles of interviewing. Thus the interviewer- respondent relationship, purpose and focus of study, accuracy in asking questions (which entailed proper understanding and interpretation of questions in the questionnaire), accurate and precise recording of responses and cautionary measures to be taken in areas of possible jeopardy, were emphasized. Training was conducted in both Kikuyu and English but mostly in the former. After two weeks it was felt that they were ready for data collection. At the end of training, the questionnaire was translated into Kikuyu with their assistance. This, it is believed further enhanced their understanding and interpretation of the questions.

Data Collection

In substance the interview was conducted in vernacular while recording of the responses was done in either Kikuyu or English.

Each assistant had a questionnaire fully translated into Kikuyu that she used for the interview but the ones on which responses were recorded remained in English. The researcher was present in 85% of the interviews. This decision was made after the initial three days in which the researcher and the assistants had attempted to collect data each individually from different households but did not manage to collect any data due to the hostile reception staged by the respondents¹³.

It is appreciated here that one could argue that it was then a waste of time and funds training the assistants for data collection. It will however be recalled firstly that they assisted the researcher in liaising with the key informants which became a very important prerequisite to each interview. Secondly, in data collection, they played a harmonising role between the researcher and the respondents such that calmness and relaxation on the part of the respondent were maintained and thus hostilities known to occur during data collection reduced to a manageable and tolerable amount. Non-response per se was therefore minimized. Even in the 15% of the interviews that were conducted by the research assistants in the absence of the researcher, visits to the specific homes for familiarization and observation of various aspects in the homestead that were related to the study but may not have been included in the questionnaire were always made. Consistency of responses provided to some of the questions would be checked through observation and probing if the necessity

¹³ This is also discussed at length under the section on problems encountered in the field in this Chapter.

arose, in order to verify for ourselves. Thirdly, the research assistants assisted very much in locating the sampled families as they knew the area better and could do so in a shorter time.

The interviews were mostly conducted in the homestead of the respective family except in cases where this proved to be impossible. For instance, in some cases we had to appeal to the sampled households for an audience through the church, the key informants or friends¹⁴. In such cases appointments were made and the interviews conducted at a place and time chosen by the respondent either because they were too busy or because they did not want to be interviewed at home for the purpose of preserving domestic privacy for instance.

This occurrence was however mostly associated with non-response or general reluctance to respond. On this front, 3 of the respondents were interviewed in Karatina market on various market days (market days are usually on Tuesdays, Thursdays and Saturdays) and 5 others on Sundays in the church premises after the church service and related activities. In these cases we were virtually at the mercy of the respondents had to have things arranged at the respondents' convenience. It will be recalled that replacements were neither entertained nor easily undertaken. It was nevertheless felt necessary to visit the respective households either before or after the interview to have some observation-based idea of the homestead. We were actually able to visit all the sample households either for the actual interview or for verification as discussed above. We always sought the consent of the relevant respondent before doing so. Honesty and confidentiality were widely maintained.

The respondents were traced by the information put down during the census.

¹⁴ The problems that led to these arrangements are further discussed at the end of this Chapter, under the section on problems in field.

Even with the assistance of the knowledgeable research assistants, this cannot be said to have been an easy task. Homesteads in the rural areas are not arranged in any order or even numbered as are the residences in urban areas., The translation of responses recorded in Kikuyu and the recording of field notes were done in the evenings after each day of data collection.

The Interview

After locating the homestead and thus the respondent, a few minutes were spent on establishing a rapport with the respondent. This is a very important prerequisite to any interview. Greetings were exchanged, introductions made and purpose of visit communicated. All the parties present participated in this, the research assistants had been well trained on the importance of this procedure and its correct performance. Where required, the broader aspects of the study, aim, purpose, and even sometimes meaning and aim of research were very briefly and as simply as possible explained to the respondent. Despite the fact that these were fellow villagers, the procedure was necessary in some instances (few) basically because of the nature of the research. Where this is not done, the respondents insist on asking a lot of questions before the researcher can get on with the real purpose of the visit not to mention that one may this way create opportunity for refusal. In any case, in the African tradition, one cannot be welcomed into a fellow villager's house and straightaway start off with serious business without first engaging in an informal conversation of some sort, especially if he is an African himself. This also helps make the respondent feel as free and relaxed as to respond to even the most sensitive of questions.

We then proceeded onto the interview. Non-response for some questions was discouraged as much as possible. Where rapport was well-established this was not a problem at all. In fact, the opposite problem whereby respondents bubbled with information, sometimes going out of the context of the questionnaire was more rampant¹⁵. A lot of probing, re-asking of questions was done to ensure a proper understanding and interpretation of questions and their responses by both interviewer and interviewee respectively.

After each interview, the questionnaire was thoroughly checked, missing gaps filled in and if necessary clarifications made. This was done to avoid having to re-trace the respondents for any clarifications and/or corrections. This it was envisaged that this would have been a difficult and expensive task.

Efforts were made to confirm the consistency of responses pertaining to income-related questions. Thus in most of the households some (preferably recent) co-operative slips (milk, coffee, tea) were made available for our perusal. We were able to look at land title deeds in 30% of the cases whereby the size of land holding could be taken to be genuine and definite. In the rest of the cases, it was not possible basically because they were not readily available. We gathered that such 'important documents' were mostly left in the man's custody. In such cases, if it also happened that the respondents did not know the sizes of the land holding, we attempted to confirm by observation and estimation, an undertaking on which we had gained a lot of experience as we carried out the data collection exercise. That is, we had learnt with time for instance, to tell how big an acre of land was just by looking. Other factors were also confirmed by observation, for instance, the acreage under cultivation, the general condition and physical out-look of the children if any were at home at the time

¹⁵ It is discussed in detail in a later section of the Chapter.

as well as that of the respondent. Needless to say, wherever this was done, the interview took a little longer than planned but this was deemed worthwhile.

Where all failed (very few instances) with due consent of the respondents, we consulted the more elderly people in the specific vicinity either in the homestead or even neighbourhood. For instance, on the question of size of landholding most of them could tell with dismaying precision not only the size of their own (most probably inherited by his son(s) by now) but also those of some of their neighbours, villagemates, friends and relatives. Some of them as a matter of fact claimed to have participated in the land consolidation and demarcation exercises after the country's independence.

The interview was always concluded with a word of appreciation for the assistance and cooperation awarded to us. On the side of the respondents, a lot of hospitality was shown to us as is common of rural dwellers.

In the initial stages of the data collection exercise, one interview could take as long as between 1½ hours to 2 hours due to factors such as interviewer inexperience, unfamiliarity with the flow of questions and straying out of topic by respondents. At the peak of it, this was reduced to between 45 minutes to 1 hour though we conducted only 4-5 interview in one day. Much of the time was taken walking around locating the sample households.

Data collection was accomplished in 3½ months, from mid October 1987 to the end of January 1988. After excluding the four interviews by the research assistants (themselves wives of migrants), a response rate of 75% was recorded. Including these into the analysis, would no doubt introduce bias because their selection first and foremost had not been random and secondly too much about them was known to the researcher.

Techniques of Data Collection

The objectives of the study¹⁶ mainly aimed at an assessment of the effects of rural-urban migration of the male head of household on the rural family with particular reference to the family's farm production capacity. In the light of this, the interviewing method of data collection was used as may have been gathered from the foregoing discussions. The main research tool was a standardized interviewer-administered questionnaire comprising of both open and close-ended questions. It was administered to a randomly selected sample of women, specifically, 'heads' of households rendered so by the migration of their husbands. The questions were mainly interval and nominal in level of measurement and this method was mainly used to cover the main survey sample of 132 respondents.

The questionnaire was divided into six sections :-

- :-Personal biographic data of both the respondent and the absent male head of household
- :-husband's migration data,
- :-farm production data,
- :-family consumption patterns data,
- :-division of labour data
- :-respondents self-evaluation data.

This method of data collection was preferred because of several of its advantages. It provides data that can be statistically analysed and manipulated allowing for generalization to the larger population level and enabling further

¹⁶ These are discussed in Chapter One of the study.

build up on the work. It is also flexible in that unclear questions and/or contradicting responses can be probed and clarified while personal reactions are observed and taken care of on the spot. Thus the researcher is in a position to assess and confirm the consistency and validity of responses on the spot. There is a direct interaction between the interviewer and the respondent, and the setting in terms of time and venue can be controlled by the researcher to either of their convenience.

Direct Observation

This was done alongside the interviews during data collection. It was done mainly for purposes of enhancing the validity and reliability of data collected. Factors observed were recorded in the same questionnaire as the responses of the main interview to facilitate easier referral and compilation, except in cases where visits were made to specific areas as will be described later. In the latter form of observation (non-interview), findings were recorded in a field notebook. Some of the Interview-based observations were on:-

- :-the general condition and out-look of the respondent, that of the home and of the children if there were any around
- :- the size of landholding
- :-food and cash crops grown
- :-acreage under food crops and cash crop(s)
- :-the general condition of the shamba
- :- the labour and capital in the shamba.
- :-a general placing of the family social-economically based on factors such as the kind of house the family lived in was also attempted.

Specific visits were made to various key places as far as the funds and time available could allow. We visited two coffee factories (selling points) in the area namely Kianganararu near the township of Karatina and Kiamwangi in Kiamwangi village.

The former was first visited on a coffee picking day, whereby we witnessed the weighing, recording of amount of coffee (in kilograms) picked, sorting out of the 'clean' from the 'dirty', of the coffee beans, i.e. the whole procedure of selling coffee to the co-operative. The latter was visited on a non-coffee-picking day. We witnessed some of the members performing gitati, a sort of a duty that all members of the co-operative have to perform in order to have it serve them in the various ways. It is performed by at least one member from each family and the nature of the work to be performed by each individual family during the gitati session is decided upon by the factory officials. On this particular day, some of the family's (each family represented by an individual member or members), were tending and sorting out the dried up coffee beans known as Mbuni (these are previously those sorted out as affected by the Coffee Berry Disease, CBD). Others re-arranged, cleaned and tidied up the place on a general basis. Up-to-date and clear records were kept on the performance of gitati by each family are kept and the question of one falsely claiming to have done it is near impossible.

Kianganararu was visited for a second time on a payment day wherein we witnessed a payment session after data collection. We were lucky to observe some of our respondents receive their payments. On this day, the co-operative signatory (only a co-operative signatory can run a co-operative account)¹⁷, some

¹⁷ The issue of Co-operative signatory is discussed in detail in the following chapter.

too old and thus accompanied by younger relatives to assist with the various procedures, streamed into the factory and into a payment hall very similar to a banking hall of an ordinary bank, with counters, cashiers and all. Each then filled out a chit with the details of his/her account, amount required and then duly signed or thumb-printed it. It was then handed over to the cashier who sent it further in for checking of signature or thumb-print and whether the account could allow the withdrawal of the amount of money required or not. It would then be sent back and if all was well the drawee would be paid and the necessary entries made into his/her co-operative bank book. One need not withdraw all that was in the account unless all of it was needed, the account operating basically like a savings account in any ordinary bank. If any of the information on the chit and/or the signature differed from that in the co-operatives' records the person's chit would be rejected. Rejections were seen to be more frequent in cases where the amount required failed to be accommodated by the accounts' balance. This was because the farmers are allowed to take various items such as fertilizers, pesticides, seeds, money for use in their farms; failure to keep good records may lead one to expect the account to have more than it actually does as the total amount the items taken on credit add up to, is subtracted from the account as the family delivers produce. However all is well communicated to the affected family and up-to-date entries made into both the co-operatives ledgers as well as the farmers' co-operative banking book.

Many on this day complained of under-payment as they had been paid at the rate of .50 cts instead of ksh.2 per kilogram of coffee delivered. We also learnt that different pay points pay at different rates of which are determined by factors such as the quality of coffee produced by the area, financial situation and set-up of the co-operative. Thus a pay-point in the same division

was said to have paid for coffee delivered over the same period at the rate of Kshs.1.00 per kilogram while another in Kirinyaga District (neighbouring District) was paying at Ksh.2.50 per kilogram of coffee delivered. We as the researchers were not able to tell the cause(s) of the differences.

After payment, on their way home, most went into a nearby shed to buy pork brought for sale by one of their fellow farmers. This has bearing on the consumption patterns of the people.

Unfortunately, we were not able to arrange for similar visits in relation to the other commercial crop found in the area namely tea. This was firstly due to the observation that the area is predominantly a coffee-growing one and thus the impact of tea growing was not equally significant. In actual fact, it was observed that even those growing both seemed to have planted tea recently and were concentrating more on coffee. Secondly time and funds would not allow for these arrangements.

Unstructured Interviews

These were administered to various key informants as mentioned earlier, the chiefs, sub-chiefs, headmen, church elders and group leaders. They were mainly used to gather valuable supplementary information that may not have been obtained through the structured interviews.

For instance, the officials in the Karatina coffee factory interviewed during the visits described above, provided very valuable and important information on various factors. These included:-

- :- the procedures of payment of cash crop dues
- :-co-operative signatories for instance what happened

where the female 'head' was denied this by her migrant husband
:-desertion of wife by migrant husband whereby he held
on to being the co-operative signatory or delegated it to other
relatives e.g his father or brother who would selfishly operate the
account to his own benefit while the migrant's direct family's which
continued to tend the cash crop suffered. For instance, the officials
described instances where the migrant came home and closed down the
account against his wife. These interviews went a long way in enriching the
data collected.

Available Data

These were used to provide background information and was extensively used
in the sampling procedures and in providing a check on the accuracy of the
survey. Reference was also made to several existing works during the designing
and planning phases of the study. Materials used comprised of previous studies -
statistics, Books, journals, daily newspapers, government records, mimeographs,
pamphlets, seminar and conference papers such as are quoted now and again in this
work. These were mainly obtained from various libraries in the University of
Nairobi particularly the main library and The Institute for Development Studies'
library. Other source included:-

- :-The Central Bureau of Statistics (G.O.K)
- :-The National Archives (G.O.K)
- :-individual persons known to be familiar with the area of study.

Limitations of the Study

Larger samples give better, more reliable results. Admittedly, the sample size in this study is relatively small. A larger one was planned for and would have been preferred if more funds and time had been available. These are some of the obstacles often beyond the researchers control and this study was no exception.

Problems in the Field

Data collection coincided with the areas' cash crops' picking season. Tea is picked on a daily basis as long as there is enough of it on the bushes while coffee is picked on specific days announced to the growers by their respective co-operative depending on whether there is enough of it on the trees as to warrant a picking session. In addition to this, Tuesday, Thursdays and Saturdays were the market days of the area. Most of the women stream in and out of the market at Karatina, some selling produce and others buying essentials needed in their homes. Above all, they have their normal routine chores of tending the children, the shamba and the home and official work for those employed elsewhere. These presented problems in that some of the respondents were too busy to afford us any reasonable length of time as was required for the interview and other procedures of data collection. Some of the instances during which we resorted to making appointments with the affected respondents at their convenience in terms of time and venue as mentioned earlier were as a result of such.

The fact that we had already become familiar to the people given the census exercise, bore a problem of its own kind. Those scheduled for the interview by

appointments went around consulting those already interviewed, but since the questionnaire was long and with detailed questions, no single respondent could manage to retain all the questions in mind as to recite them to the other potential respondent(s). Due to this problem, data collection did not run as smoothly from village to village, sub-location to sub-location as planned. Trips were made back and forth as we tried to get hold of respondents missed in the village or sub-location already covered.

The whole concept of research is rarely well understood and/or valued in most developing countries. Despite clear and honest explanations by the researcher, several of the research aspects were grossly misunderstood. Firstly, at the on-set of the data collection exercise, many of the sample households failed to understand the sampling aspect. As such, they complained about the selection of the interviewees. Many could not see why their friends, relatives, neighbours, village-mates were not being interviewed while it was well-known to them that they were "in the same boat". This caused refusal to respond to the whole questionnaire or to some of the questions in it. Some referred to the procedure as discriminatory while others insisted that others be interviewed first. Several of the women also complained about "this filling of forms that we always do but get nothing out of". The very hostile referred to it as misuse of their persons and unnecessary interference, and would have nothing to do with it. At the onset of the data collection exercise, we encountered a lot of hostilities from the respondents. It was on the basis of these that we resolved to go together (researcher and research assistants) to each and every homestead to interview the sample household after three days during which our efforts to collect data failed totally as mentioned earlier. At this juncture, further strengthening of the research assistants on the importance of establishing a

rapport with the respective household as well as its correct performance was also undertaken as a result of which these occurrences were minimized.

Prior to this, our initial census procedure had been referred to by many of them as the National Population Census by the government despite our having made clear and honest explanations by us in each case.

As much patience as could be garnered on our side was employed in such cases, to calm them down and have them agree to participate in the research. Many also thought and indeed started spreading rumours to the effect that "our husbands are going to be forced to come back here". For some this was a positive "possibility" and for others negative. Obviously, none understood either the intricacies such a move would entail nor the fact that the researchers would have very little to do with such an undertaking.

In relation to these problems several others were counter-produced. Some of the respondents took us to be their God-sent solvers of their long-term crippling problems and sufferings. They therefore took time and will to relate to us their 'miseries' and 'suffering' during the interview session without being conscious of time at all. This prolonged some of the interviews unnecessarily especially where our efforts to bring them back to course failed. Using as much diplomacy and politeness as was permissible however, the respondents were encouraged, and assisted to keep to the questionnaire and questions put to them as much as possible. It is a known fact that, given an aura of relaxation, honesty and confidentiality, any woman who thinks she has a problem will get deeply engrossed in lamenting and complaining about it. Most complained of desertion, mistreatment and other sufferings inflicted on them by their absent husbands.

On the other hand, there were those who felt that responding to our

questions was tantamount to "reporting and gossiping about their husbands" and/or divulging family concerns to a stranger. This was especially so because the questionnaire touched on almost all the affairs of the family and in particular the personal data of both the wife and her migrant husband. These are factors that tend to present problems in research, either rural or urban-based but as indicated earlier, effort was made at the onset of each interview to establish a good rapport with the respondent. This greatly enhanced their relaxation and frankness in responding to the questions.

On an average day we could only conduct between 4-5 interviews. This was firstly due to the fact that we had to walk long distances to trace the sample households, literally out of lack of a better alternative. Though faster, better and more comfortable means of transport would have been preferred, funds were insufficient. Rural areas are also characterized by poor roads, poor accessibility by road to some of the areas, unavailability of the means themselves, poor and scattered location of the homesteads, all of which made the task of gaining access a hard one.

Though we tried our best to lay out a strategy on a daily basis in terms of minimizing movement between the homesteads to be covered, quite often we ended up 'zig-zagging' all over the village and sometimes a whole sub-location especially where absenteeism, unavailability or even refusal on the part of the respondent were encountered. A lot of time and energy was obviously spent this way.

At times, the interview took a long time to conduct due to the various reasons such as mentioned elsewhere in this chapter. Rushing it would not have been an appropriate solution as it was likely to be counterproductive. Needless to say, care had to be taken always not to be pre-occupied with the completion

of the questionnaire rather than the capturing of good data. This was particularly so because a lot of probing, re-stating of questions and explaining of certain issues often needed to be done to ensure proper understanding and interpretation of questions by the respondent, and therefore recording of consistent and correct responses by the assistants.

After gaining some experience in interviewing and mastering the flow of questions, we could take as short as 30 minutes but often between 45 minutes and 1 hour. Data collection however took a considerably longer time than anticipated (3½ months) despite our having worked rather hard and intensively (we worked through out the week including weekends and early evenings). Although there are no street lights in the rural areas, with the help of a torch one can safely walk around in the early hours of the evening. As a matter of fact, we were able to accomplish much more during this time than during the day as most of the respondents were sure to be in though busy with the preparations of the evening meal.

The month of December was the worst for data collection. Serious problems of absenteeism and non-response were recorded. Several women went out for relatively long periods of time to visit their husbands, children and friends. We had no choice but to keep waiting until they returned. Worst of all, some of the husbands came home for the Christmas holidays and/or leave. As such many of the women were not willing to be interviewed in the presence of or with the knowledge of their husbands. This fact created very ugly scenes on a few occasions, with the husband demanding to know the relevance and importance of such a study and why his home had been "picked". Several warned and/or ordered their wives against responding or participating in the study in any way. Even where we thought it wise to attempt a compromise it took a lot of effort and

tactic to explain, calm down and harmonize and almost always got nowhere. To say the least not much was accomplished in terms of data collection during this month.

Admittedly, the study taxed and over-relied on the respondent's memory. There were questions calling for the recollection of events and happenings of years long gone. Too much was expected as far as the respondent's concentration and capability to remember was concerned. In the end we had to take verbal statements and estimations. Thus one cannot with uttermost certainty rule out the possibility of over-estimations, deflations and/or 'guessing' especially in the income-related questions. But it is true of most studies that such questions present problems similar to those discussed here, not to mention the more serious one of non-response. As such their analysis must always be treated with caution. Though documents were made available for our perusal in several of the interviews, some of the respondents took too much time trying to recall sometimes due to genuine memory failure but also due to fear and guilt of "reporting on my husband". Some ended up giving mere estimations while others called for help from other members of the family even when records could have been produced.

By the same token, we cannot swear upon the accuracy and completeness of the census done for the purposes of obtaining a sampling frame. Some of the households may well have been left out due to the problems of transport discussed elsewhere in this chapter despite the fact that the assistants were mature trustworthy persons.

In terms of funds, the study turned out to be extremely expensive. Funds officially allocated for it were far from sufficient and additional funds could not be procured. We had to make do with the meager resources available.

Of the problems discussed, it is quite clear that a great deal of patience,

diplomacy, politeness, charm and wit were called for on our part. The principles of honesty, objectivity and confidentiality were enforced as strictly as was possible. However, the survey methods of data collection and the standardized-prepared questionnaire such as were employed in this study, do not provide a means of dealing with issues that may arise in the course of the work especially those not anticipated. Yet the human condition is never wholly predictable. Alone, they also cannot help the researcher determine the truthfulness of responses. They are costly methods in as far as funds and time are concerned. A thorough pre-training of research assistants is an absolute necessity, so is their close supervision lest interviewer bias invalidate data collected. Interviewer bias often comes in through a variety of ways:- The way the questions are asked, the attitude of the interviewer(s) towards study topic (that of the respondent too) and his social status. The respondents(s) may doubt or take for granted the anonymity, confidentiality and honesty assured to them. This may lead to refusal to respond and/or to the giving of untrue and/or false responses factors that may go a long way in jeopardizing the study's findings. The researcher may also fail to truly enforce these virtues. These were some of the factors that were seriously considered during this study.

Regardless of efforts put in to ensure validity and reliability of data collected, gaps in the data cannot be ruled out but efforts were made to reduce these to a negligible amount.

Hypotheses

A hypothesis is a tentative generalization, the validity of which has to be tested. It is based on accumulated previous knowledge and is coined in order to find out the correct explanation of a phenomenon (Ghosh 1982).

From the fore-going discussion three such generalizations emerged. Each is an attempt to find out and understand the possible effects (negative or positive) of the rural out-migration of the male head of the household on the family's rural farm production capacity. i.e which are some of the ways in which this transformation affects the level of farm production in the rural area.

H_{1.1} Remittances by male head of household negatively affect rural household's farm production capacity [leads to a declined farm production level].

H_{1.2} Control of family income and other rural resources by wife of migrant positively affects farm production capacity [leads to an improved farm production level].

H_{1.3} Changes in the division of labour negatively affect farm production capacity [lead to a declined farm production level].

Operational Definitions and Specification of Key concepts

Concepts serve to organize and summarise views. They simplify thinking and present perceived relationships. They are defined to promote and enhance understanding within the concept the study is focusing on.

H₁ Independent variable:-

Remittances

In this study, this concept referred to goods in cash or kind sent, forwarded, transmitted and/or taken to the rural area by the migrant male from the urban centre where he works and resides.

It was measured by responses to questions on the following:-

- :-Reason(s) for husband's migration
- :-Husband's number of years of formal schooling
- :-Duration of migration
- :-Whether husband is employed
- :-If yes, where
- :-Husbands income p.m
- :-Husband's number of wives
- :-Husband's total number of children
- :-Husband's monthly expenditure
- :-Whether or not husband remits
- :-If not, why ?
- :-If yes, amount per month (cash)
- :-On whose initiative it is remitted
- :-Number of times he has failed to remit since he migrated.
- :-Whether husband offers explanation when he fails to remit :-Action wife takes when this failure occurs
- :-Use(s) of remittances
- :-Whether husband directs on the use(s) of remittances
- :-Other goods/gifts sent/brought home
- :-If migrant visits his rural home
- :-If yes, frequency of migrants visits
- :-If no, why ?

H₂ Independent variable:-

Control of income by wife of the migrant

This referred to the newly acquired power to direct, regulate, supervise, decide upon, determine, conduct, head, master mind, manage and influence the financial matters and transactions of the family income by the migrant's rural-

based wife.

It was indicated by questions on:-

- :-Whether or not wife had a Bank account
- :-whether Personal, joint or both
- :-If so, when it/they were opened
- :-By whom ?
- :-On whose decision ?
- :-Whether or not wife had invested in any kind of property since her husband migrated.
- :-If so, the kind of property
- :-The cost of investment
- :-Sources(s) of money for investment
- :-On whose decision investment was made
- :-Whether or not the husband was consulted before the investment was made
- :-if not, why ?
- :-Registration of investment (under whose name property was registered)
- :-Income generated by investment p.m.
- :-Whether wife has taken loan/credit during the man's absence
- :-If so how much ? What for and on whose decision ?
- :-Who is decisive in family budgeting ?
- :-use(s) of family income
- :-Whether wife sells farm items/surpluses
- :-Whether husband is consulted before sales are made
- :-If not, why ?
- :-Use(s) of income yielded by these sales
- :-Who is the cooperative signatory ?
- :-Whether wife is employed elsewhere
- :-If so, where ?
- :-Number of working days per week
- :-Type of work
- :-Income earned p.m
- :-To whom are household's chores delegated when she is working
- :-On whose decision was employment procured
- :-What her husbands opinion about it is
- :-Wife's participation in the husband's migration decision
- :-Whether or not she misses his presence and/or contribution.

Independent variable:-

The Changes in the Household's Division of Labour

This concept refers to those changes and variations that may have inevitably taken place in the apportionment and/or division of tasks, duties and

responsibilities in the homestead. It was measured by answers to the following:-

- :-wife's current tasks
- :-Her tasks before husbands' migration
- :-Husbands' tasks before he migrated
- :-Tasks taken up by wife after her husband migrated
- :-whether or not she feels overburdened
- :-whether she has violated the sex roles myths in her performance and fulfillment of tasks in the farm.
- :-whether or not she is otherwise employed
- :-Type of work
- :-Time spent in other employment
- :-Delegation of home tasks while she works outside
- :-other sources of labour
- :-Whether the household hires labour
- :-Average number of labourers hired in a year
- :-Cost of hiring labour
- :-Source of money (if at all)
- :-Number of children
- :-Their ages
- :-Whether they are in school or in employment
- :-Number of dependents besides respondent's own children
- :-Their occupations
- :-Whether there are village cooperative work groups in her village
- :-Whether or not she participates in these work groups
- :-If not, why ?
- :-Husband's labour contribution
- :-His visits home
- :-Frequency
- :-Length of stay during the visit(s)
- :-Whether or not he spends his annual leave at home
- :-What he does when at home on leave
- :-Who requests for his visits

N/B. It will have been noted by now that the dependent variable was a common for all the three hypotheses.

The Farm Production capacity

This referred to all aspects of farm production and was indicated by responses to questions on the following:-

- :-Number of pieces of family land
- :-Total acreage of land owned

- :-Mode of acquisition for each.
- :-If inherited, when was each piece inherited ?
- :-From whom was each piece inherited ?
- :-If purchased, when was each piece purchased ?
purchased
- :-By whom was each piece purchased ?
- :-Source(s) of money for each piece
- :-Cost of each piece
- :-Food crops grown in each piece
- :-Acreage under food crops before husband's migration
- :-Acreage under food crops after husband's migration
- :-Food crops grown specifically for sale
- :-Income yielded by this
- :-Sale of surpluses
- :-Income yielded
- :-Whether surpluses were sold before husbands migration
- :-If no, why ?
- :-Yields of maize, beans, potatoes before husband's
migration in bags
- :-Yields of maize, beans, potatoes after husband's migration in bags
- :-Rearing of cattle
- :-Number of years of cattle-rearing
- :-Cost of starting rearing
- :-Cost of cattle upkeep p.m.
- :-Amount of milk produced per day in kg.
- :-Amount sold
- :-Money earned through this
- :-Consumption of milk by family,
- :-If not, why ?
- :-Sale of cattle ?
- :-If yes, why ? When ?
- :-Income earned from latest sale of cows
- :-Use of income earned from this sale
- :-Poultry-keeping
- :-Number of years of poultry keeping
- :-Cost of starting poultry-keeping
- :-Cost of upkeep
- :-Eggs laid per day
- :-Eggs sold
- :-Money made this way
- :-Consumption of eggs by family
- :-If not why ?
- :-Sale of poultry
- :-if yes, latest sale
- :- Why ?
- :-Income earned from latest sale of poultry
- :-Use of this money
- :-Goat-rearing ?
- :-Number of years of goat rearing
- :-Number of goats reared
- :-Cost of starting goat rearing
- :-Cost of upkeep

- :-Sale of goats ?
- :-If yes, why ?
- :-Latest sale
- :-Income from latest sale of goats
- :-Use of this money
- :-Source(s) of money for livestock farming
- :-Use of income from sale of farm items (e.g. cows, poultry, goats, surpluses)
- :-Cash crop farming
- :-If yes, type of cash crop
- :-Number of years of cash crop production
- :-Cost of starting it in each piece
- :-Source of money for starting cash crop production
- :-Initiator of cash crop production
- :-Acreage under cash crop before husband's migration
- :-Acreage under cash crop after husband's migration
- :-Cash crop earnings per year
- :-Who is in-charge of the cooperative affairs ?
- :-Use(s) of these earnings
- :-Types of farm inputs used
- :-Total cost of inputs used in farm production
- :-Frequency of coffee and tea picking per month
- :-Quantity of coffee picked
- :-Quantity of tea picked

CHAPTER FOUR

DESCRIPTIVE ANALYSIS OF DATA

In this section of the study a descriptive analysis of the data is undertaken. The mean, range and mode are some of the descriptive statistics used. These pave way for inference-making. In addition, variables used in further analyses are identified. At the same time, the practicability and utility of the modernization and underdevelopment theories in analyzing and describing the problem of rural male out-migration and its impact on the rural family's farm production, continue to be assessed.

The analysis is based on 132 respondents randomly drawn from four sub-locations, Kairia, Kaguyu, Gatundu, Kiamwangi of Iria-iri location, Mathira Division, Nyeri District. The sampling distribution was as on the table below.

Table 4.1:- Sampling Distribution

Sub-location	Frequency	Percentage
Kiamwangi	36	27.3
Kairia	30	22.7
Kaguyu	29	22
Gatundu	37	28
Total	132	100

It will be recalled from the previous Chapter that those sampled had to be wives of migrants whose husbands were living in any one of the Kenyan urban centres. The period of urban stay was not specified as long as the migrants were

not daily commuters. In this vein, the local township, Karatina was excluded. It was felt that those working there were most likely daily commuters rather than migrants per se, primarily due to its proximity to the study area.

We shall first embark on a short discussion of the background characteristics which admittedly bear only slight relevance to the topic under study but do at least acquaint the reader with the people studied.

At this juncture, we may need to point out the following factors:-

:-The reader should guard against looking at the following discussion as a comparative analysis of the biographic and other characteristics of the respondents (women) and their migrant husbands.

:-As mentioned in Chapter 3 of the study, the fact that there occurred clearly an over-reliance on the respondents' memory during data collection, should also be borne in mind.

:-The unit of analysis in the study is the household and the rural-based wife of the migrant, the respondent.

The respondents' age ranged from 27 to 60 years with a mean of 39 years and a mode of 42 years. That of the migrants (as reported by the respondents) ranged from 30 to 63 years with a mean of 44 years and a modal age of 46 years.

Table 4.2 below gives the age distribution of the respondents and their migrant husbands.

Table 4.2:- The Age Distribution of the Respondents and of the Migrants

	Age category	Migrants %	Respondents %
Young	27-37	20.5	39.4
Middle	38-48	46.2	54.5
Old	> 48	33.3	6.1
	Total	100	100

(n=132)

Put briefly, these were relatively young people, 93.9% of the women fell into the 'young' and 'middle' categories while only 6.1% fell in the 'old' category, 66.7% of the migrants were in the 'young and middle' categories and a sizeable 33.3% in the 'old' category. The distribution depicts a mature people, capable of making decisions and handling their social and economic affairs effectively.

The average number of years of marriage was 17 years and the range 37 years. A majority 86.4% had been married for 10 and above years and expectedly understood and knew each other fairly well. Primarily for the purpose of reproduction and thus continuity of society, marriage is one of the traditions still strictly upheld by the Kikuyu people. A minority 17.4%(23) of the migrants were polygamous, 87%(20) of these with 2 wives and 13%(3) with 3. About 61%(14) of the polygamous migrants had married the second and/or third wife(ves) after migration, 17.4%(4) before migration and 13%(3) had married a second and/or third wife both before and after, while 3.7%(1) declined to reveal this.

The number of children per respondent was descriptively analyzed along these lines such that we were able to obtain the total number per 'polygamous homestead' and the number per respondent i.e per household. Table 4.3 below is

on this.

Table 4.3-- Number of Children per respondent and per migrant.

Category	No. of children per respondent	No. of children per migrant
0	.8	0
1 - 5	46.2	59.1
6 - 9	45.4	21
> 9	7.6	19.9
Total	100	100

It can be deduced from the table above that the homesteads with more than one wife had a larger number of children. No migrant had zero number of children, while more migrants had 1-5 children (59.1) than respondents(46.2). A similar observation is made of the more - than - 9 children category whereby more migrants than respondents fell (19.9% and 7.6%) respectively. Migrants seemingly had a higher number of children on average than the respondents which in this study will be tentatively attributed to polygamy. In the absence of men in the rural areas, women and children provide the necessary labour for farm production and related activities. In this study, most of the children were found to be either schooling or working as will be discussed shortly and thus were not much of labour contributors. Women therefore had to provide labour almost throughout, save perhaps for the 3 months school holidays (April, August and December) when the children could assist. Table 4.4 below gives information on the respondents' childrens' occupation.

Table 4.4-- Respondents' Childrens' Occupation

No. of children	In Nursery	In Primary	In Secondary	In Training	Working
0	72.7	12.1	43.2	75.8	81.1
1	25	16.7	17.4	21.2	12.1
2	1.5	17.4	22.7	3	3.8
3	-	25	15.9	-	-
4	8	20.5	-	-	2.3
5	-	8.3	.8	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
Total	100	100	100	100	100

It is observed here that most of the children were either in primary or secondary school, requiring therefore a lot of time for their studies and could not be of much help in the family farm production. Considering that 81.1% of the children were not in any form of employment one can tentatively conclude that the respondents' children were more of consumers than producers particularly because most of them were of school-going age.

In the modernization approach, a prominent feature of progress, is the acquisition of formal education. It is seen as an agent of change that develops human capital, modernizes attitudes and behaviour in the population in general and influences the formation of elites. Schultz (1961) has argued that education can produce the knowledge and skills required for economic development. At the time of independence Kenya as a country was deficient in skilled manpower. Thus the logic that, accelerated development depended upon enlargement of the supply of educated manpower which, in turn, depends on a broadening of the access to a

formal educational system, seems quite straight forward. Without this manpower development, leadership in both the public and private sectors would be woefully lacking and economic growth would be retarded. It is because of this that most parents do all that they can to educate their children and perhaps get educated themselves.

With regard to education, the people studied were found to be fairly educated as The Table below shows:-

Table 4.5:- The Educational Background of The Respondents and of the Migrants

Number of years of schooling	Respondents %	Migrants %
0	6.8	.8
1-4	3.8	7.5
5-8	22	16.6
9-12	56	50.8
13-16	11.4	22.7
> 16	0	1.6
Total	100	100

Rempel (1981) argues that it is the ethnic groups with the best access to educational opportunities and those suffering pressure on land that show the propensity to migrate. Education makes relocation easier by equipping one with the knowledge, skills and capacities necessary for the improvement of the rate of societal economic progress Sabot (1979). In the absence of adequate land, the need to relocate is felt rather strongly especially by the educated. Sabot (1979) adds that the longer a fairly highly educated man stays in town the higher his income becomes. Education therefore brings about modern values and beliefs.

Men have better and more access to educational opportunities than women. One simple reason being that women are often too busy to afford any time for it. Indeed, it was found in relation to this that, though 56% of the women had spent between 9-12 years in formal schooling as compared to 50.8 % of men, a good 24.3% of the men had gone further ahead to college/university as compared to 11.4% of the women. Whereas only one man (0.8%) had no education at all, 6.8% of the women interviewed fell in this category. The men had undergone an average of 10 years of formal schooling ranging from 3 to 18 years while most had undergone 9 years, the women had undergone an average of 8 years with a range of 14 years and a mode of 9 years.

Those studied therefore were fairly well equipped with the skills and training required to cope with the process of societal differentiation and the inevitable specialisation and re-location championed for by the modernization ethos.

A brief look at the data on migration of the male head of household would further help acquaint the reader with those studied. It was found that 82.6% were on their first migration while 17.4% had migrated earlier, returned home and re-migrated again perhaps to a different urban centre. The duration of migration ranged from 1 to 25 years and averaged 12 years. Nairobi was found to be the major receptor of migrants having received 59.8% while the neighbouring Nyeri town received only 7.6%. The rest of the migrants were shared out between Mombasa 10.6%, Nakuru 12.9%, Kisumu 30%, Kakamega 3.8% and Thika 2.3%. Tentatively, people migrate to the more prosperous and bigger urban centres expected to be offering the largest number of economic opportunities¹⁸. The

¹⁸ This latter aspect was overwhelmingly noted in Chapter 2-
Review of Literature.

reason(s) given for the move was primarily the expectation and/or the search for a higher income in the urban area as Table 4.6. below shows.

Table 4.6:- Reason(s) for Migration¹⁹

Reason for migration	Yes %	No %
Higher wages	97.6	2.4
Kith and kin support ²⁰	31	69
Further studies	29.5	70.5
Inadequacy of land	.8	99.2

The findings of this study regarding this are quite agreeable to those of Caldwell (1969). In 97.6% of the responses, the reason of a higher wage by far overrode the rest as having influenced the migration decision. It would be belabouring the obvious to cite authorities in support of this finding. In addition, one cannot help but notice the interrelatedness of the reasons given in this study. People go for further studies to improve their earnings and consequently their social economic status. In terms of facilities and academic competence, most rural dwellers wrongly believe that the good schools are often found in the urban areas; kith and Kin in the urban areas encourage migration by providing accommodation, food, bus fare and moral support during the job search period. Inadequacy or shortage of land leads to pressure on land. This spells underemployment if not total unemployment and thus the need to look for more productive employment elsewhere. Indeed it will be recalled from an earlier discussion that the shortage of land (causing pressure on land) is one of the

¹⁹ It was not possible to establish one main reason for the move due to multiple responses.

²⁰ This refers to any help offered to the migrant by relatives and friends in the urban area.

productive employment elsewhere. Indeed it will be recalled from an earlier discussion that the shortage of land (causing pressure on land) is one of the major 'push factors' in the Central province of Kenya. It is commonly believed that towns offer incomes fairly in excess of what is possible in the rural areas and that jobs in town provide a more secure return than farming. Rempel (1981) estimated that rural employment incomes for adult males in 1969 for Central Province were Ksh.147 per month, Ksh.159 per month in the Rift Valley Province and Ksh.224 per month in Nyanza Province. Agreeing with this Todaro (1971) asserts that the average earning of an African employee in the non-Agricultural sector rose from £97 in 1960 to £180 in 1966 a growth rate of only 11% per annum while in the small farm sector, over the same period family income grew at a rate of a negligible 5% p.a. from £67 in 1960 to £77 in 1966, these urban wages grew twice as fast as agricultural incomes. This may not always be the case for all categories of people. Casual labourers for instance can neither boast of a higher income nor a secure return in the urban areas. Therefore, this first and foremost, depends on the social class and the origins of the urban migrant such that a 'progressive' farmer does not earn any less than a minimum wage earner in town. Furthermore, the rural sector itself is not homogeneous, all rural families do not earn the same either in the rural or urban sector. This seeks to show that averages can be quite deceptive in this respect.

We now turn to a hypothesis-specific descriptive analysis of the data. In all the three hypotheses which form the basis of the study, a common dependent variable was opted for²¹. It was hypothesized that Remittances, the control of rural resources by the wife of migrant and the changes in the rural household's

²¹ The study's hypotheses have been stated in Chapter 3 of the study.

division of labour (all inevitable consequences of the rural-urban migration of the male head of household) would either negatively or positively affect the rural family's farm production capacity [either lead to a declined or improved farm production level]. The rural family's farm production capacity therefore was the dependent variable in all the study's hypotheses.

It was as a result envisaged that a hypotheses-related analysis for each and every hypotheses would entail a lot of repetition. We chose therefore to start off by descriptively analyzing the study's farm production data to be followed by that of the three hypothesized possible causes of this decline or improvement i.e remittances from the migrant male head of household, the control of rural income by the wife of migrant and the rural household's division of labour. In the course of this undertaking it is well appreciated that other factors other than those hypothesized here may be responsible for the decline or improvement in the level of family farm production.

Although Nyeri District is generally a highly potential agricultural area where mixed farming predominates all other agricultural activities, it suffers serious pressure on land with landholdings averaging 0.4 and 8 hectares (District Development Plan 1988). This reflects well the whole country's data on land. According to the 'Economic survey (1988), more than 60% of farm holdings have up to 4 acres, a significant 40% have less than 2 acres. This is so mainly in Nyeri, Murang'a, Kiambu, Kisii, Kisumu, Kakamega, Taita Taveta and Kirinyaga. It follows therefore that, the incomes of the people living in these areas vary as much.

Data in this study indicate that 88.5%(117) of the households studied owned one piece of land each, while 9.8%(13) owned two pieces while 2 households had no land at all. The latter were illegally living on unallocated government land

averaging about 0.25 acres where they could hardly grow enough for their own consumption. Of those who owned a second piece of land, a majority 92.3%(12) had acquired it through outright purchasing. Money used to purchase it had been secured in the form of credit by the man and was mostly paid for with money obtained from a multiplicity of sources i.e proceeds from the farm, remittances from the migrant, money earned through wife's off-farm employment etc. The total acreage of land owned by each household ranged from 1 to 40 (only 2.3 had 40) acres with an average of 6 acres and a modal acreage of 3. These are fairly small landholdings. Indeed literature in this area abounds, that it is those with no land or with very small landholdings who predominate the migration flows (Kershaw in the Review of African Political Economy 1984 issue 27/28, Monsted and Walji 1978 and Rempel 1981).

The total cost of all land acquired through purchase ranged from Ksh.15,000 to Ksh.170,000, averaging about Ksh.73,000. This indicates that land in Nyeri District is extremely expensive and not many people can easily afford to purchase it. The demand for land in this area is responsible for these high prices. According to Gilbert and Gugler (1982), land shortage entailing a decline in output or the often related breakdown of communal control over land transforms it into an asset. On the same, Kongstad and Monsted (1980) posit that, the will and right to possess one's own land, even if in only a small holding is the most fundamental element in rural ideology of rural Kenya and that large-scale agricultural undertakings in export crops or industrial crops are unlikely to change these fundamentals. This contradicts the position of the modernization approach.

Table 4.7-- Size of Landholding

Acreage	% of household
0-2	19.7
3-5	37.1
6-9	28.1
10-12	9.1
> 12	6.0
Total	100

(n=132)

The distribution above shows that, most of the households fell in the between 3 and 9 acres category (65.2%). Such small holdings cannot be effectively mechanized neither are they practical and/or suitable for export farming. Agricultural production must remain labour-intensive or else displacement of incumbent labour occurs. A majority 81.1% reported that they had acquired their land through inheritance (one of the households had acquired the two pieces of land that they owned through inheritance). Land ownership was vested in the men in 70.7% of the cases and in other relatives (still men) in 27.7%. It is interesting to note that, in totality, land ownership was vested in men in 98.4% of the cases and only 1.6% in women. This finding is clearly reflective of the African tradition as far as land ownership is concerned, in that, women do not own land either through purchase or inheritance in the traditional African society (Okoth Ogendo 1977, Mbilinyi 1974). However of the 14.3%(19) of the women who had made any form of investment since the migration of their husbands,

63.1%(12) had bought land, which they had registered as shown on table 4.8 below.

Table 4.8:- Registration of Land Purchased by the Respondents (women)

Registration Name	%
Own name	16.7
Husband's name	16.7
Child's name	50
Not Registered	16.6
Total	100

(n=12)

Other than usufructuary rights obtained through their relationship with men, this is the only way the African women can lay claim to ownership of land. Indeed they struggled to keep the existence of this land concealed even to the researchers as a result of which it is felt that this number may have been bigger. Due to this 'hiding' most of this land remained either uncultivated or rented and in a few cases, cultivated secretly and thus not effectively. It is worth noting at this point that women are capable of getting practical about the fundamental that they believe in.

For purposes of optimising land use, smallholder agriculturalists normally practice crop interplanting. In this region, maize, beans and irish potatoes are grown in all farmsteads, interplanted with other crops like carrots, cabbage, tomatoes, pulses, sweet potatoes and yams. The former are the major ingredients of the area's main diet- githeri or irio. About 79.5%(105) of the households grew some of these food crops specifically for sale. These comprised mostly of vegetables, 82.8%(87). The money earned from this ranged from Ksh.400 to Ksh.18,000 p.a. with a mean of Ksh.5,000 p.a. i.e about Ksh.400 per month, and a mode of Ksh.4,000 p.a. (Ksh.300 p.m.). Vegetables are seasonal crops, basically parallel to an area's rainfall patterns. Thus tomatoes, kale

(sukuma wiki), spinach, cabbage, are planted between March and June during the long rains and again in October and November during the short rains. Some of the vegetables are harvested after three months while others take a while to grow. Most of these (except for maize, beans and potatoes which were universally grown in all the households studied) were grown in an ad hoc manner. Some families would decide not to grow carrots this season only to do so in the next but any direct relationship between this and migration of the male head was observably absent. Connotations of capital, labour and land shortage however were deduced. There was no report on the introduction of new crop types since the migration of the male head of household.

The law of supply and demand dictates that when the supply of a certain item is high, the demand is low and prices will tend to be low also. As a result of which, farmers ferry their products for sale to the urban centres where the demand as well as the food prices are almost always high. During the data collection period, foods such as tomatoes, kale (sukuma wiki) and spinach were in such plentiful amounts that some farmers used them to feed livestock and poultry, under the justification that the costs of their production exceeded by far the proceeds of their sales locally at the time and was therefore not worthwhile. In the local market at Karatina Township, one could buy the standard box of tomatoes sold at a wholesale price of Ksh.50.00 only and the standard bunch of kale for Ksh.50. But other than use it to feed livestock, others sold them to middlemen who ferried them to urban centres for sale capturing therefore larger profits.

In addition to growing food crops specifically for sale, a majority 89%(117) of the households often sold what they referred to as 'surplus' produce. In normal circumstances, surplus is what is produced over and above what the

family needs for its own use. There occurs often, a serious problem of differentiation between what is and what is not surplus. In this study, on probing, it was found that most of those who claimed to be selling 'surplus' were actually selling what they needed, only to buy it later. It is possible that the need for cash was felt to be greater.

Regarding the acreage of the food crops and cash crops grown, their respective yields and earnings, there appeared to be slight changes that could be tentatively attributed to the migration of the male head of household.

Food security needs are given priority by most smallholder farmers. Maize and beans therefore occupy a good share of the land use in most rural areas. According to the Economic Survey (1988), annual perennial crops in Nyeri occupy about 54% of land use, permanent crops 13%, pasture 26% and woodland and forest 7%. This trend is reflected in our own study, the average total acreage of land being 6 acres and the average acreage under food crops being 2.6 acres.

Before male migration, to the best of the respondents recollection, the acreage under food crops ranged from 0.25 to 43 acres, with a mean of 2.5 acres and a mode of 1 acre. The acreage under food crops at the time of data collection ranged from 0.25 to 19 acres, a mean of 2.6 acres and a mode of 2 acres. Though the mean was observed to have remained almost the same the modal increase observed indicates that several people had increased the acreage under food crops by about 1 acre after male migration i.e. people previously having less than 1 or 1 acre under food crops had increased this to 2. Data on the acreage under food crops is as on table 4.9 below.

Table 4.9:-Acreage Under Food Crops Before and After Male Migration

Acreage	Before migration	After migration
0-4	92.7	89.9
5-9	5.7	9.3
10-14	0	0
> 14	1.6	.8
Total	100	100

(n=132)

Data above indicate that there was an increase in the acreage under food crops in the period after the migration of the man. A fall in the 0-4 acres category and a rise in 5-9 from 92.7% to 89.9% and 5.7% to 9.3% respectively are observed although majority of the households at both times remained in the least category i.e. between 0 and 4 acres. This finding is corroborative of the fact that landholdings are generally fairly small as discussed earlier. One also notes the decrease in the households with over 14 acres by a half from 1.6% to (0.8%). The increase of the acreage under a certain crop may not necessarily mean an increase in its yields. One may increase the acreage under cultivation but reap even lower yields due for instance to less intensive farming, labour shortage or less specialized farming. We cannot therefore argue for an improved farm production capacity here.

It was also found that there were changes regarding the food crop yields between the two periods. Taking maize, beans and potatoes as the key factors of this analysis (basically because a 100% of the landed households grew these) data on this finding is on Table 4.10 below.

Table 4.10:- The Range, Mean, Mode of the Yields of Maize, Beans and Potatoes Before and After Male Migration

Crop	Range	Mean	Mode
Maize-Before migration	34	8.5	10
After migration	53	10.5	10
Beans-Before migration	23	8.4	6.0
After migration	25	9.3	3.0
Potatoes-Before migration	29	8.6	8
After migration	39	11.3	1

An increase, albeit slight, in the yields of maize, beans, potatoes is indicated by the data in the Table above, between the two periods. Rarely do small scale farmers keep up-to-date records of their yields particularly of food crops. As such the figures given here seem too large due to the fact that, the recollection called for on the part of the respondents may have played havoc on the figures. At the same time, these are a whole year's yields which are consumed as they are harvested and may therefore be correct. The most important aspect to note here in any case is the fact that an increase is exemplified. Thus far, we tentatively conclude that the increase in yields were due to the increase in acreage under food crops observed, all other things being equal. This conclusion is subject to further analysis.

Crops grown on a commercial basis were mainly tea and coffee. These were regarded high-income generating permanent crops. For those households growing these, 80.3%(106) 63.2%(67) grew coffee, 30.2%(32) tea, and a minimal 6.6%(7) both. This had been an on-going economic activity for an average of 13 years. Despite serious declines in cash crop prices and problems of payment (complaints widely voiced to us) many still considered it an important economic activity to

Despite serious declines in cash crop prices and problems of payment (complaints widely voiced to us) many still considered it an important economic activity to carry on with.

The acreage under cash crop production ranged from 0.25 acres (1/4 acre) to 11 acres. The average acreage under cash crop was 1.3 acres and the mode 1 before the male head's migration. At the time of study (after male migration) it ranged between 0.25 acres (1/4 acre) to 12 acres, had an average of 1.4 acres again and a mode of 1. In both cases, therefore, cash crop production took about 20% of the total landholding. Cash crops are traditionally men's crops. This fact provides the reasons as to why changes in this 'sector' were almost non-existent. For one, it may have been due to this that women shied away from initiating any form of improvement on it. Thus they can decide to expand the acreage under food cultivation for instance, readily, faster and more easily than they can do for cash crop.

For those households that had started it before migration, cash cropping as an economic activity had been initiated by the man. Notable however, is the fact that 47% of the women in the case of those households where it had been initiated after the migration of the male head of household had participated in making the decision. The money used to initiate it, however, was mostly by way of a loan or credit as Table 4.11 below shows²².

²² The money used for this was obtained from a multiplicity of sources.

Table 4.11:- Source(s) of Money for Initiating Cash Crop Farming

Source	Yes %	No %	Total
Loan/credit	67.6	32.4	100
Husband's Earnings	29.7	70.3	100
Farm proceeds	16.2	83.8	100
Misc. savings	5.4	94.6	100

(n=74)

Table 4.12 below gives more information on the acreage under cash crop production before and after male migration.

Table 4.12:- The Acreage under Cash Crop Production Before and After The Migration of the Male Head of Household.

Acreage under cash crop	Before migration	After migration
0-3	95.9	95.3
4-6	2.7	1.9
7-9	0	.9
10-12	1.4	1.9
Total	100	100

The number of households growing cash crops on 7-9 acres of land increases albeit slightly from 0% to .9%, 10-12 from 1.4% to 1.9% as a result of which there is a drop in the 0-3 acres category from 95.9% to 95.3% respectively. One also notes that the majority of households remain in the lowest acreage category in both periods and that the better off land-wise have a larger acreage under cash crop(s) on average.

Coffee and Tea were considered important income earners but the respondents were not able to tell what the cash crop earnings had been before male migration. Cash crops trees are normally the man's concern and thus all matters pertaining

to these rarely get known by the women certainly not in a precise form. After male migration, they may have inevitably fallen in the domain of women. Income earned from this 'sector' ranged from Ksh. 1,200 p.a (Ksh. 100 p.m.) to Ksh. 100,000 p.a (Ksh. 8,000 p.m.) with a mean of Ksh. 17,000 (Ksh.1,400 p.m.) and a mode of Ksh. 18,000 (Ksh. 1,500 p.m.). For all practical purposes, in the absence of the male head of household cash crop production may have become the woman's concern. The women now tended and cared for the cash crop and were responsible for its marketing. But it was observed that many still did not have the autonomy to control the proceeds from it. For instance as concerned marketing, the money was paid through the family's co-operative account, which the woman may not have been a signatory²³.

Livestock husbandry was found to be neither extensive nor intensive. None of the households studied reared goats and/or sheep or cattle on a commercial scale. Instead much of it was found to be purely for domestic purposes. Indeed, 55.3% of the households did not rear any livestock at all. This finding may also be explained by the size of landholdings. Being as small as they were found to be, they were not only inappropriate for livestock husbandry on a commercial basis but also unsuitable for effective livestock rearing as an economic activity. It is also possible that the households simply lacked knowledge on how to rear livestock on their small plots of land a factor that could tell us

²³This factor is discussed in a latter section of the Chapter.

something about the effectiveness of the agricultural extension services in the area.

The few goats/sheep and cows were treated as movable assets, sold off in times of need and as source of food. In their most recent sales of these, they had made an average of ksh.800. Such needs according to the respondents ranged from the settlement of a debt, school fees, purchase of an expensive but seriously required item, land purchase and the settling of a hospital bill. However on probing on the actual use that this money was put into, it was found that it often ended up being used for day-to-day consumption. Saving and/or reinvesting only came fourth.

An overwhelming majority of 93.9%(124) kept dairy cattle but on a small scale. The cost of starting a cattle-keeping project was estimated to have ranged from Ksh.400 to Ksh. 10,000 with a mean of about Ksh.1,700 and a mode of about ksh. 1,000. Cattle keeping was taken a little more seriously than other forms of livestock production. Through zero grazing, a farmer can rear livestock on a plot of land as small as half an acre even quarter of an acre. The cost of cattle upkeep ranged from Ksh. 120 p.m. to ksh. 3,400 per month for those with larger herds. Upkeep here included feeds, dipping and veterinary expenses. Feeds for dairy cattle are very expensive. One bag was costing Ksh. 120.00 at the time of the study i.e enough to feed a full-grown heifer for only one month, and even then it had to be combined with other feeds such as grazing, hay, nappier grass and potato tubers etc. A well-fed cow on the other hand produces more high quality milk than one poorly-fed.

An average of 11 kilograms of milk was produced per day. Most of it was sold to individuals, small hotels and/or restaurants in the Karatina township. This deviation from the traditional order (selling to the cooperative) was

justified through allegations of delayed, irregular, miscalculated and corrupted payments. A range of between Ksh.590 and 13,600 was made from milk sales per month, averaging about Ksh.1000. A majority of 98.3%(122) remained some of it for consumption at home while 1.6% argued they did not have young children to feed on milk and thus sold all of it.

Cattle, like sheep and goats were treated as assets traded in times of need. Of those rearing cattle, 35.5%(44) had made between Ksh.400 and 10,000 in their latest sale of the same as per the time of study. The average amount of money made this way was Ksh. 2,000.

Table 4.13 below shows the findings on the general use(s) of money earned from the sale of such items²⁴.

Table 4.13:- Use(s) of Money Earned from Sale of farm Items

Use	Yes %	No %	Total
Save/invest	42.9	57.1	100
School fees	60.2	39.8	100
Farm production	46.9	53.1	100
Subsistence/consumption	78.6	21.4	100
Help extended family	36.8	63.2	100

Poultry farming was the least serious economic activity observed. Though 43.2%(57) of the households practised 'poultry keeping', only 1.7% (1 household) did so on a notable scale. An overwhelming 99.2% of the households kept poultry purely for domestic purposes and sold the eggs only when an excess was available, after taking care of their own consumption needs especially, for the children. The scale of poultry keeping was observably too low.

²⁴ The responses were given in a multiple form hence the format of table construction.

Agricultural inputs in rural Kenya are often limited in scope. In this study, the use of herbicides, fertilizers, dipping facilities, farm machinery and farm credit were referred to as maintenance costs. Livestock production, being of the magnitude discussed above, the use of inputs in it was not of any important scope. Besides the dipping and feeding costs, not much else was used. The use of farm inputs was more notable in cash crop and food crop production where 80.3% used them. For these the cost of farm maintenance ranged from Ksh. 200 to Ksh.8,000 and averaged Ksh. 1,800 per annum. This again can be attributed to the size of landholdings.

The findings on the type of farm inputs used were found to be as on the Table below.

Table 4.14:- Types of Farm Inputs used

Type of input	Yes %	No %	Total
Dipping facilities	94	6	100
Fertilizer and herbicides	76	24	100
Hired labour	68.8	32.4	100
Feeds	95	5	100
Machinery	.8	99.2	100
Farm credit	70	30	100

(n=132)

Amongst other inputs therefore, 94% of the households utilized dipping facilities while only 1 household utilized farm machinery. The size of landholding as frequently mentioned was unsuitable for the use of machinery. The use of herbicides and fertilizers were also wide, so were feeds and credit

A general question on the effect of male migration on the family's farm production was put to the respondents and it obtained responses as shown on the Table below.

Table 4.15:- Effect of Male Migration on Farm Production

Effect	Percentage
Positive	33.3
Slight improvement	25.8
Negative	23.5
No change	17.4
Total	100

(n=132)

It can be deduced from the Table above that 59.1%(78) of the households could cite some improvement on their farms since their head's migration. As for whether or not the improvements cited could be attributed to the migration of the male head of household or the female heads efforts and efficacy at making adjustments, will be determined in the next Chapter of the study.

We shall now undertake to relate the study's independent variables (Remittances, the changes in division of labour and the control of income by the migrant's wife) to the farm production capacity as discussed above.

It was hypothesized that money and goods remitted by the migrant male head of household from the urban area would lead to a decline in the household's level of farm production.

It will be recalled that the migrants in this study were found to be fairly highly educated. Perhaps due to this, it followed that a majority of the migrants 90.9%(120) were employed. Though 73.9% had spent more than one year 'job searching' (an aspect that can have adverse effects on the rural-based family),

migrants 90.9%(120) were employed. Though 73.9% had spent more than one year 'job searching' (an aspect that can have adverse effects on the rural-based family), 67.4% were permanently employed and only 5.3% were temporarily employed, while the rest were either not employed at all or had their form of employment not known to the respondents.

It is not in the habit of the African men to reveal their earnings and other money matters to their wives and often only make payments for specific obligations (Michael 1964). It was found that 81.3% of the respondents did not know where their husbands worked let alone their earnings; only 30.5% had knowledge of their husbands earnings. The migrants' income helped establish the criteria upon which remitting in terms of regularity, amount and kind was based. It ranged notably from Ksh. 900 to Ksh. 15,000 p.m. suggesting wide dispersions about the mean which was Ksh. 3,500 p.m. These figures seem high but not when shared between two households, the urban and rural especially if there is a fully-fledged urban household as well. In this study however, a good 78.8% did not have any information on their husband's subsistence expenditure not to mention that records were non-existent even for those of their own households. To determine how low or high these incomes were the civil service wage structure adopted by most studies for the purposes of analyses were found seriously wanting (outdated and hardly revised despite the rising inflation and cost of living). A World Bank document of 1980 was found more fitting and therefore adopted in this study. Its structure is as follows:-

Very low income between	K£ 0 - 500 p.a.
Low income between	K£ 501 - 1000 p.a.
Medium income between	K£ 1001 - 3000 p.a.

High income

K£ 3001 - above p.a.

The migrant's income was thus classified as on Table 4.16 below.

Table 4.16:- Migrants' Income

Category p.m (gross)	Per Annum	%
0-834	K£0-500	0
835-1667	K£501-1000	14.6
1668-5000	K£1001-3000	73
> 5000	> K£3001	12.4
Total		100

(n=40)

A good majority of 73%(29) of those whose earnings were known to their wives earned between Ksh. 1,700 and 5,000 per month. This finding implies that the migrants were fairly highly paid in view of which one would expect the remittances to be substantial. One must always bear in mind that this was as reported by wives, who in turn had obtained the information from their husbands.

It was found that a majority of the households i.e 86.4% received other goods besides money, mostly taken along during the visits. These goods were mostly in the form of food, clothing and other gifts, as well as agricultural implements such as seeds and tools. Table 4.17 below has information on this.

Table 4.17:- Items (Other than money) Remitted Home

Item	Yes %	No %	Total
Food	79.9	20.1	100
Clothes and other gifts	54.4	45.6	100
Agricultural concerns e.g seeds	61.5	38.5	100

(n=114)

It is clear from the Table above that food and food products were the most commonly remitted. These comprised of maize flour, cooking fat, wheat flour, sugar and such other items. It is worth noting that farm production concerns took the second priority.

As posited by Rempel (1981), rural areas hardly remit to the urban areas. Indeed only a negligible 15.9%(22) did so in this study. The items remitted in this case were overwhelmingly 95.3%(20) food and negligibly 9.6%(2), money.

Evidence is on the other hand in abundance that most of the rural households 84.1%(111), received assistance and support from their migrant male heads in the form of hard cash. The amounts received varied notably from Ksh. 100 to Ksh. 4,000 p.m. averaging about Ksh.650. Most households, however, received Ksh.400 which represents about 18.6% of the urban wage bill²⁵. This finding underscores the migrants commitment to their roots, the desire to maintain links with the rural area and continuously be counted as part of it. This need is prompted by the insecurity suffered by the migrant worker in capitalist employment in the urban area (Meillassoux 1975 in African perspective

²⁵We did not separate school fees from the regular remittances whereby this figure would have been much higher, because it was learnt that more often than not, the cash crop earnings were reserved for the payment of school fees as per the migrant's instructions.

capitalist employment in the urban area (Meillassoux 1975 in African perspective 1978/1). The migrant is kept from becoming a really free "proletariat" a place reproduced by capitalist employment as a distinct social class differentiated from the rural peasantry, imperialism therefore asserts itself as the mode of production of cheap labour through modern migration. These ties are sustained because they produce the cost of living of the migrant in that he is paid by the capitalist employer a wage so low that it is not enough to sustain him fully and he has to be continuously supplemented and subsidized by his rural family. This way the capitalist is able to maximize his profit as he does not bear the burden of reproducing the migrant's labour. On the other hand, the migrant through visits, and remittances is able to keep the links alive and thus to uphold claim to the ownership of rural resources especially land i.e he is not divorced from the means of production.

It is seemingly right to conclude albeit tentatively that migrants remit to their rural households as a matter of responsibility and obligation. This conclusion is reached due to the finding that 48.6%(54) of those remitting regularly did so on their own resolve, while it was a joint decision in 34.9%(39) of the cases and only 16.5%(18) of the migrants had to be 'pushed' into it by their wives and perhaps other relatives. Collectively, 82.9%(92) of the men had at least participated in this decision.

The more a household receives, the more its capability to save and re-invest and the higher its purchasing power, even of land and other agricultural implements. Consequently, one would expect an improvement in the farm production capacity. It should be better able to buy (more) land, widen the scope of crops cultivated, hire labour, all leading to a higher social economic status. The amount of remittances received were found to be as on Table 4.18 below.

Table 4.18:- Amount of Money Remitted per month.

Amount category	% of households
100-500 p.m	49.5
501-1000 p.m	41.5
1001-1500 p.m	6.3
> 1500	2.7
Total	100

(n=111)

Given the lower standard and (perhaps also) cost of living in the rural areas in comparison to urban areas one may non-committally conclude that these were fairly high. If put into good and constructive use, especially in combination with the supposedly still existent rural income, this money would benefit its recipients a great deal. The crux of this hypothesis however is the way in which this money is dispensed of.

Our findings on the use of remittances were as on Table 4.19 below²⁶.

Table 4.19:- Use(s) of remittances

Use	Yes %	No %	Total
Subsistence/consumption	90	10	100
School fees	38	62	100
Farm production	40	60	100
Save/invest	4	96	100

(n=111)

Amongst the rest of the uses, an overwhelming 90% used it for day-to-day consumption. Interestingly enough, use as working capital for farm production superseded paying school fees for the children, while the least subscribed to use was saving and/or investing. Literature abounds within the claim that remittances are often consumed rather than constructively used to enhance economic activities in the rural end (Lipton 1980, Caldwell 1969, Richard 1929, Rempel 1981). Lipton (1980) writing on the villages of Papua in New Guinea, particularly argues that remittances are conspicuously consumed to enforce status. Caldwell in his 1969 study in Ghana, found instances where even a factor as important as the childrens' school fees was not considered a priority. It is imperative to note that it was second in priority in our own case. From the data above, we can infer that instead, remittances are used to supplement the

²⁶ The responses were given in a multiple form hence the format of table construction. It gives the percentage of the households that subscribed to a certain use amongst others.

supposedly still existent rural income and not to enhance the household's farm production capacity. This is supported further by the finding that when and where failure to remit occurred, action taken by the would-be recipients (respondents) ranged from, insisting on the remittances, to 'tightening of the belt' in the areas of subsistence and production, the latter being the most commonly opted for 53.3%(59). Besides this, rural dwellers depend for their livelihood on earnings from the export of labour. An observable greater reliance on remitted goods and money may therefore serve to depress farm production as a source of subsistence or income through which to derive subsistence.

Some families literally become dependent on this influx of money and goods in order to procure basic food supplies (Gugler 1965, Kerven 1979, Robertson 1984, Pala 1976, Brown 1980, Johnson and Whitelaw 1974, Monsted and Walji 1978, Rempel 1981, African Perspective 1978/1 and Lipton 1980). These scholars argue that remittances may serve to improve the welfare of the rural village and to subsidize and supplement agricultural production. This would make the women so dependent on this subsidy and/or supplement to the point of cultivating their shambas less. This factor was clearly observed in this study. Statements such as;

".... at least now we do not have to wear ourselves out tilling the land for a livelihood; we can afford to relax a little knowing we have this money coming from town at the end of the month".

were frequent in the course of interviewing those households that regularly received remittance i.e 84.1%.

Thus as argued by Van Velsen (1960), Byerlee et al (1976), Rempel (1981), and Richards (1929), instead of enhancing farm production, remittances serve to decrease it, and thus lead to an actual loss of the land's subsistence value. This however is not enough evidence on which to construe that the value of land will fall as remittances increase. Even undeveloped land is still highly

valued. As mentioned earlier, owning land is a fundamental most difficult to
erase in the rural areas. It was also found that those women with grown-up
children in the towns in addition to the husband, were in actual fact seriously
envied by some of the women interviewed. This was depicted in statements such as;

".... They don't need to till the land any more! They hardly need
the money they are already receiving from town, they do not have
young children if the land needs tilling their sons' wives can do it
and just give them (the women) their share of the harvests..."

These statements also seems to reasonably suggest that women are tied to
farm work by nothing else but the need to produce for the family some food and
an income to purchase the necessities that cannot be grown - soap, kerosene, fat,
etc. According to a UN document (1986), withdrawal of women from productive
activities as the household income rises tends to deteriorate their relative
position. They may become less busy and relaxed but the benefits are not
sufficient to offset the disadvantages. The bargaining power within and without
the family is also weakened. This may not only reduce their income but also
their status. But the increase in wages diminishes the significance of the rural
income foregone, at least by the husband. All this however suggests that, it is
not out of remittances that they manage to maintain a reasonable livelihood,
rather their efficacy in land cultivation and the competence of their family
labour force which are crucial to their prosperity and the target of envy for
many. Together with the dependence, there was also observed 'shifts in demand'²⁷.
It has been argued that this often leaves other more important basic needs

²⁷ This was discussed in Chapter 2 of the study.

unsatisfied (Gugler 1965). Most respondents were in so much praise for remittances such that they argued that;

".... Now we can afford 'important' items that we previously could not. For instance, toilette soaps like 'lux' rather than using 'kipande' soap to wash, bread for breakfast other than having to eat arrow roots and sweet potatoes or even last nights ugali for breakfast or just tea alone..."

Most of the statements made to this effect and those discussed earlier were however notably made by those receiving substantial and regular remittances²⁸. Notable also is the fact that, even those who did not strongly support remittances in the manner exemplified by the statements above, still talked favourably and insinuated that they could not do without them. In any case, that was why migration of their husbands was justified.

As a path of development, modernization exposes the rural (traditional or pre-capitalist) populace to new goods and services which leads to a change in their needs, tastes and values. The demand for rural products then declines as productivity falls i.e traditional values and status 'modernize' at the expense of farm production²⁹.

In instances where the household's landholding was too small coupled perhaps with irregular, unreliable and small remittances the respondents resorted to selling their labour outside their farmsteads. This was seen as yet another form of demand shift especially in the cases where those involved owned some land no matter how small. Even a small piece of land, if cultivated intensively and in a specialized manner, can be productive enough. It was found that 38.6%(51)

²⁸ These statements were also made in the local dialect and have been translated by the researcher.

²⁹ The aspect of modernization and its bearing to a peoples way of living has been discussed in detail in Chapter 2 of the study.

of the respondents had contracted off-farm employment. They travelled an average of 1.8 km. for this and earned an average of Ksh. 870 p.m. Contrary to what is advanced by the literature, only 29.4%(15) were casual workers in other peoples' farms. The rest held 'better' jobs such as typist, teacher, subordinate staff.

One sets out to sell his/her labour due to inability to procure the basic necessities of life. Indeed, Kongstad and Monsted (1980) have argued that, women maintain many of the features of unpaid family labour in household production but their responsibilities for procuring the daily food supplies lead to a need for supplementary cash and a necessity to be involved in the market. Besides this, as advanced by Gavin Williams (1976), with the expansion of commodity production and the availability of opportunities for wage employment outside the rural farmstead, labour-time itself acquires a cash value Gavin Williams (1976). This is because employment both within and outside the rural economy may provide a source of cash income and savings, which could be re-invested in the consolidation of peasant holdings.

The demand for cash income to pay for daily necessities was more relevant or befitting an explanation. The existence of landless proletarians was not well established because questions relating to farm production were not applicable to the households that did not own any land. Once a woman adds to her income especially through an off-farm occupation, she may be expected by her husband to pay for domestic necessities and school fees that he would otherwise pay for. This fact tends to negate any economic advantage on the part of the wife and therefore the rural household. For the farm production capacity, there may occur an avoidable neglect of her own farm activities and consequently lead to low and poor harvests. Table 4.20 below gives a summary of remittances received, migrants' income, migrants wife's income, and net family income. The

classification of the various incomes has been standardized to allow for this analysis.

Table 4.20:- Migrants' income, Amount remitted, Wives' Income and Net Family Income (p.m).

Amount Category	Husband's Income p.m %	Amount remitted p.m %	Wives income p.m %	Net family Income p.m %
100-500	-	49.5	47.1	-
501-1000	3.4	41.5	31.3	18.2
1001-1500	9	6.3	4	14.4
1501-2000	13.4	.9	7.8	26.5
2001-2500	7.9	.9	3.9	14.4
2501-3000	24.7	-	5.9	9.1
3001-3500	5.6	-	-	3.8
3501-4000	18	.9	-	2.2
4001-4500	2.3	-	-	-
4501-5000	3.3	-	-	2.3
> 5000	12.4	-	-	9.1
Total	100	100	100	100

Sabot (1979) is well supported by data above, in asserting that, that those with higher income remit less. At the same time, those with a lower income do not have much left to remit after the urban commitments and their remittances tend to be small, and do so only in comparison to those earning high incomes say Ksh. 1,000 and above. Interestingly, some of the households with highest-income-earning migrant heads had the highest net family income (without benefitting much from remittance). Otherwise most of the households clustered around Ksh.501 to Ksh. 3,000 (32.6%) per family per month. This seemed to have been made so by the

incomes of the working female heads which clustered in the same region (50.9%) rather than by remittance.

Although a 47.1% of the women earned a meager income of between Ksh.100 and 500 p.m., the rest earned fairly good incomes ranging from Ksh.501 to Ksh.3,000. Most of the migrant men earned between Ksh. 1,501 to Ksh. 4,000 with only a meager 12.4% earning over Ksh. 15,000 whereas the highest the female 'heads' earned was Ksh. 3,000. The hypotheses under discussion in this section is implicit. The migrant decides on the amount to remit, firstly, on the basis of his own earnings, those of his wife and ultimately these three (his income, that of his wife, and the amount he remits) determine the household's net income. This may then have an effect on the rural home's farm production either as working capital for reinvestment to enhance it or by causing its decline due to over-reliance on the remittances and demand shifts. In the data on Table 4.20 net family income varied rather notably from Ksh. 600 to Ksh. 16,000 p.m. suggesting sharp variations about the mean. The mean in this case was Ksh. 3,000 p.m. A majority of 84.1% had a net family income of between Ksh. 500 and Ksh. 3,000 p.m. Given the rate of inflation today, this is a very low income despite the relatively lower standard and cost of living in the rural areas. Low, unreliable and irregular remittances may also force or prompt the wife to look for an off-farm job to 'make ends meet'. Concerning this hypothesis, the descriptive analysis seems to suggest that, remittances do not necessarily lead to a decline in the rural family's farm production capacity, simply because it

could not on its own, or to a larger extent, it could not replace the family's farm production no matter how highly it was valued by the recipient family. Having found that the households' farm production capacity had improved albeit slightly we conclude that remittance had not negatively affected the farm production capacity but neither had it led to any crucial or substantive improvement. Despite the statistical insignificance of this latter finding, it is still an important one warranting no lesser notation than the others. This is because remittances were not used constructively used to revamp or enhance farm production. This however, so far, is a tentative conclusion.

The second hypothesis in the study stated that the control of income and other rural resources by the wife of the migrant would positively affect the rural family's farm production capacity.

In the absence of the male head of household, the wife inevitably takes over the financial and income management of the home. For instance, women who take up jobs not only improve their decision-making role in the household but increase also their marital power as they earn money they can term their own and control its use in the household. Habits of traditional dependency or submission to men are also broken, making the women more self-confident and competent. In this sense, money seems to mean power. Control of rural resources enables the woman to plans and lay out strategies in the family's farm production. They are able to make decisions, execute and implement plan towards more effective and improved farm production capacity.

Of those that were working outside their own farmsteads, 80.4%(41) had sought the jobs solely on their own decision and in fact reported that their husbands were either indifferent or did not like it. It was deduced that they were driven into this venture basically by need. Most of the women were also

found to be in control of the family budgeting. 73.5%(97) of the women were wholly decisive in as far as family budgeting was concerned while it was a joint task in 25% of the cases. Only a negligible 1.5%(2) of the migrants had insisted on doing this despite being perhaps hundreds of miles away. One notes that women participated in this in 98.5% of the cases. This constitutes an important trend.

Cash crops are traditionally sold to the cooperatives, which handles the respective cash crop(s) grown. Each family must 'appoint' a signatory for its account an 'appointment' that carries with it a lot of 'prestige' and control. The signatory signs all the relevant documents and has to endorse all the transactions with the cooperative on behalf of his/her family. He/she receives payments, runs the account and signs for loans and credit. Contrary to the common assumption, there can be more than one signatory for the cooperative account and he/she need not be the land's title- deed holder, It is often up to the man's discretion in whom land ownership is commonly vested, to 'appoint' one. It was found that 61.7% of the women in this study had been 'appointed' cooperative signatories by the then migrant men. It was however not surprising to find that a good number of the migrant men had opted to hang on to it while others opted to delegate it to their relatives residing in the rural areas, often male, in most cases the migrants father or brother. This is perhaps due to the cultural web that dictates that a woman should not handle 'such important matters' such as those relating to cash crop production and money. It also underscores the wish of men to continuously control women's labour by retaining control of certain aspects³⁰.

³⁰ The issue of control of the cooperative affairs has been discussed in Chapter 3. This issue was found to be rather sensitive according to certain cooperative officials interviewed during the data collection exercise.

Women in the traditional African society are not expected to be enterprising. When and where it occurs, it is expected that the man be somehow involved and perhaps even spearheading the undertaking. This is probably one of the explanations to the observation that only a negligible 14.4%(19) had taken the initiative to invest since the migration of their male heads. Other than the reason given above it may also be that they lack the capital with which to do so. On the other hand, driven by zero-option and by knowledge that land ownership gives power and control to men and may lead to an improvement of their status, these women seem to have gone against tradition. It is worth noting however that 63% of these, had bought land, while 0.8%(1) had bought both a shamba and started a business. In most parts of Africa, women can only gain ownership of land in the form of usufructuary rights through their relationship with men. This is widely-accepted and recognized in Kenya (Kenyatta 1953, Fisher 1950, Feldman 1984, Mbithi 1974, White 1984, Mbilinyi 1974, Government of Swazi 1978/79 and Boserup 1970). As such, women have to always depend on men even for the development of farm production. This is therefore an important finding as it underscores women's entrepreneurial awakening, especially given the fact that women in the rural areas have a lower bargaining power due to their lower levels of education. Most of those who had bought land, vehemently insisted on the need to 'hide' it. Having bought it secretly, they had to register it secretly under their name or that of one of their children as discussed earlier. It was extremely difficult for the researcher to extract enough information in this regard. This means that they considered it their own property and did not wish its existence to be known to their husbands. A gentle out-of-the-questionnaire probe, in each case indicated that most of these women felt insecure in marriage because their husbands had either married again and/or were in the process of

doing so, or they merely felt neglected while for the others, the remittances were too low and unreliable to depend on for the rest of their lives. These had driven them into a search for an alternative source of security. They also argued that they had used their own hard-earned money to purchase the land, and they naturally did not feel bound to consult their husbands before making the purchase.

While one of the respondents completely declined to reveal the source of money used for the investment, 47.4%(9) had borrowed the money from friends and relatives, 33.3%(6) had secretly saved it from various sources while 11.1%(2) happened to have specifically earned it from concealed off-farm duties. A follow up question revealed that the money had not been obtained from a formal lender in any of the cases, i.e a Bank or even the Cooperative Society. Women rarely have collateral to assist them secure loans or credit facilities from formal lenders; Perhaps this best explains this finding. One of these women had obtained part of the money from her urban-based husband and although it was registered under the man's name she insisted on calling it a joint investment basically due to the fact that she had contributed the larger share. Though she may have been wrong, this implies that some of the women knew of their rights in property ownership but may not be able to enjoy them due to certain cultural and sometimes legal constraints. The registration of property jointly between wife and husband is an extremely rare phenomenon, even when the woman has contributed a substantial amount to the undertaking. From ones cursory observation, even the most enlightened of men will always be reluctant to do this. The women resort to keeping the existence of property purchased with 'their own money' concealed. In the end such investments do not bear any fruit in terms of control and power on the part of the woman or even in terms of utilizing it to uplift her family's

socio-economic status.

As discussed in an earlier section of this Chapter, a lot of farm produce was recurrently sold in the market either in the form of crops grown specifically for sale and/or 'surplus' harvest. Quizzed on whether they consulted their migrant husbands before doing so, 50% responded in the affirmative while 50% responded negatively. A follow up question addressed to the latter on why they did not do so, yielded the following responses:- 74%(49) responded that they were not expected to, that they had the autonomy to decide what to do on the farm, 24.2%(16) did not consider it necessary, arguing that it would be asking for too much to expect them to wait for a person so many miles away to endorse such a decision. The latter response denoted a degree of defiance. The remaining 1.5%(1) gave no apparent justification for not doing so. As much as this spells greater control of rural resources by the women, it also throws light on the nature of the relationship between the respondents and their migrant husbands.

Women's direct access to income is the most powerful indication of a significant change in their status. It can also help challenge the foundation of the prevailing sexual division of labour and economic differentiation. Out of the 84.1%(111) that received regular remittances, 63.6%(70) were fully in charge of deciding on how it should be used. In 30.3%(34) of the cases, the men controlled this from their urban bases. In addition, 44.7%(59) of the respondents had operational Bank accounts viz. 44%(26) personal, 47.3%(28) joint with their husbands and 8.4%(5) both. The accounts had been opened by the women on their own in 45.8%(27) of the cases and jointly in 42.4%(25) and 11.8%(7) solely by the men. These had been in existence for a period ranging from one to 40 years and averaging about 8 years. Whereas this may not entail notable control since the accounts were reportedly on their 'least-acceptable-balances' most of the time,

the fact that 30.3% had negotiated for and obtained a loan or credit facilities albeit from informal other than formal lenders may³¹. This finding warrants attention because even when borrowing from an informal lender, one still needed a little money as 'security' according to the findings of this study. Formal lenders often consider women in money matters such that, most banks deny women credit for fear of default in repayment. To make matters worse, women especially in the rural areas, as mentioned earlier often lack the collateral with which to secure credit, what with land ownership vested almost entirely in men. The men on the other hand are often reluctant to give the go-ahead for fear of losing the farm in case of default in loan repayment, especially when they reside so far away.

The longer a man stays away from his rural home the more likely he is to get established in the urban area and the more likely he is to let go of some of the household functions such as those discussed in this section. But some may insist on doing them even in their absence. Of importance here then, are the visits to and fro and the length of stay during the visits by the man.

Of those who made regular visits to their rural homes, 32.5% visited once every month, presumably at the end of the month and 20% once every three months, 15% once every 6 months, 13.3% once a year and 19.2% once every week. Again this data confirms the migrants' commitment to the rural area and the necessity to keep the links alive. An overwhelming majority spent at least a weekend with their rural families when they visited, while 10.8% spent just a few hours. A negligible 1.6% spent between one and two weeks, but one would have to be on

³¹ Some of these were informal 'co-operatives' where each member contributed a little money each month on the basis of which she could be lent some money for her own use by the group at some time. The interest charged on this money was normally so small that the borrower did not strain so much to pay the loan back.

leave from work. A good 55.3% spent their leave days at the rural homes and assisted with the farm work while there. A question on the initiative for the visit(s) put to the respondents further proved the migrants' commitment to the rural areas. It was found that 42.2% visited on their own resolve and initiative, while in 45.7% of the cases it was a joint decision. Noteworthy also is the fact that women visited their husbands in town less frequently and for very short stays. It was found that of those 40.9%(54) who did, a negligible 1.9%(1) once every week, 7.4%(4) once a month, 48.2%(26) once in three months, 22.3%(12) once in 6 months, 20.3%(11) once in a year. Quizzed on why they did not visit at all, this category of 59.1%(78) claimed to be either too busy, felt unwelcome, were not allowed to, could not afford the travelling fare, or they did not know the way. A general lack of time and also interest was deduced here. Data in this section also indicated that women were in fair control of rural resources and income. Suffice it to conclude here that,

"Women who take over managerial farm functions on the farm after labour migration may command a higher status than previously."

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Those men who struggle to hold on to the managerial farm functions, despite being very far away, exemplify a struggle to retain control over female labour as pointed out earlier. This could lead to a situation whereby the woman's agricultural production suffers as decisions and other important aspects on the improvement of farm production are always in the hands of the migrant who may not be around when problems arise.

Having found in this case that agricultural production had improved albeit slightly after male migration as discussed earlier, it is seemingly proper to conclude tentatively that this improvement was due to the take over of the

control of rural resources and income by the migrant's wife.

The control of income in the rural end is a factor that is positive and pertinent enough to cause a decisive change in the farm production capacity of the rural family. The women may get more motivated to expand, specialize and intensify farm production when they are in control of the income than when they are not. The family is the production team and the main source of labour for agricultural production³². The family or household typically provides the social basis for the allocation of labour and the labour process. Production takes place in the homestead of the rural family. With the new compulsion to earn cash in addition to subsistence agriculture, and the vanishing of communal labour for socially-related activities, domestic communities are being destroyed and appear to be decomposing into individual households as the basic units of simple re-production (Bernstein 1976). This however does not mean that the distinction between 'necessary' and 'surplus' labour is being destroyed.

To overcome the contradictions produced by the increasing socialisation of the conditions of production via the market and the individualisation of responsibility, settlement has to occur at the household level. One of the ways this gets settled is by way of re-allocation of labour in the family.

Thus, in this study, it was hypothesized that upon the migration of the male head of the household, there would inevitably occur changes in the households division of labour in the rural family that would lead to a decline in the rural family's farm production level.

³² The paramountcy of the family as the main source of labour for the process of production as well as its responsibility in the reproduction of labour has been discussed in Chapters 1 and 3 of the study.

Firstly, the fact that the man is living away from the rest of his family and being supplemented and subsidized for the reproduction of his labour by his family in the rural end, is a notable change in the division of labour. This is because instead of becoming the main source of individual reproduction, wage labour relations have remained supplementary in nature.

Secondly, a lot of re-allocation of labour occurs as a result of labour migration and this was seriously noted in our study. Table 4.21 below summarises data collected on this aspect.

Table 4.21:- Changes in Division of Labour After Male Migration

Tasks	A	B	C	D
Tending & picking of cash crops	73.4	43.2	30.1	39.4
Planting & weeding	91.7	91.6	1.5	22.7
Pruning & spraying cash crop	54.5	3	49.8	49.3
Clearing & harvesting	90.9	40.1	45.3	61.4
Household & childrearing chores	81.2	100	0	.8
Animal Husbandry	91.7	9.1	80	82.6
Building & fencing	58.4	3.0	54.4	88.7
None	-	-	10.6	9.8

Key

- A-: Wives Tasks
- B-: Wives tasks before husbands migration
- C-: Tasks taken over by wife after her husbands migration
- D-: Husband's task before migration

The coding and classification of the various and diverse farmstead duties and tasks presented a formidable task. It is not practical that a respondent performed only one task, hence the multiplicity of responses. As such, Table 21 above depicts information on the various duties in terms of how many were performing a certain task alongside the other tasks. Such that, 54.4%(72) of the

respondents reported having taken over the tasks of building and fencing after their husbands migrated in addition to the other tasks that they were performing. This is ordinarily a man's task.

Animal Husbandry, building and fencing are ordinarily male tasks (Kenyatta 1953, Fisher 1950). Data indicate here that this is so in the sense that it was precisely these tasks and other predominantly male tasks that were mostly taken over by the women after male migration. The apportioning of tasks between men and women is based on the physiological make of the genders as well as cultural dictates as mentioned earlier. Due to the fact that men are physically stronger than women, they are apportioned the heavier, harder and more difficult tasks. Being relatively physically weaker, women are apportioned the bulk of the daily farm maintenance duties which tend to be more arduous and back-breaking such as weeding. This is clearly exemplified in the Table above. Both before and after male migration, the women performed the tasks of planting and weeding as well as household chores. It can be clearly seen that very few took over these tasks after male migration (1.5% and 0% respectively). Due perhaps to the disruption of the household's division of labour by the migration of the male head of household, it was found that 73.4% consequently picked and tended cash crop as opposed to 43.2% of the wives before migration, 54.5% pruned and sprayed cash crop(s) as opposed to 3% before, 90.9% cleared land for sowing and harvested as opposed to 40.1% before, 58.4% fenced and built (constructed) as opposed to 3% before labour migration. Amidst all this 81.2% still performed their traditional tasks of household and child-rearing chores. The rest, 18.8%, may have utilized hired labour or relatives, hosted dependents, children for these tasks, not to mention the fact that, when children grow up, household chores reduce drastically. Upon the migration of the male head of household

therefore, the woman's farm-work time increases tremendously as depicted by the Table. In such circumstances, due to fatigue as cited by Lipton (1980) a consequent result normally is that of a fall in the land cultivated as well as the land's output. This would especially be so if combined with the sale of farm work time, as well as the drop in farm work intensity and extensiveness due to reliance on remitted money and goods as encountered in an earlier section of this discussion. The possibility of a general drop in farm production, loss of some rural potential output and a consequent widespread shortage of food, cannot be ruled out.

Otherwise, increased productivity is obtained through the intensification of the labour input and extension of labour time, reflecting a quantitative rather than qualitative change of labour input. Changed labour relations mean an increased work input from women and children and a decreasing one by men. Men remain in management and decision-making or totally alienated from farm work especially as migrants. Women therefore maintain several features of unpaid family labour in farm production. They and their children form the basic unit of reproduction. Women's labour therefore is the critical element in determining the standard of living in the household (Hay 1976, Allen 1976). As a result of labour re-allocation due to labour migration, 82.6% of the respondents reported that they were grossly overburdened, that they could not even afford time for any extra farmstead activities. A good 65.2% had also violated the 'sex-roles taboos' by performing tasks traditionally meant for men.

Upon the integration of the African rural economies into the international market system, which creates the impetus for labour migration and reinforces rural poverty, an intolerable burden of work is placed on women. They have to increase or at least maintain agricultural production i.e food, cash crop

production and livestock farming for market sale or export (White 1984). This comes out fairly clearly in this study. The drive is to foster production for profit or capital accumulation, but the net outcome may not be that encouraging.

The households studied essentially depended on the family as the main source of labour for agricultural production. Hired labour is not popularly used in Nyeri District (Clayton 1974). It was found, however, that 54.5% of the households utilized hired labour especially during peak seasons, for instance during the cash crop picking seasons, harvest time, sowing and weeding time. Most of those using hired labour argued that they only did so at specific times of the year, when it was absolutely necessary. It was too expensive for them to feed and pay due to financial constraints already prevalent. The cost of hiring labour ranged from Ksh. 200 to Ksh. 3,000 per year i.e. Ksh. 15 to Ksh. 250 per month. Hired labour basically constitutes of neighbours and strangers who are employed for wages to supplement family labour. At such a time, women also adjust by redistributing some of the work to children and co-wives. In some instances, children may stay away from school so as to work in the shamba. This latter instance was however not encountered in this study. If at all any children were found at home during school-time it was because of lack of school fees, building fund, uniform or such other necessities but not for the purposes of working in shamba.

Other sources of labour included friends and community or cooperative work groups (mutual aid groups) known in the area as the Ngwatio. Regarding the latter, 52.3% reported that Ngwatio was still existent in the community but that everyone participated in them. Ngwatio are cooperative activities initiated by the villagers themselves to supplement family labour as a source of labour and

offset the household's labour constraints³³. A group of people come together to work in the farm of another in exchange for labour in their own farmsteads at another time or when the need arises (mostly during peak seasons). It is taken very seriously and those who do not participate in other peoples' Ngwatio have their calls ignored when they have work to be done. They are rated highly as a cheap source of labour. All the host needs to do as the work goes on in her shamba, is to arrange for a good meal for the participants. Ngwatio also come in handy when one is ill, invalidated or incapacitated. Table 4.22 below gives a summary of the data on the various sources of labour.

Table 4.22:- Households' Sources of Labour³⁴

Source of Labour	Yes %	No %	Total %
Hired labour	54.5	45.5	100
<u>Ngwatio</u> ³⁵	79.7	20.3	100
Friends	82.7	17.3	100
Family	93.7	6.3	100

It is observed that an overwhelming majority 93.7% depended on the family as the main source of labour while a good number looked to friends, relatives and neighbours for this.

³³ It was learnt that the form and content of Ngwatio has not changed much under the impact of the new market economy. It operates on the same old traditional principles.

³⁴ It is not practical for a household to depend on only one source of labour hence the multiplicity of responses given and the format of table construction.

³⁵ The word in this study Ngwatio refers to village mutual aid groups.

People hosted or living with relatives often have to 'pay' for their stay to the hosts either by contributing to labour or in (rarely) monetary terms. In 67.4% of the households studied, it was found that the respondents were hosting people who also constituted a good and cheap source of labour. The number hosted ranged from 1 to 7 persons and averaged 2 (86.4%). This was found to be a major source of labour especially owing to the fact that 85% of them were not working or schooling.

One of the most important prerequisites for effective farm production is the adequacy and appropriateness of labour. This fundamental goes for any kind of production setting. Due to the overburdening, the woman's efforts to intensify or make extensive her labour input so as to increase productivity are hampered. Having taken over the roles previously performed by the man (which cause serious overburdening), she may not afford time to attend to agricultural extension workers' advice demonstrations and seminars and/or to apply it in her own farm.

Tentatively, we conclude that though labour constraints experienced after male migration did not cause a decline in the farm production capacity according to the findings of the descriptive analysis data on the level of farm production, their effects were far from positive. The woman was left with serious adjustments and adaptations to make in order to keep the family farm production system afloat. So far we are not able to attribute improvements observed in the farm production level to the changes in the division of labour discussed above. Thus far, changes in the division of labour due to the migration of the male head of household, do not lead to a decline in the rural family's level of farm production.

CHAPTER FIVE

STATISTICAL TECHNIQUES

The aim of this chapter is to test the study's hypotheses through bivariate and multivariate analysis. For findings to yield answers to research questions, they have to be summarised and inferences made as interpretations are linked to available knowledge. Then follows the drawing of conclusions and the raising of questions as patterns are established. This in essence is the purpose of this chapter.

Whether or not the preservation of the pre-capitalist modes of production serves to improve the level of farm production in the female 'headed' rural household as argued in an earlier section of this study, is here analytically tested.

Chi-square (χ^2) is used basically to test the statistical significance of such relationships. It is opted for because of its' flexibility in relation to the level of measurement. It is interpreted alongside the contingency coefficient.

In this study however, as far as the use of chi-square is concerned. There arose a problem in deciding whether or not the number of expected frequencies are sufficient. Siegel (1956) observes that if 20% of the cells in a cross-classification have expected frequencies of less than 5, the coefficients tend to be measurably problematic in terms of stability and hence interpretation.

To avoid over-categorization, interval level data were generally excluded from cross-tabulation and analysed through Pearson correlation.

The statistical analysis of data in this study is done hypothesis by hypothesis. We start off by cross-tabulating measures of the dependent variables with the independent variables for each hypothesis and discuss the findings and then proceed on to analyse the data through the Pearson product-moment correlation.

RELATIONSHIP BETWEEN URBAN REMITTANCES AND FARM PRODUCTION.

Cross-Tabulation

Our first hypothesis (H_1), states that, remittances by the urban-based male head of household negatively affects the rural family's farm production capacity (leads to a declined farm production capacity). The assumption here is that, since women are driven by need into the various undertakings, the households may become so dependent on the remittances as a source of livelihood that they may cultivate their shambas less and less leading to a declined farm production level. This is of course subject to several factors, the size, regularity, and consistency of the remittances for instance. Table 5.1 below indicates an association between the question of whether or not the migrant male head of household remitted and the effect this has on farm production through a cross-tabulation of the two³⁶.

The effects of migration on the rural family's farm capacity is here below analysed alongside the question of whether or not the urban-based male head of household remits to his rural home. Findings are as in the table.

³⁶ In all the cross-classifications, figures in parentheses represent column percentages.

Table 5.1:-Farm Production by Urban Remittances

Does he send you money ?

Effect(s) of remittances on farm production	Yes	No	Row Total
Positive	37 (33.3)	7 (33.3)	44 (33.3)
Slight improvement	24 (16.2)	7 (33.3)	31 (23.5)
Negative	18 (16.2)	5(23.8)	23 (17.4)
No Change	32 (28.8)	2(9.5)	34 (25.8)
Column Total	111 (84.1)	21 (15.9)	132 (100)

4.17082 df. 3 Significance .2436 C .17501

According to the chi-square test (4.17082 at 3 degrees of freedom) this association is only significant at 75.6% which is below the level of confidence chosen in this study. The contingency coefficient of .2436 further indicates a weak association. The association between urban remittances and the family's farm production level is therefore weak and insignificant.

Below, the question of whether or not the migrant male head of household returns to his rural home is cross-classified with the size of land put under cash crop(s) in an attempt to find out whether or not remittances lead to a decline in the level of cash crop(s) production.

Table 5.2:- Acreage Under Cash Crop(s) Production by Urban Remittances.

Does he send you money ?

Acreage	Yes	No	Row Total
< 1 acre	28 (31.5)	10 (58.8)	38 (35.8)
1 - 2	53 (59.6)	7 (41.2)	60 (56.6)
3 - 4	5 (5.6)	0 (0)	5 (4.7)
> 4	3 (3.4)	0 (0)	3 (2.8)
Column Total	89 (84)	17 (16)	106(100)

χ^2 5.36053 df. 3 Significance .1472 C .21940

The contingency coefficient of .21940 indicates a weak relationship between the two variables. The chi-square test (5.36053 at 3 degrees of freedom) shows that the relationship between the two is only significant at 85.28% level of confidence which is below the level chosen as significant in this study (90%). As such, the association between the migrant male head remittance and the acreage under cash crop(s) at the time is insignificant.

It was found that of the 84.1% (N=89) that were receiving remittances, a majority 91.% had 2 acres and below under cash crop, a negligible 9% has 3 acres and above. Of those not receiving remittances, a more or less similar observation is made in that majority also had 2 acres and below of cash crop. However, a slight though insignificant association is implied in that those receiving remittances had a higher acreage under cash crop on average than those who were not.

Landholdings in this region were found to be relatively small, averaging about 6.7 acres, not to mention that cash crop farming in the African traditional society falls in the man's domain, women are known not to tamper with them. With

the set-up of the rural home changing, whereby the woman lives in the rural area and is left to control the household's affairs even those pertaining to cash crop production, due perhaps to the physical absence of the man, changes may be observed.

A cross-classification of the acreage under food crops and whether or not the migrant male head of household remitted, was then done for the same purposes as expressed in the case of cash crop(s) production. Women are more readily concerned about food crops. Food production forms the basis of women's labour and perhaps main source of income in the rural areas. Results of the cross-classification are displayed on Table 5.3.

Table 5.3:- Food Production by Urban Remittances

Does he send you money?

Acreage	Yes	No	Row Total
< 1 acre	9 (8.2)	2 (11.1)	11 (8.6)
1 - 4	88 (80.0)	16 (88.9)	104 (81.3)
5 - 9	12 (10.9)	0 (0)	12 (9.4)
15 - 19	1 (.9)	0 (0)	1 (.8)
Column Total	110 (85.9)	18 (14.1)	128 (100)

2.43215 df. 3 Significance .4877 C .13655

The chi-square test shows that the association between the two variables is only significant at 51.23% confidence level which is below the level of confidence of 90% chosen by the study. The contingency coefficient of .13655 further reflects a weak association. The relationship between the two variables is insignificant. As in Table 5. 2, most of those receiving remittances had 4 acres and below of food crops, 10.9% had between 5 to 9 acres and a negligible 2 had above 15 acres. None of those not receiving remittances, exceeded 4

acres of food crops. It generally follows that remittances do not negatively affect acreage under food crops, notwithstanding a slight improvement observed in those homesteads receiving remittances.

A cross-tabulation analysis of the number of pieces of land a family owned in relation to whether or not the migrant male head of household remitted was done. This was an attempt to establish whether or not the disposal or sale of land could have been caused by remittances.

The cross-classification attempts to establish the existence of a significant relationship between the two variables.

Table 5.4:- Number of Pieces of Land by Urban Remittances

Does he send you money ?

No. of pieces	Yes	No	Row Total
1	97 (87.4)	18 (85.7)	115 (87.1)
2	13 (11.7)	2 (9.5)	15 (11.4)
Column Total	111 (84.1)	21 (15.9)	132 (100)

1.81751 df. 2 Significance .4030 C .11654

The chi-square test here shows the association between the two to be significant at 59.7% level of confidence. This being below the level of 90% chosen by the study, renders the association insignificant. The contingency coefficient (.11654) further underscores the weakness of this association. In effect therefore the association between the two variables is insignificant. Of those receiving remittances a majority (87.4%) had only one piece of land and the rest (11.7%) had 2 pieces. Similarly a majority of those not receiving, (85.7%) had one piece and the rest (9.5%) had 2 pieces. With or without remittances, majority of the households owned only one piece of land. Women

cannot dispose of land for any gain. Not only are they not able to do so legally, land happens to constitute their main source of livelihood. Relinquishing it therefore is tantamount to denying themselves a livelihood. Women in the African traditional society are not expected to own land either through outright purchase and/or inheritance (Okoth Ogendo 1977). They obtain usufructuary rights through their relationship with a man. Suffice it to summarize here that, remittance by the migrant male head of household to his rural home did not have an effect on the number of pieces of land owned by the family. After all, with land ownership being almost always vested in men, women cannot sell or dispose of land easily, neither is purchase of land by women facilitated legally as mentioned earlier.

Below, cattle rearing is cross-classified with urban remittances and analysed.

Table 5.5:- Cattle-rearing by Urban Remittances.

Does your husband remit ?			
Cattle - rearing	Yes	No	Row Total
Yes	104 (93.7)	20 (95.2)	124 (93.9)
No	7 (6.3)	1 (4.8)	8 (6.1)
Column Total	111 (84.1)	21 (15.9)	132 (1000)

.0000 df. 1 Significance .1.0000 ~ C .02367

The chi-square test here indicates that there is no association whatsoever between the two variables. The contingency coefficient of .02367 is very low and further underscores the non-existence of an association. Thus, with or without remittances most of the families, 93.9% reared cattle. This leads us to the conclusion that the women did not rely on remittances in order to carry on

th cattle-rearing and that they did not abandon cattle rearing because of the absence of remittances. Therefore, remittances do not negatively affect cattle rearing.

Below, the acreage under food crops is cross-classified with the question whether or not the man directs on the use of remittances.

Table 5.6-- Acreage Under Food Crops by Urban Remittances

Does he direct on the use of remittance?

Acreage	Yes	No	Row Total
< 1 Acre	4 (10)	5 (7.4)	9 (8.3)
1 - 4	30 (75)	56 (82.4)	86 (79.6)
5 - 9	6 (15)	6 (8.8)	12 (79.6)
15 - 19	0 (0)	1 (1.5)	1 (.9)
Column Total	40 (37)	68 (63)	108 (100)

1.883570 df. 3 Significance .6072 C .12928

The chi-square test (1.83570 at 3 degrees of freedom), indicates that a significant association does not exist at 90% level of confidence chosen in the study. The contingency coefficient (.12928) also indicates the non-existence of significant association as it depicts a very weak association. This implies that the question of whether or not the man directed on the use of remittance had influence on the acreage put under food crops. Whether or not he did so, most households remained with 1 to 4 acres of food crops. Probably this is what they could afford regardless of the direction on the use of remittances from the man. This goes to suggest that remittances did not have effect on food production even where the man controlled their use. Below, the same (direction on the use of remittances) is cross-tabulated with the acreage of land put under cash

crop(s).

Table 5.7:- Acreage Under cash Crop(s) by Male Migrant's Direction on the Use of Remittances.

Does he direct on use of remittance ?

Acreage	Yes	No	Row Total
< 1 Acre	11 (35.5)	17 (29.8)	28 (31.8)
1 - 2	17 (54.8)	35 (61.4)	52 (59.1)
3 - 4	3 (9.7)	2 (93.5)	5 (5.7)
> 4	0 (0)	3 (5.3)	3 (3.4)
Column Total	31 (35.2)	57 (64.8)	88(100)

χ^2 3.32491 df. 3 Significance .3442 C : .19081

The chi-square test (3.32491 at 3 degrees of freedom) indicates the non-existence of a significant association at 90% level of confidence. The contingency coefficient (.19081) further underlines the weakness of the association. Whether or not the man directed on the use of remittances did not have any effect on the acreage under cash crop(s). Majority of the households had 2 acres and below of cash crop(s) in both instances. They were able to sustain the acreage under cash crop(s) regardless of the man's direction on the use of remittances.

Tentatively, we can conclude that the question of whether or not the man controlled the use of the money he remitted, did not negatively affect the acreage put under food crops and/or cash crop(s) and thus farm production. The fact that they are received, does not lead to a decline in the acreage under cultivation. Thus far, the negative effect stated in the hypothesis is denied analytically.

An attempt was also made to find out whether or not those women who had

sought off-farm jobs were typically those not receiving remittances or vice versa. On this, the question of whether or not the household was receiving remittances was cross-classified with that of whether or not the migrant's rural-based wife had an off-farm job. The findings are on Table 5.8.

Table 5.8:- Off-farm Job by Urban Remittances.

Does he send you money ?

Off-farm Job	Yes	No	Row Total
Yes	43 (38.7)	8 (38.1)	51 (38.6)
No	68 (61.3)	13 (62)	81 (61.4)
Column Total	111 (84.1)	21 (15.9)	132 (100)

.00000 df. 1 Significance 1.0000 C .00483

According to the chi-square and contingency tests in this cross-classification, there is no association whatsoever between the question of whether or not a household received remittances and that of whether or not the woman was employed outside her farmstead. This demonstrates that, it was not necessarily those women who were not receiving remittance that sought outside employment and/or vice versa. Women therefore are not generally dependent on their men for basic survival; they have the capability to seek solutions to their own problems, and organize their labour-time in the manner that yields the best returns.

Remittances are often consumed rather than used constructively for the maintenance and continuance of subsistence in the rural areas, (Caldwell 1969, Clifton 1980, Richards 1929, Byerlee et al 1969, Rempel 1981, Van Velsen 1960). It was found in this study that, 90% used the remittances for day-to-day subsistence and/or consumption and only 4% put its use to saving and/or

vestment purposes. It will be recalled from the descriptive analysis (chapter four) that slight improvements in both the acreage under food production and that under cash crop(s), as well as in the yields of basic food crops (maize, beans and potatoes) were observed when data for the periods before and after the migration of the male head of household. We are unable thus far to attribute this to the flow of money from the urban-based head of household to his rural home. These may seemingly be due to other factors other than remittances. Suffice it tentatively conclude here that, those households receiving remittances, did not experience any decline at all in their farm production level but neither did it exemplify any substantial improvement. The remittance factor therefore does not make any crucial difference to the family's farm production capacity. However, it does make a difference in the family's perhaps qualitative consumption but not in farm production. The woman seemingly carries on fairly well with both her roles of subsistence production and reproduction of labour whatever the changes in the division of labour. The fact that remittance contributes to the well-being of the household albeit minimally, cannot however be dismissed regardless of its statistical insignificance.

MULTIVARIATE ANALYSIS

As mentioned earlier, interval data were spared from cross-tabulation analysis to avoid over-categorisation. These data were analysed in terms of Pearson correlation so as to yield relatively better results.

We now proceed with the correlation analysis for hypothesis 1 (H^1)

Key for Correlation matrix for Hypothesis 1 (H^1)³⁷

³⁷ See correlation matrix

v007	Husband's number of years of schooling
v009	Household's (Respondent's) number of children
v020	Duration of migration
v033	Husbands monthly income
v036	Husband's monthly subsistence expenditure
v039	Amount remitted to rural home per month
v072	Total cost of purchased land
v080	Acreage currently under food crops
v084	Cash yielded by sale of food crops grown for sale
v085	This year's yields of maize in bags.
v086	This year's yields of beans in bags.
v087	This year's yields of Potatoes in bags.
v099	Cash obtained through sale of surplus
v103	Number of years of cattle rearing
v104	Cost of starting cattle rearing
v105	Cost of cattle upkeep per month
v106	Amount of milk produced per day (kg)
v107	Amount of milk sold per day (kg)
v108	Cash obtained from milk sales (per month)
v110	Money obtained from latest sales of cows
v119	Number of goats reared
v120	Number of years of goat rearing
v121	Cost of starting goat rearing
v123	Income obtained from latest sale of goats
v130	Acreage under cash crop(s) this year
v132	Number of years of cash crop farming
v135	Total cost of starting cash crop farming
v138	Cost of maintenance of cash crop(s) in Ksh.
v143	Total cash crop earnings per year (ksh)
v165	Net family income (Ksh per month)

Sabot (1979) argues that the longer a migrant man stays in town, the higher his income becomes but the less he remits to his rural home. This could be attributed to the fact that, with time, the insecurity he suffers as an urban dweller wanes such that he does not need to maintain very strong ties with the rural home. This will particularly be so if he is maintaining a fully-fledged household in the urban area as well. With time he may be able to establish for himself a firm base in the urban area.

There was a slight positive correlation (.3910) between the duration of stay in town and the income he earned whereas the correlation between the amount remitted and the duration of stay in town was negative and negligible (-.1237).

The fact that a migrant had stayed in town for a long time and his income had as a result risen, did not mean that he remitted high amounts of money to his rural home. Furthermore, the amount remitted per month did not influence negatively, the acreage put under food crops (.1832) or acreage under cash crops (.1551). Similar observation was made between the amount of money remitted and the cash crop(s) earnings per year (.1133). Negligible chance effects of amount of money remitted on cattle rearing (.0310) and goat rearing (.0369) were observed.

However, fair and in some cases, slight positive correlations were observed between the amount remitted and the cost of cattle upkeep (.4617), the amount of milk produced (.3944), the amount of milk sold (.4043), the income earned from milk sales (.3056), the cost starting cash crop farming (.3737), the cost of hiring labour (.3929) the cost of maintaining cash crop farming (.3964) and with the net family income (.4856). This implies that a fair amount of what was remitted most likely ploughed into or indirectly used to enhance these activities, leading consequently to a higher net family income. As regards the starting off of cash crop farming, money used to do this was mainly obtained by way of loan or credit (67.6%) obviously secured by the man, or directly financed by the man himself (29.7%), making it predominantly the man's undertaking. It did not matter whether the man was present or not at the time for this to happen. The observed negligible chance and negative correlation of the amount remitted with the duration of cash crop farming (-0973) and also with the duration of migration (-0637) lend support to these percentage values.

The amount remitted was also negligibly correlated with the total acreage of land owned (.1844) and the total cost of land purchased (.1212) It will be recalled that the majority of the households studied had acquired most of the land owned through inheritance (92.5%). This means that not much land was owned

through outright purchasing (11.3%), whereby remittances would be expected to have played a role.

The slight and in some cases, fair positive correlations of remittances per month with the yields of maize (.3830), beans, (.3242), potatoes (.3638) and the money earned from the sale of crops grown specifically for sale (.3464), the money earned through the sale of surplus harvest, (.4434), suggest that the remittances do not have a negative effect on the food production of the receiving family.

Contrary to what is asserted by Gugler(1965), remittance does not lead to less intensive cultivation or total abandonment of the shamba (decline in the value of land). Any decline or deterioration of family's farm production that may be attributed to the remittance is refuted by the quantitative results of this study. Although the majority of households (90%) used remittances for day-to-day subsistence rather than for savings and/or for re-investment (4%) a finding well supported by the literature in this area, (Lipton 1980, Caldwell 1969, Richards 1929, Rempel 1981), remittance has no bearing on the notion of deterioration of the farm production capacity in this analysis. This means that other monies and/or resources were probably ploughed into farm production as remittances were consumed thereby leading to the sustenance and improvement of the family's farm production capacity. Thus remittances are used to supplement other rural sources of consumption income and not necessarily to enhance them or directly improve the farm production capacity. This leads us to the conclusion that whereas a dependence on remitted goods and money as stated by (Gugler 1965, Kerven 1979, Robertson 1984, Pala 1976, Brown 1980, Jonhson and White law 1974, Monsted 1978, Rempel 1981, African Perspective 1978/1, Lipton 1980), was also encountered in this study, its capability to lead to a definite decline in farm production

capacity (less cultivation or total abandonment of the shamba leading to lower and/or poorer yields) is doubted. Though a few of the respondents voiced sentiments that can be construed to mean less cultivation or abandonment of farm production, statistical analysis of the data disproves this. Besides dependence, remittances also cause shifts in demand. However, the farm production capacity did not necessarily suffer a decline due to remittance. Besides the satisfaction of the 'basic needs', man still needs to afford other types of consumptive items that are considered fashionable and born of the aspiration for the new values and demands. For instance, alternative sources of income may be sought to supplement both the remittances and the farm production income. Regarding this, it will be recalled that, 38.6% of the respondents (wives of migrants) had secured off-farm employment earning an average of Ksh. 850 p.m. There was however, no relationship however between this and remittance. It is our conclusion that H_1 is not supported by the discussion above.

RELATIONSHIP BETWEEN CONTROL OF INCOME BY RURAL-BASED WIFE AND FARM PRODUCTION

Cross-tabulation

Our second hypothesis (H_2), states that, the control of rural family income and other resources by the wife of the migrant male head of household positively affects the family's farm production capacity (leads to an improved farm production capacity).

On this, cross-classification of data on selected measures of control of income and farm production capacity was done. Table 5.9 displays the association between the question of who is in charge of the rural family's household

budgeting and the acreage under food crops. It is assumed that it is the responsibility of whoever is in charge of family budgeting to decide what and how much of the family's resources is to be allocated to each one of the family's concerns.

Table 5.9:- Acreage Under Food Crops by Control of Family Budgeting

Who is decisive in budgeting ?

Acreage	I	My husband	Both of us	Row Total
< 1 acre	8 (8.6)	0 (0)	3 (9.1)	11 (8.6)
1 - 4	81 (87.1)	1 (50)	22 (66.7)	104 (81.3)
5 - 9	3 (3.2)	1 (50)	8 (24.2)	12 (19.4)
15 - 19	1 (1.1)	0 (0)	0 (0)	1 (1.8)
Column Total	93 (72.7)	2 (1.6)	33 (25.8)	128 (100)

χ^2 17.10563 df. 6 Significance .0089 C .34334

The chi-square test here indicates that the association between the two variables was significant at 90% level of confidence. The contingency coefficient of .34334 further supports this observation depicting a moderate association. The association between the question of who is decisive in rural family budgeting and that of the acreage put under food crops is moderate and significant.

With respect to women in charge of budgeting, 87.1% had between 1 and 4 acres under food crops, 3.2% had 5 to 9 acres and 1.1%, 15-19 acres as compared to the cases where the man was in charge of budgeting. Data on joint budgeting are quite different. Although the majority still had 1 - 4 acres of food crops (66.7%) a good 24.4% had 5 - 9 of the same. Thus where women played a role in budgeting, the acreage under food crops tended to be higher on average. This suggests that, where women participate in budgeting, they budget to facilitate

the expansion of acreage under food crops, i.e., they are able to cultivate food crops on a larger area than where they do not participate.

Table 5.10:- Acreage Under Cash Crop(s) by Control of Family Budgeting

Who is decisive in budgeting ?

Acreage	I	My Husband	Both of us	Row Total
< 1 acre	9 (39.2)	0 (0)	9 (30)	39 (35.8)
1 - 2	43 (58.1)	2 (100)	15 (50)	60 (56.6)
3 - 4	1 (1.4)	0 (0)	4 (13.3)	5 (4.7)
> 4	1 (1.4)	0 (0)	2 (6.7)	3 (2.8)
Column Total	74 (69.8)	2 (1.9)	30 (28.3)	106 (100)

10.94144 df. 6 Significance .0902 C .30588

The chi-square test in this cross-classification (10.94144 at 6⁰ of freedom) indicates that this association is significant at 90.28% level of confidence. The contingency coefficient of .30588 strengthens this indication as it depicts the existence of a moderate association. According to these statistics therefore the association is moderate and significant.

Data in the Table above indicate that where the women played a role in budgeting either solely or jointly with their migrant male heads, the acreage under cash crop(s) was also larger on average. From the two Tables above, one implication is that where women control the rural family budget, some of the money may well be allocated for farm production. A change in the two variables cross-classified with the issue of budgeting (acreage under cash crop(s) and that under food crops) was observed. One would therefore expect even greater changes if women were left in total control of budgeting. Being the ones residing in the rural farmstead, they are better able to decide on the allocation of resources

for the various activities constituting rural farm production as they are more in touch with these. To the extent that women in African traditions do not deal with money, allowing them to do so not only assists in the elevation of their status but also boosts their morale and motivates them to work harder. It also equips them with the experience and knowledge to plan better for the family and farm upkeep.

Table 5.11:- Acreage Under Food Crops by Utilization of Bank Services

Do you have a currently running Bank Account ?

Acreage	Yes	No	Row Total
< 1 acre	1 (1.7)	10 (14.9)	11 (8.8)
1 - 4	46 (76.30)	55(82.1)	101 (80.8)
5 - 9	10 (17.2)	2 (3.0)	12 (9.6)
15 - 19	1 (1.7)	0 (0)	1 (.8)
Column Total	58 (46.4)	67 (53.6)	125 (100)

13.92313 df. 3 Significance .0030 C .31658

The Chi-square test from the Table above indicates that a significant association exists between the acreage under food crops and the question of whether or not the wife had a currently running bank account at 100% level of confidence. The contingency coefficient (.31658) supports this as it depicts a moderate association. The association here therefore is not only moderate but also significant. Of the 46.4% that had a bank account that was operational at the time of data collection, 79.3% had between 1-4 acres of food crops and 17.2%, 1-9 acres and 1.7% 15-19. Of those that did not 82.1% had 1-4 and only 3% 5-9. On average those with a Bank account had a larger acreage under food crops. This suggests that there exists an association between the question of whether one has

money of her own (which she controls) and the acreage she puts under food crops. Some of the money may trickle down to food production. She is the boss in deciding what to do with it and she could put all of it in food production if she so decided.

Below, the acreage under cash crop(s) was also cross classified with the question of whether or not the respondent (migrants wife) operated an operational Bank account at the time of study.

Table 5.12:- Acreage Under Cash Crop(s) by Utilization of Bank Services

Do you have a currently running Bank Account?

Acreage	Yes	No	Row Total
< 1 Acre	12 (21.8)	26 (54.2)	38 (36.9)
1 - 2	36 (65.5)	22 (45.8)	58 (56.3)
3 - 4	4 (7.3)	0 (0)	4 (3.9)
> 4	3 (5.5)	0 (0)	3 (2.9)
Column Total	55 (53.4)	48 (46.6)	103 (100)

15.13136 df. 3 Significance .0017 C .35790

The chi-square test in this case also indicates a significant association at nearly 100% level of confidence. A moderate association is also suggested by the contingency coefficient (.35790). This means that a moderate and significant association exists between acreage put under cash crop(s) and the question of whether or not the migrant's wife based in the rural area had an operational Bank account. It is evident from data in Table 5.12 that in the cases where the migrant's wife had an operational Bank account, the acreage under cash crop(s) was on average bigger. There were few households with less than 1 acre of cash crop(s) in this category, although the majority had between 1 and 2 acres. At the same time 7.3% had 3-4 acres and 5.5%, over 4 acres whereas in the cases

where the women had no bank accounts, 100% had 2 acres and below under cash crop(s). Again one can tentatively conclude that the fact that the migrant's wife has an operational bank account affects the farm production capacity positively as it serves to expand the proportion of land used for cash crop production. It may mean that when in total control of finances, women may take initiative in the tending of cash crop(s) especially when they do not have to consult the husband on how to use the money. This therefore negates the myth that women are incapable of handling cash and cash crops. Women therefore do best in their roles of subsistence and cash crop production as well as the reproduction of labour when and if they have their own directly controlled money. The physical absence of the man may well give them this opportunity.

Another aspect that constitutes control on the part of the woman is the control of the cash crop co-operative affairs (running the family's co-operative account, receiving payments, signing for all the family's cash crop(s) transactions deciding on and arranging for credit facilities from the co-operative etc.) Below, the question of who the signatory in the cooperative was, analysed vis a vis the cash crop earnings in the year of study. It will be recalled that over 60% of those interviewed were found to have had the role of cooperative signatory relegated to them.

Table 5.13:- Cash Crop Earnings by The Running of Cash Crop's Co-operatives Affairs

Who is the cooperative signatory ?

Earnings	I	Him	Children	Relative	Row Total
0-15000	28(43.8)	11(42.3)	0(0)	1(25)	40(39)
15001-30000	26(40.6)	8(30.8)	0(0)	1(25)	35(34.3)
30001-45000	9(14.1)	4(15.4)	3(37.5)	2(50)	18(17.6)
45001-60000	1(1.6)	0(0)	0(0)	0(0)	1(.9)
60001-75000	0(0)	2(7.7)	2(25.0)	0(0)	4(3.9)
> 75000	0(0)	1(38)	3(37.5)	0(0)	4(3.9)
Column Total	64(62.7)	26(25.5)	0(0)	4(3.9)	102(100)

51.06246 df. 5 Significance .0000 C .57759

The Chi-square test indicates a significant association at 100% level of confidence which is way above the study's level of confidence, rendering this association significant. This observation is further strengthened by the contingency coefficient (.57759) which depicts a fair degree of association. Cash crop earnings tend to be related to the question of who the cooperative signatory is.

It was found that cash crop earnings were highest where the man remained the co-operative signatory. This will be explained first and foremost by the fact that cash crop production in the African traditions is the man's 'business' but perhaps also by the fact that co-operatives are essentially run by men who may have a bias against women given the latter's 'illiteracy' and lack of knowledge about marketing strategies. Of the 62.7% cases where the migrant's wife was in charge of cooperative affairs, a majority of the households (84.4%) received Ksh.30,000 and below per year while a small minority (15.6%) received Ksh.30,001

and 60,000 per year. Where the men had remained cooperative signatories despite their being far away, cash crop(s) earnings tended to be above average. Whereas a majority (73.1) still earned Ksh 30,000 and below per year from cash crop(s), 37.5% earned between ksh 30,001 and Ksh 45,000, 25%, between Ksh 60,001 and 75,000 and one household earned over 75,000 Ksh per year. This means that cash crop(s) remain the property of men and in the interest of men even when they are living far away. Even though they do not tend them, men still control cash crop production in a non-apparent way. In the few instances where this was delegated to male children (7.8%), cash crop earnings tended to be very high. A son may be a direct beneficiary of cash crop production as he is likely to inherit the land on which it is grown and all else on it. This in itself is enough to compel him to tend the crops rather keenly given the ideology on land ownership in the African tradition. On the other hand, women consider cash crops to be the men's domain of interest and therefore they may not tend them as keenly, even when they are cooperative signatories. It is good to point out that they may be too pre-occupied and overburdened with food production to give much thought and time to an activity that is not considered their 'business' anyway. Concentrating on cash crops may jeopardize food production, and their welfare and that of their children not to mention that often, they are not the beneficiaries of the income earned.

Below, further analysis of the question of control of cooperative matters vis a vis cash crop production is undertaken.

Table 5.14:- Acreeage Under Cash Crop(s) by Control of Co-operative Affairs

Crop(s)

Who is the cooperative signatory ?.

Acreeage	Me	Husband	Children	Relative	Row Total
< 1 Acre	28(43.1)	7(25.9)	0(0)	2(40)	37(35.2)
1 - 2	36(55.4)	6(59.3)	5(62.5)	3(60)	60(57.1)
3 - 4	1(1.5)	2(7.4)	2(25)	0(0)	4(4.7)
> 4	0(0)	2(7.4)	1(12.5)	0(0)	3(2.8)
Column Total	65(61.3)	27(25.5)	8(7.5)	5(4.7)	105(100)

22.12297 df. 12 Significance .0362 C .41554

The chi- square test here indicates a significant association at 96.4% level of confidence. The accepted level of confidence in this study is 90%, therefore this association is significant. The contingency coefficient of .41554 further suggests a moderate association. The acreeage under cash crop(s) is therefore moderately and significantly associated with the question of who the cooperative signatory was. Even after the man has migrated, matters relating to cash crop production remain predominantly the man's interest. The acreeage under cash crop(s) therefore rose where the man remained in charge of cooperative affairs. There were fewer households with less than one acre of cash crop(s) and more with 3 to 4, and above 4 acres in this category. This means that on average, the acreeage under cash crop production was higher where the man controlled cooperative affairs, However, in both instances majority due to other factors had between 1 and 2 acres of cash crop(s). As mentioned earlier cash crop(s) are not directly and regularly consumable in the household and therefore according to the women, may not deserve very close attention. But they could organize its

production despite the absence of the co-operative signatory, which means that they do undertake cash-crop production and are capable of running the show.

An attempt was then made to establish the existence or non-existence of any significant association between the question of who the cooperative signatory is and the acreage put under food crops.

Table 5.15:- Acreage Under Food Crops by Control of Co-operative Affairs

CROPS

Who is the cooperative signatory ?

Acreage	I	Husband	Children	Relative	Row Total
< 1 Acre	2(3)	2(7.1)	0(0)	1(20)	5(4.7)
1 - 4	60(90.9)	23(82.1)	3(37.5)	4(80)	90(84.1)
5 - 9	4(6.1)	3(10.7)	4(50)	0(0)	11(10.3)
15 - 19	0(0)	0(0)	1(12.5)	0(0)	1(.9)
Column Total	66(61.7)	28(6.2)	8(7.5)	5(4.7)	107(100)

χ^2 32.40035 df. 9 Significance .0002 C .48211

The chi-square test in this cross-classification suggests that, the acreage under food crops, is significantly associated with the question of who the cooperative signatory is. This is as indicated by the chi-square of 32.40032 at of freedom, significant at 100% level of confidence. The contingency coefficient (.48211) further suggests a moderate association. The acreage under food crops was larger on average where the woman was the cooperative signatory. Although a majority, (93.9%) had between 3 and 4 acres and below under food crops, 61% had between 5 to 9 acres. Where the man had remained cooperative signatory, a majority (89.2%) had 4 acres and below under food crops while 10.7% had 5 to 9 acres. Children were signatories only in 7.5% of the cases, the

majority of whom had 1 to 4 acres under food crops, but 12.5% of such households had 15 to 19 acres under food crops. The acreage under food crops was still larger on average where women had been designated cooperative signatories. These data suggest that women are more concerned with food production and that control of resources in the rural farmstead mostly tends to gear them towards improvement of food production. Thus as signatories in the cooperative, they could have been able to obtain and channel resources (e.g. fertilizers) towards the expansion of the land under food crop production.

Of the women interviewed, 31% had obtained a loan or some credit facilities during the year of field research. It was mostly used for investment purposes as discussed in Ch. 4. It will also be recalled that most of this was obtained from informal lenders. An analysis of this vis a vis farm production is done below. In some instances the man participated in or was the sole decision maker in the procurement of loan/credit facilities. The Table below cross-classifies acreage under food crops by the question of who had made the decision for the procurement of the loan/credit facilities.

Table 5.16-- Acreage Under Food Crops by Utilization of Credit Facilities

Who made decision for procurement of Loan/credit ?

Acreage	I	Husband	Both of us	Relative	Row Total
< 1 acre	2(2.5)	0(0)	0(0)	0(0)	2(4.9)
1-4	14(87.5)	2(33.3)	14(77.8)	1(100)	31(75.6)
5-9	0(0)	4(66.7)	4(22.2)	0(0)	8(19.5)
Column Total	16(39.0)	6(14.6)	18(43.9)	1(2.4)	41(100)

15.15457

df.

6

Significance

.0191

C .51949

N/B. This analysis has been carried out despite the numerous missing observations. This variable was considered particularly important because rural women hardly have a regular source of income. Access to income even if in the form of a loan was considered worth noting. They do not own land and often any other form of property. As such they cannot raise the collateral or security demanded by formal lenders before they can advance them any money with which to carry out activities on their farmsteads. Yet they and their children would benefit a lot from such resources.

The chi-square test in this cross-classification (15.15457 at 6⁰ of freedom) indicates the existence of a significant association at 98% level of confidence. The contingency coefficient of (.51949) also indicates a moderate association. The association here therefore is not only moderate but also significant. The acreage under food crops is moderately and significantly associated with the question of who the decision-maker in the procurement of credit facilities is.

The man almost invariably has an upper hand in matters relating to credit facilities. First and foremost, women in the traditional African society do not make decisions especially those involving money. Women rarely have security or collateral of their own with which to secure loans. The acreage under food crops was higher on average where the man had participated in making the decision to procure credit facilities. Where the woman had done so solely, 87.5% had between 1-4 acres. Where it was jointly done, 77.8% had between 1-4 acres and 22.2% between 5-9 acres. Where the man had done so solely, 33.3% had 1-4 and 66.7% had between 5-9 acres of food crops. Total control in such a matter for the woman may allow for an even higher rate of farm production improvement. Yet this is one area

where total control by the woman is not achievable³⁸.

The same kind of analysis in relation to cash crop(s) was performed. The question of who had made the decision for the procurement of credit was cross-tabulated with the acreage under-cash crop(s).

Table 5.17:- Acreage Under Cash Crops by Utilization of Credit Facilities

Who made decision for loan procurement ?

Acreage	I	Husband	Both of us	Row Total
< 1 acre	4(30.8)	0(0)	4(22.2)	8(22.2)
1 - 2	9(69.2)	4(80)	9(50)	12(61.1)
3 - 4	0(0)	1(20)	4(22.2)	5(13.9)
> 4	0(0)	0(0)	1(5.6)	1(2.8)
Column Total	13(36.1)	5(13.9)	18(5.0)	36(100)

χ^2 6.17427 df. 6 Significance .4040 C .38262

The chi-square test (6.17427 at 6⁰ of freedom) indicates an insignificant association. The contingency coefficient (.38262) however, indicates a moderate association. The acreage under cash crop(s) therefore is moderately but insignificantly associated with the question of who the decision-maker in the procurement of credit facilities is.

It is observed as with food crops, that where the man had participated in this decision, the acreage under cash crop(s) was slightly larger, on average. This observation is reached as the Table's data clearly shows that at least 1

³⁸ It will be recalled that the kind of borrowing encountered in this study, did not involve formal lenders although the involvement of the man in the transaction still stood basically because even as a migrant leaving far away, he remains the head of the household and the woman is not expected to make decisions without involving him.

household had 3 to 4 acres where the decision was solely the man's; and better still is that 4 households had 3 to 4 acres where it was jointly decided upon. Findings here imply that both of them (migrant and wife) independently represent their respective area of interest in family decision-making.

The man therefore remains in control of farm production matters because the money borrowed remains his in view of the fact the land on which food crop production is undertaken belongs to him and he has a lot of say on how it is cultivated and managed. After all women cultivate land privatized under male title which results in impaired access to services and inputs. Given the inherent constraints in relation to household production, there are limits as to how far women can expand the farm production base. This does not hinder them however, from carrying on with it and making changes and improvements where they deem it necessary. Neither does it hinder them from using their newly-acquired control for its development.

Women's directly earned income and their ability to stretch this and other resources is vital for the survival of many households. Even within the 'traditional' 2-parent households, women have always contributed economically and the importance of their income-earning is rapidly increasing. Poor (often landless) families, often simply cannot survive without the women's earnings. Several studies have shown that women spend more on family necessities and production, if earnings accrue directly to them.

Table 5.18 cross-categorizes the question of whether or not the woman was employed elsewhere and the acreage under food crops.

Table 5.18:- Acreage Under Food Crops by Off-farm employment

Are you otherwise employed ?

Acreage	Yes	No	Row Total
< 1 acre	7(14.9)	4(4.9)	11(8.6)
1 - 4	34(72.3)	70(86.4)	104(81.3)
5 - 9	5(10.6)	7(8.6)	12(9.4)
15 - 19	1(2.1)	0(0)	1(.8)
Column Total	47(36.7)	81(63.3)	128(100)

6.00553 df. 3 Significance .1113 C .21170

The chi-square test (6.00553 at 3⁰ of freedom) is significant at 90% level of confidence. The contingency coefficient (.21170) also indicates a weak association. The relationship between the acreage under food crops and the question of whether or not the migrant's rural-based wife had an off-farm job is therefore weak and insignificant. Data on Table 5.18 indicate that on average, the acreage under food crops was slightly higher where the woman was employed off the farm. Although a majority (87.2%) had 4 acres and below, 10.0% had 5-9 acres and 2.1%, 15 to 19 acres. Where they were not employed, observations were more or less similar in that 91.3% had 1-4 acres but 8.6 had 5-9 whereas none went beyond 9 acres. That is, for the latter, there were more people with lower acreage and few in the higher, unlike in the former. This means that women are likely to plough some of the money earned outside into food production. For one, they may be better able to hire labour to make up for the loss of their own.

As concerns cash crop(s) in relation to the question of employment outside the farmstead, data were as cross-tabulated below.

Table 5.19:- Acreage Under Cash Crop(s) by Off-farm Employment

Are you otherwise employed ?

Acreage	Yes	No	Row Total
< 1 acre	11(35.5)	27(36)	38(35.8)
1 - 2	16(51.6)	44(58.7)	50(56.6)
3 - 4	3(9.7)	2(2.7)	5(4.7)
> 4	1(3.2)	2(2.7)	3(2.8)
Column Total	31(29.2)	75(70.8)	106(100)

2.50417 df. 3 Significance .4745 C .15192

The chi-square (2.50417 at 3⁰ of freedom) is not significant at 90% level confidence as the association is only significant at 52.5% level of confidence. The contingency coefficient of .15192 further indicates the lack of an association between the two measures.

Cash crop production is considered to be the man's concern and interest. Women will not easily and/or readily plough their earnings into cash crop production. Thus in both instances (whether the woman had an off-farm job or not) the acreage under cash crop(s) remained the same, the majority having 2 acres and below of cash crop(s) and an equal number of households in both cases being beyond 2 acres.

The capability to invest constitutes a certain amount of control for the woman. Women who own property are respected not only by their fellow women but also by men, and may be considered a threat by men in some instances.

Table 5.20:- Acreage Under Food Crops by Rural Woman's Investment Initiative

Kind of investment

Acreage	House	Car/ bicycle	Shamba	Enterpr ise	Plot	Row Total
<1 acre	0(0)	0(0)	0(0)	1(25.0)	1(16.7)	2(12.5)
1-4	1(100)	0(0)	4(100)	3(75)	5(83.3)	13(81.3)
15-19	0(0)	1(100)	0(0)	0(0)	0(0)	1(6.3)
Column Total	1(6.3)	1(6.3)	4(2.5)	4(2.5)	6(37.5)	16(100)

17.38462

df.

8

Significance

.0263

C

.72162

This is because the question of whether or not the woman had invested in any form of property since her husband's migration was considered crucially important from a practical vantage point in this Study.

The chi-square test (17.38462 at 8⁰ of freedom) in this case indicates a significant association at 90% level of confidence between the kind of investment(s) made and the acreage under food crops. It will be recalled from the descriptive analysis of data that over a half of the women who had made any investment at all had purchased land either in the form of a shamba or plot³⁹. The contingency coefficient (.72162) indicates a marked association. The relationship between what the woman had invested in and the acreage under food crops is significant. It is clear from the Table above that where the investment was land or allied type of property, acreage under food crops tended to be higher on average. The implication here is that part of the land purchased was used for

³⁹ This differentiation is as indicated by the respondents themselves. They argued that, although both of them refer basically to land, a plot is normally 1 acre and below, while a shamba is anything above an acre. A plot can be either residential, commercial, while the bigger proportion of a shamba is used for farming.

food production or yielded an income that was ploughed in farm production at home thus expanding the household's size of land under cultivation of food crops.

Table 5.21:- Acreage Under Cash Crop(s) by Rural Woman's Investment Initiative

Kind of investment(s).

Acreage	House	Car/bicycle	Shamba	Enterprise	Plot	Row Total
<1 acre	1(100)	0(0)	0(0)	0(0)	0(0)	3(23.1)
1-2	0(0)	0(0)	2(50)	2(100)	4(80)	8(61.5)
> 4	0(0)	1(100)	0(0)	0(0)	1(20)	2(15.4)
Column Total	1(7.7)	1(7.7)	2(15.4)	2(15.4)	5(38.5)	13(100)

13.54167 df. 8 Significance .0945 C .71429

The chi-square (13.54167 at 8⁰ of freedom) depicts an association significant at 91 degrees level of confidence. The contingency coefficient (.71429) further underscores this indicating a marked association. It is clear from Table 5.21 that the wives' investment behaviour had influenced cash crop(s) production. Keeping in mind that landholdings in the research site were found to be relatively small, one notes that the majority of those who had made investments had invested in land, whereby acreage under cash crop(s) tended to be higher on average. It is implied that some of the land purchased may have been used under cash crop production.

MULTIVARIATE ANALYSIS

We now proceed to correlation analysis for this hypothesis (H_2).

Key for correlation matrix for Hypothesis 2 (H_2^{40})

- v072 Total cost of land (Ksh)
- v080 Acreage currently under food crops
- v084 Cash yielded by sale of food crops grown for sale
- v085 Yields of maize this year in bags
- v086 Yields of Beans this year in bags
- v087 Yields of Potatoes this year in bags
- v099 Cash earned through sale of surplus (Ksh)
- v103 Number of years of cattle rearing
- v104 Cost of starting cattle rearing (Ksh)
- v105 Cost of upkeep of cattle per month (sh)
- v106 Amount of milk produced per day (kg)
- v107 Amount of milk sold per day (kg)
- v108 Income from sale of milk per month (Ksh)
- v110 Money earned from latest sale of cow(s) (Ksh)
- v119 Number of goats reared
- v120 Number of years of goat rearing
- v121 Cost of starting goat rearing (Ksh)
- v130 Acreage currently under cash crop(s)
- v131 Income from later sale of goats (Ksh)
- v132 Number of years of cash crop(s) farming
- v135 Total cost of starting cash crop farming (Ksh)
- v138 Cost of maintenance of cash crop(s)
- v143 Cash crop earnings per year (Ksh)
- v145 Cost of hiring labour (Ksh)
- v159 Number of wife's working days per week
- v161 Wife income per month (Ksh)
- v165 Net family income per month (Ksh)
- v208 Loan taken. Amount in Ksh.

This hypothesis suggested that control of rural income and other resources by the wife of the migrant, would lead to an improved farm production level. Some of the women had sought off-farm employment as discussed earlier, for the purposes of earning an independent income. The number of days the woman worked outside her own homestead per week was found to be correlated with the income she

See correlation matrix

earned (.3679). This was also correlated with net family income (.4688) and with the yields of food crops grown in her own farmstead; maize (.4028), beans (.3206) potatoes, (.4587). Contrary to Lipton's (1980) assertion that off-farm duties constitute loss of ones own farm work time, leading to late clearing, sowing, late weeding and consequently lower and poorer yields. Data here indicate improvement in the family's farm production level. This means that the adaptations made may have been beneficial to the level of farm production. This kind of observation was also made in the case of earnings from cash crops (.3469). As argued earlier on, cash crop(s) farming in the African traditional society is typically a man's task. Women even in the absence of the man, therefore, may not take a keen interest in tending them. If the more number of days worked outside meant fewer years of cash crop farming, then the cash crop(s) may have been too 'young' to generate a substantive income, thus prompting the woman to seek off-farm income-earning opportunities to fill up the gap. This is in addition to the fact that the cash crop(s) needed less work and therefore less time. availing them therefore the time to work elsewhere.

The income earned out of those off-farm duties, it will be recalled, averaged Ksh. 870 and ranged from Ksh. 200 to ksh. 3,000. A fair correlation was yielded between this and the amount of money obtained in the form of a loan or credit facilities by the women during the year of study, (.4148). This arises out of the fact that most of the credit facilities were obtained from informal lenders and therefore were perhaps secured with the help of the woman's direct income. In the absence of collateral and/or other forms of security, women turn to their own directly-earned income for security. The more one earned through off-farm duties the higher the amount one was able to secure. Amount of credit borrowed was found to be fairly positively correlated with total amount spent on

land purchases (.4083), which in essence can be taken as indicative of women's involvement in the purchasing of land. A trickle-down effect of this money into food production is deduced through the slight positive correlations between it and yields of maize (.3502), beans (.3178), and potatoes (.3828). Consequently, slight and positive correlations are also observed between it and money made out of the sale of crops grown specifically for sale, (.3367) and through the sale of surplus harvest, (.4058). It therefore spells more intense, qualitative rather than an extensive, quantitative cultivation of the shambas. Through this income, it may be possible to engage hired labour, as implied by the slight positive correlation of .3589 observed between the amount earned and the amount spent on hired labour. At the end of it all, money earned through off-farm duties helps swell net family income as suggested by the fair positive correlation coefficient of .4523.

There is low association however between the fact that the woman had an off-farm job and various aspects of farm production. Negligible and negative correlation coefficients are observed between it and several aspects of cash crop production; with acreage under cash crop(s) (-.1332), number of years of cash crop farming (-.1896), total cost of starting cash crop farming (.1690), and the total cost of maintaining cash crop farming (.1914) and consequently with cash crop earnings per year (.4443). Several of the above observations apply also for livestock farming. There was slight or no correlation with the number of years of cattle rearing (.0266). The cost of cattle upkeep per month (.4701), the amount of milk produced per day (.3173), the amount of milk sold per day (.3405) the income from milk sales (p.m.) (.3820), were slightly correlated with the amount earned through the off-farm job. Money earned from the latest sale(s) of cow(s) (.1546), number of goats reared (.0135), the cost of starting goat-rearing

(.1297), and income from the latest sale of goats (.1623). One observes here a positive effect of off-farm employment on cattle-rearing in that a well-fed cow produces enough milk to sell and to consume. Women therefore use some of their directly-earned money to buy feed for the cattle, leading to higher production of milk, and consequently higher amounts of money after some of it is sold, but this is not so for goat rearing. It will be recalled that livestock farming in the area is quite low and is basically for domestic purposes.

The amount of money borrowed was slightly and in some cases fairly positively correlated with the total cost of land purchased (.3802), which suggests that a good share of it was borrowed for the purpose of investing in land (It will be recalled that 52.5% of the women had borrowed strictly for investment purposes). Women therefore do feel the need to own land. This variable was also found to be slightly and positively correlated with the acreage put under food crops (.3619), yearly maize yields (.3142), beans (.2914), potatoes (.3146), and with money made out of sales of crops grown for sale and surpluses (.3142) and (.3414), respectively. These coefficients plausibly indicate that monies borrowed are directly or indirectly used for maintaining and/or revamping food production. Similar observations were made of this variable and livestock farming. Slight positive correlations were observed between the amount of money borrowed and the cost of cattle upkeep (.3142), the amount of milk produced per day (.3168), the amount of milk sold per day (.3248), and the amount of money earned from milk sales (.3968). This seemingly go into cattle rearing though not necessarily into the purchase of cattle or their sales as there is no correlation between these two and the monies borrowed, going by the coefficients of (.0489) and (-.0408), respectively. They spent money on cattle-rearing only in terms of maintenance and continuance. Regarding goat-

rearing the correlation coefficients were merely chance with the number of goats reared (.0816), number of years of goat rearing (.0242), with cost of starting goat-rearing (.0123) and with income made from latest goat(s) sales (.0468). These coefficients suggest that the women did not take goat-rearing seriously, that it was basically just a domestic undertaking rather than an income-generating farm production activity, a finding also highlighted in the descriptive analysis of data (Ch.4) in the study.

Correlation coefficients of money secured as loan or credit facilities with the acreage under cash crop(s) being (.1943), with number of years since starting cash crop farming were chance (.1609) but slight with the total cost of cash crop(s) maintenance (.3468). These coefficients suggest that the women spent some of the money secured as loan for the maintenance of cash crop(s). Perhaps as a result of this, a correlation of (.3416) was observed between the amount secured and money earned from cash crop production per annum, despite the fact that earnings from cash crop(s) may not accrue directly to them as is the case with those from food production. At the same time, net family income was found to be correlated with the amount of money secured as loan, as a fair positive correlation coefficient of (.4899) was observed. This means that it contributed to the net family income, and thus to the family's standard of living and socio-economic status.

It is clear from the analysis above that money earned by women from various sources is likely to be used for the benefit of farm production. This is because they are able to exercise maximum control on its management. Thus control of rural resources by women leads to an improved farm production capacity. They are able to decide on and effect changes in agriculture particularly when they do not have to seek the approval of their migrant husbands at each and every point.

Therefore rural households with migrant heads in which women have control of income and other rural resources can become socially stable and economically viable. The former of which is debateable as Kayongo-Male and Onyango (1984) have shown as they discuss the effects of male migration on the socialization of children. The hypothesis under test in this case is largely supported.

RELATIONSHIP BETWEEN THE CHANGES IN THE DIVISION OF LABOUR AND FARM PRODUCTION.

Cross-Tabulation

The third hypothesis (H_3) stated that, changes in the division of labour due to the migration of the male head of household negatively affects the family's farm production capacity (leads to a declining farm production capacity).

Like with the previous two, cross-classifications were done on selected measures of the two variables i.e. changes in the division of labour and farm production capacity. Most of the women interviewed said that they were grossly overburdened. Below, the question of whether or not the woman was overburdened is cross-classified with acreage under food crops.

Table 5.22:- Acreage Under Food Crops by Overburdening of the Rural Woman

Are you overburdened ?

Acreage	Yes	No	Row Total
< 1 acre	8(7.3)	3(15.8)	11(8.6)
1 - 4	92(84.4)	12(63.2)	104(81.3)
5 - 9	8(7.3)	4(21.1)	12(9.4)
15 -19	1(.9)	0(0)	1(.8)
Column Total	109(85.2)	19(14.8)	128(100)

χ^2 5.66295 df. 3 Significance .1292 C .20583

The chi-square value of (5.66295 at 3⁰ of freedom) is significant only at 87.8%. This falls slightly short of the 90% level of confidence chosen in the study, thus rendering the association insignificant. The contingency coefficient of .20583 further depicts a weak association. Most of the overburdened women (84.4%) had between 1 and 4 acres under food crops while, 7.3% in this category had 5 to 9 and .9%, 15 to 19 acres. There were fewer respondents with less than 1 acre for those not overburdened. A majority of them had 1 to 4 acres 21.1%, 5-9 and none at all in this category had 15 to 19. This means that those overburdened had larger acreage on average under food crops than those who did not. Perhaps this is one of the reasons for overburdening. They were able to expand the acreage under food crops alongside all the other chores.

The finding underscores the centrality of the role of women in food crop production. They struggle even in times of hardship to keep it going by intensifying their work in it. The fact that women are overburdened does not hinder them in the least from keeping up with food production. Not only do they maintain a reasonable farm production capacity, they also expand acreage under

food crop production amidst their numerous tasks, displaying resilience and talent in doing this inspite of insurmountable odds. An attempt is made to find out whether it is the same with cash crop production.

The question of whether or not the wife was overburdened was also cross-classified with the acreage under cash crop(s) as below.

Table 5.23:- Acreage Under Cash Crop(s) by Overburdening of the Rural Woman

Are you overburdened ?

Acreage	Yes	No	Row Total
< 1 acre	35(37.2)	3(25)	38(35.8)
1-2	55(58.5)	5(41.7)	60(56.6)
3-4	1(1.1)	4(33.3)	5(4.7)
> 4	3(3.2)	0(0)	3(2.8)
Col.Tot.	94(88.7)	12(11.3)	106(100)

χ^2 24.85286 df. 3 Significance .00000 C .43581

The chi-square test in this cross-tabulation (24.85286 at 3⁰ of freedom) indicates an association significant at 100% level of confidence which is way above the 90% acceptance level. The contingency coefficient (.42581) further indicates the existence of a moderate association. Acreage under cash crop(s) is therefore moderately and significantly associated with the question of whether or not the wife of the migrant was overburdened as a result of his migration.

One observes that those overburdened had a larger acreage under cash crops on average. A majority of them (95.7%) had 2 acres and below; 37.2% of these had less than an acre and a good 58.5% between 1 to 2 acres. This implies that the majority of those with low acreage under cash crops were not from the overburdened category, and vice versa. Women therefore are able also to keep up

and improve cash crop production even when they are overburdened. They have no choice anyway.

So far the changes in the division of labour do not necessarily affect farm production negatively. Alternative sources of labour have to be sought in the absence of the male head of household to help ease the burden on the women. One such alternative is hired labour. Below, the acreage under food crops is cross-tabulated with the question of whether or not the household hired labour.

Table 5.24:- Acreage Under Food Crops by Use of Hired Labour

Do you hire labour ?

Acreage	Yes	No	Row Total
< 1 acre	0(0)	11(19.6)	11(8.6)
1 - 4	60(83.3)	44(78.6)	104(81.3)
5 - 9	11(15.3)	1(1.8)	12(9.4)
15 -19	1(1.4)	0(0)	1(.8)
Column Total	72(56.3)	56(43.8)	128(100)

χ^2 21.12495 df. 3 Significance .0001 C .37638

According to the chi-square test here, there exists an association between the two variables that is significant at 100% level of confidence. The level accepted in this being 90%, the association therefore is significant. The contingency coefficient of .37638 further supports this as it indicates a moderate association. A moderate and significant association therefore exists between the acreage under food crops and the question of whether or not the household hired labour.

Those who hired labour had a higher acreage under food crops on average. Keeping in mind that other factors (family income, for example) are related to the family's capability to opt for hired labour, we can tentatively conclude that

the hiring of labour positively affects the acreage a household is able to put under food production; which in effect means that the migration of the male head of household does not negatively affect food crop production. Of those hiring labour none at all had less than an acre of food crops (83.3% had 1 to 4 acres, 15.3% 5 to 9, and 1.4% 15 to 19). Whereas of those not hiring labour 19.6% had less than an acre, 78.6%, 1 to 4 acres, 1.8% 5 to 9 not hiring labour at all had 15 to 19 acres. Below, the same variable (Hiring of labour) is cross-tabulated with the acreage under cash crop(s).

Table 5.25:- Acreage Under Cash Crop(s) by Use of Hired Labour

Do you hire labour ?

Acreage	Yes	No	Row Total
< 1 acre	14(19.4)	24(70.6)	38(35.8)
1 - 2	51(70.8)	9(26.5)	60(56.6)
3 - 4	5(6.9)	0(0)	5(4.7)
> 4	2(2.8)	1(2.9)	3(2.8)
Column Total	72(67.9)	34(32.1)	106(100)

27.24348 df. 3 Significance .00000 C .45218

The chi-square test in this cross-classification depicts a significant association at 100% level of confidence, which is above the 90% chosen in the study. The contingency coefficient (.45218) further shows a moderate association. A moderate and significant association therefore exists between the acreage under cash crop(s) and the question of whether or not the household hires labour.

Acreage under cash crop(s) is higher on average where the household hires labour. A majority (70.6%) of those not hiring labour have less than 1 acre under cash crops while only 19.4% of those doing so are in this category. Likewise

70.8% of those hiring labour have 1 or 2 acres whereas only 26.5% of those not doing so fall in this category. Whereas 6.9% of those hiring labour have 3 to 4 acres under cash crop(s), only one falls in this category where labour is not hired. Changes in the division of labour therefore do not negatively affect the acreage under cash crop(s).

The other possible source of labour for the female-headed household is the ngwatio meaning, mutual-aid or cooperative work group. It will be recalled that, 52.3% of the households interviewed reported that ngwatio was still existent in the village and that 79.7% of the households participated in these. The acreage under food crops is below cross-classified with the participation in it. The objective was to establish whether or not the question of participation by the woman in the village cooperatives had affected the family's farm production level.

Table 5.26:- Acreage Under Food Crops by Participation in Ngwatio

Do you participate in the cooperative work groups in your village ?

Acreage	Yes	No	Row Total
< 1 acre	2(3.6)	2(20)	4(6.2)
1 - 4	51(92.7)	6(60)	57(87.7)
5 - 9	0(0)	1(10)	1(1.5)
Column Total	55(84.6)	10(15.4)	65(100)

χ² 10.95773 df. 3 Significance .0120
 C .37982

The chi-square test in this analysis (10.95773 at 3 degrees of freedom) indicates the existence of an association significant at 99.8% level of confidence. Being above the level of confidence chosen in this study, we conclude that this is a significant association. The contingency coefficient of .37982

further suggests a moderate relationship. Women's participation in the mutual-aid labour groups existing in their villages positively affects the family's food production capacity. Those participating in these labour aid groups have a higher acreage under food crops on average.

The same kind of analysis was done for cash crop(s) production. The question of whether or not the migrant's wife participated in these work groups is here below cross-tabulated with the size of land under cash crop production.

Table 5.27:- Acreage Under Cash Crop(s) by Participation in Nowatio

Do you participate in village work groups ?

Acreage	Yes	No	Row Total
< 1 acre	23(45.1)	1(25)	24(43.6)
1 - 2	26(51)	2(50)	28(50.9)
3 - 4	1(2.0)	0(0)	1(1.8)
> 4	1(2.0)	1(25)	2(3.6)
Column Total	51(92.7)	4(7.3)	55(100)

5.83669 df. 3 Significance .1198 C .30974

The chi-square test in this cross-classification (5.83669 at 3 degrees of freedom) indicates an association that is significant at 88.02% level of confidence. This falls short of the acceptance level, by this rendering the association insignificant. The contingency coefficient of .30974 suggests a moderate association.

Women's participation in the cooperative work groups in their village is therefore moderately but insignificantly related to the acreage under cash crop cultivation. It does not help to expand the acreage under cash crop production as this would require 'male' labour. This finding again underscores the pre-

occupation of women with food production.

Of the respondents participating in the work groups, it was apparently in activities other than those that would lead to the expansion of the acreage under cultivation (of cash crop(s) or food crops) of the host farmstead. This is deduced from the finding that, participation in mutual-aid group did not raise the family's farm production level.

It will be recalled from the descriptive analysis (Chapter 4), that 65.2% of the women admitted that they had violated the sex-roles myth by doing jobs traditionally meant for men alone (e.g., fencing and/or constructing). Below, this variable is cross-classified with the acreage under food crops to find out whether a household had to necessarily violate the sex-role prescriptions to keep up or improve their production capacity.

Table 5.28:- Acreage Under Food Crops by Violation of Sex Role Prescriptions

Have you violated sex-role prescriptions ?

Acreage	Yes	No	Row Total
< 1 acre	8(9.3)	3(7.1)	104(81.3)
1 - 4	71(82.6)	33(78.6)	12(9.4)
5 - 9	7(8.1)	5(11.9)	1(.8)
15 - 19	0(0)	1(2.4)	11(8.6)
Column Total	86(67.2)	42(32.8)	128(100)

2.68267 df. 3 Significance .4432 C .14328

According to the chi-square test (2.68267 at 3⁰ freedom), the association here is only significant at 55.68% level of confidence which is below the level acceptable in the study (90%). The contingency coefficient of (.14328) indicates that there is no association between the two variables. The relationship between

the acreage under food crops and the question of whether or not the rural-based wife of the migrant had violated the sex prescriptions is not only by chance but insignificant.

Data her suggest, that with or without violation of the sex-role taboos a the majority of the households had between 1 and 4 acres of food crops. This means that there is rarely any violation of sex role prescriptions when it comes to food production. Women remain specialized in food farming, processing and petty commodity trading in the African patriarchal society. This is widely noted in the literature (See White 1984, Boserup 1970, Nommand 1973, Kenyatta 1953, Abott 1974, Mullings 1976, Allen 1976, Henn 1984). Tentatively therefore, violation of the sex role prescriptions does not affect the acreage under food crops. Whether or not the sex role prescriptions had been violated, the majority of the households (91.9%) and (85.7%) respectively, had 4 acres and below of food crops.

The same variable (violation of sex roles prescriptions) is cross-tabulated with the acreage under cash crop(s) production as shown in Table 5.29.

Table 5.29:- Acreage Under Cash Crop(s) by Violation of Sex Role Prescriptions
cash crop(s)

Have you violated any sex roles prescriptions ?

Acreage	Yes	No	Row Total
< 1 Acre	27(33.6)	22(30.6)	38(35.8)
1 - 2	41(58.6)	19(52.8)	60(56.6)
3 - 4	0(0)	5(13.9)	5(4.7)
> 4	2(2.9)	1(2.8)	3(2.8)
Column Total	70(66)	36(34)	106(100)

10.28984 df. 3 Significance .0163 C .29746

The chi-square test (10.28984 at 3 degrees of freedom) is a significant at 99.37% level of confidence which is way above the level of acceptance in the study (90%); and constitutes therefore a significant association. The contingency coefficient .29746 indicates a weak association. The acreage under cash crop(s) is therefore weakly but significantly associated with the question of whether or not the woman had violated the sex role prescriptions. Cash crop(s) in the man's domain in farm production. In his absence, the woman may have no choice but to perform those tasks that pertain to cash crop(s), especially since they are a major income-earner and cannot be totally ignored. From the descriptive analysis (chapter 4)) it was found that, 30.1% had taken over the tasks of picking and tending cash crops, 49.8% pruning and spraying cash crops, tasks previously performed mostly by men. Where the sex-role prescriptions had been violated, 33.6% had less than one acre under cash crop(s), 58.6% had between 1 and 2, none had 3 or 4, while 2.9% had over four acres of cash crop(s). Where they had not been violated, 30.9% had between 3 to 4 and 2.8% had over 4 acres. It is apparent that where the sex-role prescriptions had been violated the households had a higher acreage on average than where they had not. It means therefore that violation of the sex-role prescriptions positively affected cash-crop production and that it is part of the adaptations and adjustments undertaken by the women so as to ensure continued subsistence as well as labour reproduction.

The gap left by the man's absence is thus filled ensuring a growing level of farm production. As discussed earlier in this Chapter, 38.6% of the women had sought employment outside their farmsteads, a change inevitable as a result of migration of the husbands. When cross-tabulated with data on both acreage under food crops and cash crop(s) it was found to be associated not only weakly but insignificantly with both variables. In the case of the former (food crops), a

slight improvement could be noted on the acreage under food crops. Perhaps as a result of a more intensive labour input either from self or from hired labour and/or dependents hosted. Yields of maize, beans, potatoes as will be recalled, were found to be fairly correlated with the income earned by the woman out of the off-farm occupations.

MULTIVARIATE ANALYSIS

We now move onto correlation analysis for this hypothesis (H_3).

Key for correlation analysis for Hypothesis 3 (H_3^{41})

- v145A Number of labourers hired per year.
- v145 Cost of hiring labour
- v183 Number of dependents
- v224 Number of wives
- v225 Number of children
- v072 Total cost of purchased land
- v080 Acreage currently under food crops
- v084 Cash yielded by sale of food crops grown for sale
- v085 Yields of maize this year (in bags)
- v086 Yields of beans this year (in bags)
- v087 Yields of potatoes this year (in bags)
- v099 Cash earned through sale of surplus
- v103 Number of years of cattle rearing
- v104 Cost of starting cattle rearing (ksh)
- v105 Cost of cattle upkeep per month
- v106 Amount of milk produced per day (kg)
- v107 Amount of milk sold per day (kg)
- v108 Income from milk sales per day (kg)
- v110 Money earned from latest sale of cow(s) (ksh)
- v119 Number of goats reared
- v120 Number of years of goat rearing
- v121 Cost of starting goat rearing (ksh)
- v123 Income from latest sale of goats (ksh)
- v130 Acreage currently under cash crop(s)
- v132 Number of years of cash crop farming
- v135 Total cost of starting cash crop farming
- v138 Total cost of maintaining cash crop(s) p.a. (ksh)
- v165 Net family income per month (ksh).

⁴¹ See correlation matrix

It will be recalled that 54.5% of the households interviewed hired labour, spending an average of ksh. 642 per annum. This indicates that the hiring of labour is of a fairly low magnitude as asserted by Clayton (1974). Besides the hiring of labour is not only erratic but also highly seasonal and limited to certain aspects of farm production.

The number of labourers hired in one year averaged 6. This was found to be highly and positively correlated with the amount spent on hiring labour (.7614) and fairly with the total acreage of land owned (.4732). The latter coefficient indicates that the more land a household owned, the higher the number of labourers hired and the more money spent this way. A fair positive correlation of .5642 was found between this and the acreage under food crops. It therefore was also done for various aspects of food production. This is suggested by the fact that positive correlation coefficients was also found between it and the cash yielded by the sale of food crops grown specifically for sale (.4428), the yields of maize (.3616), beans (.4981) and potatoes (.3426) and with cash yielded out of the sale of surplus harvest(s) (.6819). Hired labour may have enhanced farm production not only in terms of intensification and/or specialization in food production but also in its expansion of total acreage under cultivation. This led to an increase in both the proportion of land under cultivation and in the increase of the yield per unit of land.

Fair and positive correlations were also observed between this variable and the cost of cattle upkeep (.5992), amount of milk produced per day (.4816), amount of milk sold per day (.6155) and, probably as a consequence with the income earned; from milk sales per month (.4960). These coefficients suggest that, the higher the number of labourers hired the better cattle rearing becomes, more milk is produced, more is sold and thus more money is earned, but also that

more money is spent on maintaining cattle rearing obviously due to the cost(s) of maintaining the hired labour. This means that the inadequacy in labour needed to maintain and step up farm production is well counteracted by the utilization of hired labour.

In relation to yearly cash crop earnings, a negative correlation was indicated ($-.3001$). This implies that the lower the number of labourers hired, the lower the cash crop earnings per year.

The ultimate need for hiring labour really lies in cash crop production. It is this that is more adversely affected by a shortage of labour if at all. The higher the number of labourers hired, the higher the maintenance cost of cash crops as indicated by the marked positive correlation coefficient of $.6001$. When one is starting off cash crop production, for instance, (planting tea or coffee for the first time) one almost always has to hire labour. This may be the best explanation for the fair correlation found between the number of labourers hired and the total cost of starting cash crop production, ($.5105$); but more money is earned from the activity in the end ($.5168$) and consequently makes for better the family's capability to hire labour. As a result of the positive effects accruing to farm production due to the number of labourers hired, net family income may increase as the number of labourers increases. This is attested to by the fair and positive coefficient ($.5886$), observed between the two variables. Hosting of dependents constitutes a readily available, cheap and reliable source of labour, particularly when they are not going to school or working elsewhere. 57.4% of the households were found to be hosting an average of 2 dependents.

This variable was found to be fairly and positively correlated with the yields of food crops, maize ($.6154$), beans ($.4538$), potatoes ($.4026$) and with money earned out of the sales of food crops grown for sale and out of the sale

of surplus harvests (.4731) and (.5448) respectively, and with the acreage under food crops (.4222). Again one possible explanation is that extra labour helped in specialization and/or intensification and expansion of the acreage under cultivation of food production leading to better and higher yields i.e. increasing the output per unit of land as well as the expansion of the acreage farmed. It was also found to be slightly correlated with the amount of milk produced per day (.3295) as well as amount of milk sold per day (.3404). The more the milk produced, the more of it was sold and hence the more is earned from the activity per month, (.3426). Dependents normally are under obligation to offset the cost of their housing and lodging, mostly through contribution of their labour. Tending cattle may be one sure way.

As argued with the question of starting off cash crop production vis a vis the hiring of labour, where dependents participate in this, the cost of starting off is higher particularly where there are more mouths to feed. Thus, the higher the number of dependents, the higher the cost of starting off cash crop farming (.3478), the higher the cost of its maintenance (.3322) and consequently cash crop(s) earnings per year (.4556). Perhaps as a result of these, the higher the net family income (.3271). A higher net family income implies an improved family socio-economic status in turn.

An overwhelming majority of 81.8% of the households studied were found to have been having only one wife per homestead. Wives are a valuable source of labour in the rural area. Other than with the number of children per migrant (.4769) no other notable correlation was found to exist between this variable and the numerous measures of the farm production capacity. Marriage in the traditional African society is normally contracted for the purpose of reproduction; many wives therefore mean many children.

Added to the fact that only a small proportion of the households (17.5%) had more than one wife, rarely do co-wives cultivate the same piece of land. Each wife is normally responsible for the tasks of farm production for her own household, liaising with the migrant husband independently and directly when the need arises. This is so for all aspects of farm production:- food production, livestock farming and cash crop production as well as child-bearing and house chores. The question of collaboration between her and her co-wives in the way effecting any changes in the farm production of the whole homestead does not arise, therefore. The number of wives per homestead does not affect the rural family's farm production capacity.

Regarding the total number of children, a more or less similar observation was made, but for different reasons. Although each homestead had an average of 8 children, most of them were found to be either of school-going age or working, which rendered them of minimal use in as far as labour for farm production and related activities were concerned. Collaboration is also minimal between step-siblings, particularly when not sanctioned by their mothers. For these reasons the number of children was not correlated in any significant manner with the numerous measures of farm production. The number of children per household therefore had no effect on the family's farm production capacity.

It is hereby concluded as a result of the foregoing analysis that changes in the division of labour did not negatively affect the family's farm production level as postulated by H_3 . This implies that the hypothesis that, the changes in the division of labour leads to a declined farm production capacity is not supported.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The overall aim of this study was to highlight some of the effects of the rural-urban migration of the male head of household on the rural family's farm production capacity. We specifically hoped to determine the relationship between factors resulting from a move to an urban area of the male head of household and the farm production level of those left behind. The factors examined in relation to the family's farm production capacity were:-

- : - remittance by the migrant male head of household
- : - the control of family income and other rural resources by the migrant's wife
- : - the changes in the division of labour in the rural household as a result of this migration.

An attempt was therefore made to analytically find the most fitting and/or appropriate explanation for the changes recorded in the rural family's level of subsistence production using these factors as reference points.

Land in the rural areas is the single most important means of production. In this study, most of the households studied owned only one piece of land, and most always through inheritance. Land in Nyeri District is very expensive. At the time this survey was carried out, one acre was costing as much as KSh. 100,000. Outright purchase as a mode of acquiring land therefore is not common here as most of the people simply cannot afford. The total acreage owned per household averaged about 6.7 acres, with ownership vested mostly in men. Although negligible, the fact that 9.1% (12) of the women had purchased land during

the man's absence is worth noting. This finding not only agrees with the essentiality of land ownership in the rural areas as advanced by Kongstad and Monsted (1980), but also and perhaps more importantly for this study, it indicates that the rural woman is aware of the fundamentality of land ownership and can get practical about it. Some insecurity on the part of the woman is connoted as manifest in the drive to acquire land in her own right.

The kind of farming practised here is for the purposes of food and nutritional needs as well as income generation.

Food crops grown include foods such as spinach, tomatoes, carrots, cabbage, kale (sukuma wiki), Irish potatoes, sweet potatoes, beans, maize, and peas. These vary in magnitude and intensity of cultivation from household to household and in their significance to the people's diet. Maize, beans and potatoes are grown in each and every household as they constitute the area's main food. Nearly all, if not all food production is maintained by the family's labour and especially that of the wife. The use of hired labour was found to be highly seasonal and limited to the households with larger landholdings.

The commercial crops grown in the area are tea and coffee. A few households grow both. Cash crops production is essentially practised for the purposes of income-generation. It is carried on despite serious declines in the yields and earnings over the recent years, a factor widely articulated by the households studied. It is normally the man's 'business' (to finance the undertaking and tend the crops) but he may get assistance from the woman when there is too much to be done, for instance during the picking season. Otherwise, the woman does not get overly-or seriously concerned about it and/or involved in it.

and when the man is removed from the home, the woman finds herself having to get increasingly concerned and involved in cash crop production

particularly for the purpose of maintaining the household's former level of consumption from the overall farm-earnings of the homestead.

With the exception of cattle rearing, livestock husbandry is of a most insignificant magnitude in the area. Despite the small land holdings cattle-rearing is widely carried out. This is probably made possible by the facility of zero grazing. Goat and poultry-keeping are kept purely for domestic and/or traditional purposes.

However cattle, goats and poultry as well as their by-products are used for income-generation particularly in times of need i.e as distress sales. Goats for instance are often sold to raise school fees or money for such other need. Cattle-rearing generates money through milk sales and the sale of cattle during times of need. Poultry farming being of the least significance contributes minimally to the household's income.

Regarding this data in relation to the rural-urban migration of the male head of the household, it was found that an expansion in the total acreage of land under cultivation and in output-per-acre, was experienced for both cash crops and food crops during the period of the male household head's absence.

The female-headed household receives financial support in the form of remittance from its urban-based head of household as a matter of responsibility and obligation. The amount of remittances received in this study averaged ksh.650 per month. This underscores first and foremost, on the part of the migrant, the desire and commitment to remain a member of the rural village as is widely articulated in the literature⁴³. Through these links, the cost of living (reproduction of labour) is continuously underwritten by the rural family. The migrant, on his part, is able to lay claim to ownership of the rural resources

⁴³ See Chapter 2.

particularly, land and is thus not divorced from his means of production and reproduction. This is due to the fact that the wage he is paid in the urban sector is not sufficient to reproduce both his family and himself. This finding puts emphasis on the importance of the existence of the pre-capitalist modes of production alongside the capitalist one⁴⁴. The utility value of the former to the latter is clear here. The semi-proletarianized male labourer is not aware of the benefits reaped by the capitalist out of this arrangement but he dare not on the other hand break off ties with his rural lineage no matter 'how well his needs are taken care of' in the city. This is because he fears being 'detrribalised' and thus lose the ultimate catchnet of his survival i.e land. The capitalist employer on the other hand well understands the benefits of the arrangement and thus encourages the co-existence of the two modes of production precisely because he is able to maximize his profits through the support of the non-capitalist sector in reproducing the family's labour for which his 'wage' is not calculated to pay. He also benefits from the arrangement in that the family back in the rural area, carries out production of marketable commodities which he buys at a price that does not take into consideration the entire costs of production. This is the way the mechanism of unequal exchange operates; it also undervalues the peasant family's labour. The rural family therefore carries on production and reproduction of labour at no cost at all to the capitalist. He pays the labourer a wage so low that it can barely take care of the labourer's reproduction, let alone that of his family. The latter, as well as the labourer himself, from time to time have to fall back on the rural-based family's production efforts.

⁴⁴ These views are articulated in Chapter 2 of the study under the section on Theoretical Framework.

As is widely acknowledged in the literature, the biggest problem of remittance has to do with its use. It is basically used for consumption purposes rather than the improvement or even sustenance of family farm production. This conclusion is arrived at as a result of the finding that remittances were extensively used for consumption i.e for basic subsistence purposes. That is, they are used to supplement and/or subsidize other incomes and are rarely saved and/or re-invested. It is our view that this encourages both dependence and/or shifts in the demand for consumption goods as maintained in the literature on migration. Remittance according to the respondents 'enables' people to afford things they previously could not afford and 'encourages' them to rely on the remittance⁴⁵. Despite these, there is no evidence to the effect that remittances served in this instance, to drop the family's farm production capacity by way of lower and/or poorer yields, or the shrinkage of the land under cultivation and consequent loss of the land's subsistence value. Though we did not set out to examine the possibility of a positive effect it does no harm to mention that slight improvements were encountered in that, those receiving remittances reported slightly higher acreage on average under cultivation. Regarding this latter finding, a direct association between this and the question of "remittance" was statistically denied. Nevertheless it is quite an important finding upon which further research could be advanced. There was no observation of a direct injection or budget of remittance into farm production activities. We can only surmise that the improvement may have occurred due to shifts in the household's consumption patterns. For instance, money previously used to buy subsistence materials such as, kerosene may find its way into farm production while

⁴⁵ Statements made by the respondents to this effect have been articulated in Chapter 4 of the study.

remittance takes over this task. Thus remittances may lead to a re-organization of the household's budgetary pattern in a way that may be favourable to the household's farm production but not necessarily influence it either negatively or positively. This re-organization is the best explanation to the slight improvements observed in farm production.

Remittances do not play any role in cattle rearing. Regardless of the availability of remittances, cattle rearing is practised extensively in this area. This is due to the fact that it is a high-priority traditional practice whose source of money for its initiation need not be remittance. It was not clear whether this was a priority in relation to consumption needs or 'prestige' value for the better-off households.

In some few instances the migrants control the utilization of remittances while in their urban bases. Directing on such a thing while one is so far away is one thing, seeing to it that it is done accordingly (as per ones directions), is another. In addition to this, one living far away may not know well the rural family's real and/or actual needs and may not be the best person to decide on the use(s) of money in the rural area. This kind of control essentially negates and further constrains the possibility of 'growth' in the family's farm production.

Suffice it to conclude here that, contrary to what is postulated by H₁ of the study, remittance does not lead to a decline in the rural family's level of agricultural production. Although the women show appreciation of the remittance in various ways and for various reasons, the women do not just sit back waiting for it so as to carry out the necessary farm production activities. It ensures a livelihood for the family in the absence of the man regardless of the remittance. Decline in the level of farm production after the migration of the male head of household may therefore occur due to factors other than remittance.

The other factor examined alongside the family's farm production data is the question of the control of income and other rural resources by the woman. She may obtain a good amount of control of money and other resources as result of the migration of her husband. This control may be manifested in the capability to acquire an off-farm job through which she earns 'her own money' over which she has autonomy of control.

Women have more difficulties securing employment than men. This could be attributed to their lower level of literacy and socio-economic status relative to men. The migrant's wife though of a lower educational calibre than her husband is fairly well educated. Chances of securing a 'good' job is therefore pegged to the possession of a relatively high level of education. Educated women are fairly well equipped to cope with societal differentiation, one of which may be the migration of one's own husband. One of the ways she can cope with this transformation is by securing off-farm employment. In this study, it is interesting to learn that the women working outside their farmsteads were not merely engaged in casual jobs in other peoples' farms as is widely advanced in the literature and that their earnings averaged nearly Ksh.1,000 per month. The types of jobs contracted ranged from teaching in the local schools to clerical and subordinate work in the nearby institutions, for instance, the cooperative Society. This may not necessarily be a positive aspect; it will be recalled that 44.4% of the households hired labour which may be as a result of the contraction of off-farm employment by the female 'heads. The more the number of days committed to outside employment the more money is earned. But it has been argued on the other hand that, working long hours outside one's own farm leads to late clearing, late sowing, late weeding, late harvesting and consequently lower yields. This is because an input of tired man (woman)/hours do not counteract

this effectively as advanced by Lipton (1980). However it seems in this case that, an injection of capital and labour may effectively serve to offset it.

The women earning high incomes from off-farm employment are able to secure larger loans and/or credit facilities. This directly earned money therefore serves as security for credit facilities. In turn, this also influences the women's investment patterns. They are better able to purchase or at least participate more effectively in land purchasing. Most of all the amount earned in the off-farm duties is directly related to the family's farm production level. Data in this study indicate that, the higher the amount of money earned by the migrant's wife through off-farm employment, the higher the level of farm production achieved by the household. This is because the higher the income earned outside, the higher the amount ploughed in food production and consequently the higher the yields of food crops, (maize, beans and potatoes). As a result more money is generated out of the sale of surpluses and of those crops grown specifically for sale, the household thus attains a higher family income. The households are then better able to alleviate the problem of labour shortage by for instance, engaging hired labour. Admittedly the fact that the woman labours elsewhere only to hire outside labour to perform the work she should be performing herself, may introduce a discrepancy in the argument advanced here. One possible explanation is that she hires labour for the tasks that fall predominantly in the man's domain yet are vital for the overall family's farm production level. The effect of this money on farm production was in the form of more intensive and specialised farming leading to higher output per unit of land. Some of these would mean intensification of labour (including the hiring of labour), use of various inputs like fertilizers, manure and the use of more specialized methods of farming etc.

In the case of food production, some expansion of the acreage under food crops was observed where the woman enjoyed an off-farm job. This was however not the same in the case of cash crop production. Women are more involved in and affiliated to food production than cash crop production. The fact that it is their direct responsibility and obligation, may prompt them to plough some of the money earned outside into it. This could explain the expansion in acreage under food production.

Women's responsibilities for the supply of food leads to a need for supplementary cash and a necessity to be involved in the market if only to acquire a cash income with which to pay for the household's daily necessities. When and where women earn their own money or are allowed to control or even participate in the family's financial matters, the household may experience an improvement in their socio-economic status. The women in turn become self-confident and competent in managing the family's farm production affairs, as their decision-making prowess also improves. In this study, those without cash crop(s) or with relatively 'young' cash crops (recently initiated) were found to have succumbed easily to off-farm employment.

Control of resources in the rural household by the woman may lead to growth in the family's socio-economic status. The migrant's rural-based wife 'mans' the family's budgeting, and runs the family's cash crop(s) co-operative affairs. She is able therefore to invest in assets of her own choice. She can also shift production priorities without having to consult the man in each and every instance. This augurs well for the development of farm production. She plans, executes and implements the strategies she deems fit for the improvement or maintenance of the household's level of farm production.

Participation in family budgeting by women leads to the expansion of the

acreage under cultivation in regard to food and cash crop(s) production. Since each one of them (man and wife) represents separate areas of interest, each presses for the allocation of money in the respective area that he/she represents. The acreage under the cultivation of food crop(s) benefits most when the woman is in charge of family budgeting. The association between women and food production is here underscored. The family achieves greater growth in its level of food production due to the control of family budgeting which can be attributed not only to the investment of a good share of the money into it but also to the strenuous work undertaken by the women in their farm production roles as a result of the raised morale and the attainment of a higher level of responsibility.

Women's directly earned income is also vital to the maintenance and sustenance of family farm production. Women spend more on family necessities if and when their earnings accrue directly to them. The quality of consumption in terms of the varieties of food eaten may also change when the women are in charge of household budgeting.

Women in the traditional African society do not handle money and associated matters. Operating a Bank account by such women constitutes autonomous and direct management of money and signifies achievement of control and power. This leads to some rise in the acreage the family is able to cultivate and hence the family's production capacity. When one has his/her own money, freely controlled and used, he/she uses it for what he/she deems most necessary and fulfilling. In this, an explanation for the improvements indicated in the rural family's production capacity renders itself. In instances where the women had achieved a good amount of control of the household's financial affairs, some improvement in the level of farm production was recorded.

The control of the Co-operative affairs by the woman may be of a higher significance or more of an achievement in as far as control of 'important' household operations are concerned. This is because such control confers much more prestige and power to the woman⁴⁶. It is however not easily explicable why cash crop earnings are particularly higher where the man remains in control of certain aspects of the cooperative affairs, while food crop production does better when control of co-operative concerns falls in the hands of women. In this study, cash crop earnings were found to be higher where the man held onto the control of cooperative affairs while the overall acreage under cash crop(s) and under food crops had increased on average where the woman had been given the mandate to control the co-operatives affairs particularly as co-operative signatory. The cooperatives were nevertheless not based on food crops but on cash crop(s).

Resources obtained through the cooperative, e.g fertilizers, pesticides, go to facilitate the expansion of food and cash crop production. For instance, the household may procure a loan or other types of credit facilities if the 'head' of household has been relegated control of cooperative affairs during the absence of the male head of the household. In the case of credit facilities, this may be more positive where the man participates in the decision. Men retain the upper hand when it comes to the procurement of loans and/or credit facilities. This is because they hold the security or collateral required before credit facilities can be secured. They are therefore, better able to procure more

⁴⁶ It will be recalled from chapter 3 that for the woman who had been 'appointed' the cooperative signatory, it was considered quite an elevation.

substantial amounts, a good share of which they put into farm production⁴⁷. This is perhaps the best explanation to the finding that the acreage under the cultivation of both food and cash crop(s) were larger on average where the decision to procure the loan/credit facilities was jointly made. This is because each argues for the allotment of funds to his/her area of interest, and since their concerns in farm production are well demarcated, it results in the expansion in acreage under cultivation for the respective area at the end of which an improvement in the household's level of farm production may be attained.

Although only a negligible number of women 14.8%(19) had made any investments since their husbands' migration, farm production was found to have gained very positively in this respect. Over a half of the women had invested in land either in the form of a shamba or a plot. This had positively influenced the acreage under cultivation both for food crops as well as cash crop(s). This finding not only underscores the women's yearning to own land but also their expectation of a positive effect on the overall family farm production. This is also an indication that women wish and endeavour to uplift their status rather than succumbing to the position of an underdog. In the rural areas, the poorest household or individual is one who owns very little or no land at all. At the same time, a woman who owns land is highly respected not only by fellow women but also by men. Land is therefore the single most important criterion that symbolizes prosperity in the rural areas. That wives of migrant men are aware of this fact, is here emphasized.

For those who had borrowed money, it was mostly for the purpose of

⁴⁷ It will be recalled however that the credit facilities secured in this case were not from formal lenders but from informal sources regardless of which it was argued that some sort of security was still needed. This latter factor may have been responsible for bringing in the man.

investing. Most of the money borrowed was used to purchase land. The higher the amount borrowed, the more land was purchased. Given the price of land in this area, one has to be 'rich' to buy land but at the same time, the more land a household owns the higher its farm production capacity may be. This is because one can only expand the acreage under cultivation on his shamba only as long as the land exists. We do appreciate also that expansion of acreage under cultivation is not the only way of raising ones level of farm production. If the former be the case, the higher the food crop yields, the more is earned from the sale of surpluses and from crops grown for sale as well as from livestock production. For instance, milk yields had realized a sharp increase in those households that had borrowed money. The higher the amount of money borrowed, the more the milk produced and sold, and the more money is earned out of this particular activity as a result. Money borrowed may affect farm production positively in such ways. One must, however, appreciate the fact that things do not always run in such a linear or logical fashion. That is, other variables may intervene. For instance, if such money is not put into constructive use so as to lead to the kind of outcomes such as are mentioned above, the household ends up painfully paying for it. At such a time the family undergoes a great deal of hardship.

Control of rural resources by women in the rural areas therefore motivates women into expanding the area under cultivation, undertake intensive and specialized farm production, thus leading to higher outputs. They are better able to budget, plan, implement, monitor, and evaluate their own farm production activities leading to higher levels of farm production capacity and expectedly, an elevated socio-economic status for the family. This is because the women view this as a very positive turn in their lives despite the man's absence. It is

felt that the control of resources, even if only in the absence of the men, facilitates and helps them to attain progress and to 'grow' as individuals in their day-to-day lives. They now learn that they can run their own lives without necessarily having to always depend on the men. However we do not mean to conclude that women can absolutely do without men.

The family in the rural area is the main source of labour for farm production. Communal labour has vanished with the rising of the compulsion to earn cash. The household is now the basic unit for simple production and the reproduction of labour. On top of this, the woman has had to take over tasks previously performed by the man. She picks, prunes, sprays coffee trees and tea bushes, clears land, harvests, fences and constructs on a larger scale than ever before. Her farm-work time therefore increases drastically. As a result she suffers immense overburdening. The only options available are the slowly-fading *Mgwatio*, the highly-unaffordable hired labour, the not-so-common hosted dependents and the school-going children. These options are turned to with varying degrees by the household whose heads have migrated. For instance, the households that cannot afford to hire labour may opt to host more relatives who in turn are expected to help with the farm work. On the other hand, there are those who prefer to hire labour, arguing that it is cheaper and less cumbersome as the labour does not live within the homestead and after all is only seasonally contracted. Such a finding underscores a popular appreciation of the adequacy and appropriateness of the existing labour as a prerequisite for the success of farm production.

Friends and/or relatives hosted in the rural household often are under obligation to pay back by contributing to the household's labour. This also leads to an enhanced farm production capacity beneficial in the long run to the

household. The higher the number hosted, the higher the farm production capacity attained. One must however keep in mind that at the same time, the household has to spend more on subsistence. Nevertheless not only may land under cultivation expand, higher outputs may also be achieved and consequently the family earnings may experience an overall as well as a higher socio-economic standing in the village. In such a case, these changes will not be due to the migration of the male head of household but to the woman's increased efficacy and exertion as well as the correct choice of options (and therefore strategy) to make up for the labour deficit.

Regardless of the adjustments and adaptations made, women still complain of serious overburdening. The overburdening of women inhibits their capability to intensify and/or extend their labour inputs to maintain or increase productivity. Once a woman becomes overburdened, she is not able to put in as much time into the components of her chores that would improve farm production. Perhaps driven by a 'zero option' situation, she may exert more effort in her farm production endeavours which may in turn lead to an improved farm production capacity. She has as we have seen all through this discussion, to make certain adaptations to keep the household's survival secure. This is perhaps the best explanation to the finding that those women who were overburdened had increased the proportion of land under cultivation in their shambas. We must appreciate however that they may have become overburdened as they strove to increase or maintain the level of farm production. Just as cultivating greater land would mean more overburdening on the part of the woman (other things being equal), less cultivation of the shamba could mean starvation for her household. It is therefore an intricate balance.

Due to preoccupation with food crop production, this category did not register any substantial growth in the level of cash crop production. The commitment of women to food production in the rural area indicates that this overburdening may be obligatory. That they get encumbered with work as they struggle to fulfil expectations. The most important aspect to note here however, is the capability of the women to carry on with their roles despite the physical absence of the men. The changes in the division of labour therefore does not have an adverse bearing on the family's farm production as was postulated by the study.

The capability to hire labour bore positive results for the expansion of both the acreage under food crops and under cash crop(s). This is a clear indication that adequate and appropriate labour is essential for the success of farm production. Hired labour is likely to become more of an imperative to a thriving farm production capacity after male out-migration than ever before. This, on the other hand, may explain the improvement observed in the farm production capacity of the households that hired labour as well as those that participated in the village cooperative work groups (Ngwatio).

The more land a household owns, the bigger the number of labourers it may need to hire and the more money it is likely to spend on the undertaking. At the same time, these households are able to cultivate a larger acreage of food crops as well as cash crop(s). They are also able to increase the yields of food crops (maize, beans and potatoes) and consequently household earnings.

For purposes of maintaining and/or improving their household's farm production, female heads are deemed to be violating existing sex-role taboos as they adjust and adapt to the situation. It is very hard to prove violation of sex-role prescriptions as well as its effect in as far as the production of food

is concerned. Food production is the major pre-occupation of the rural women. The violation of such taboos and sex stereotypes is most likely to occur in cash crop production as was encountered in this study. Due to the physical absence of the man, the woman takes over tasks previously predominantly performed by and traditionally meant for the man which constitutes a violation of sex roles myths and stereotypes. Through this cash crop production is enhanced both with the expansion of land under cultivation, and with increased earnings as well.

Suffice it to state here that the woman is able to make adaptations as well as adjustments that ensure a flourishing level of farm production capacity for her household. That is to say simply, that life does not necessarily come to a standstill due to the absence of the male head of household.

This goes to prove contrary to common assumption that the pre-capitalist mode of production need not be completely eroded to pave way for the development of a capitalist mode of production. In fact, the former contains definite elements of capitalism e.g hired labour, private property etc. It means that, the traditional or pre-capitalist modes of production are a necessary component of the accumulation of capital. It is what gives capitalism its peculiar form in many Third World agrarian economies.

Data in this study suggests an improvement in the family's farm production level after male migration in as far as the control of resources by the woman and the changes in the household's division of labour are concerned. It is our conclusion that this improvement is due to the preservation of the pre-capitalist modes of production that continually ensure subsistence production as well as reproduction of the labour of those in urban wage employment.

Recommendations

One of the objectives of this study was to generate some useful data not only for academic purposes but also for policy-makers and planners to facilitate more accurate prediction, on areas such as regional resource allocation as well as better-informed regional and sectoral policies.

The findings of this study have demonstrated that rural-urban migration of the male head of household is not always necessarily harmful or deterrent to the development of the rural area. Impeding it would boil down to adding 'imprisonment' to the other rural disadvantages and ignoring the possible benefits of mobility for growth in other sectors. At the same time, it is clear that more appropriate policies for the development of the rural areas should be formulated so that labour transfers are kept at their minimum, manageable and functional levels in terms of size and composition. The absence of the man from the rural area due to rural-urban migration should not defer policy on rural development. Women should become equal recipients of extension advice, new technology and organizational membership so as to develop both their present capacity and that of the national effort in transforming the rural scenario.

The following therefore are recommended to the relevant authorities and all those concerned, interested in, associated with and/or affected by this problem.

The government should allocate investment grants as well as incentives in ways that do not encourage and set precedence for premature and therefore disappointing labour transfers. It seems almost certain so far, that development implies steady labour transfers out of agriculture. For this to steer the country's development constructively, a correction of

investment and incentive biases in favour of the rural sector is necessary. This will help integrate all the regions and sectors of the country into the country's development process, a prerequisite very important for the general equalisation of incomes.

Incomes, including remittances, farm production earnings as well as income accruing directly to women could have even more positive effects on farm production if women were made more literate. This would go to help them manage and utilize it more effectively. Women should be educated through qualified staff on managerial book-keeping and budgetary procedures to ensure better use of resources particularly by the rural-based female 'heads' of households. The process of 'literateising' women should be stepped up. They should be made aware of possible alternatives that are within their reach; their rights and nature of requirements as well as possible/existing ways and means of meeting these. These would also greatly increase their negotiating power. There is need therefore to identify specific elements within their environment which can help to facilitate this educational process.

The government should pursue more vigorously the policy of literatizing rural women in agriculture, especially in agricultural technology, horticulture, cooperative skills and in the use of credit facilities so as to integrate them into the mainstream of the country's development. We need to incorporate issues relating to women farmers' needs and potential into the country's overall agricultural planning, by increasing and making flexible for instance, the budgets on agricultural prospects for women,

hiring qualified personnel and conducting effective market research. Their integration will no doubt be beneficial to rural farm production and broadly, development. They would, in this way, be made to participate in the development of not only themselves but also their villages.

4. It is also important that the cultivation of their own crops be modernized to increase yields and protect self-sufficiency. One sure way of achieving this is through the introduction of labour-saving techniques and modern farming technology, locally 'nurtured' to save the capital intensive trap from strangling the rural sector. They should be accorded equal access to modern inputs, services, resources and wage employment as to lead to the transition to modern agriculture. This may be preceded by or may itself act as a catalyst to the general development of the rural area.

5. Capital should be made more accessible to women. Structural changes and innovations should be made in the delivery systems of credit. For one, their accessibility to credit, formal services in banking and other tangible services to enhance their utilisation of resources should be stepped up. Mobile credit and saving facilities that do not demand high collateral or service charges should be made available to women. A policy espousing a cheap and simple way of securing credit facilities should therefore be formulated for these purposes.

All-women's cooperatives are persistently objected to by policy makers and interested experts. Yet men normally enjoy the resulting income from mixed cooperatives. This objection should be overcome. It would be one way of

fostering women to earn their own money and safeguard their interests. Better still, a method of mandatorily turning signatory rights to rural women rendered 'heads' of households by the migration of their husband can be worked out and effected.

7. Women's involvement and/or interest in cash crop production should be recognized. This would improve both their status and crop production. More involvement of women in the process of marketing products should be fostered. As things stand now, the greater the economic importance of the marketed products, the lesser is the women's ability to take charge of marketing decisions and transactions. Production for the market is on the increase; if ever mechanization is applied, it is mainly men's activities in cash crop production, yet the demands on women to provide more labour is on the increase. The gap between men's and women's agricultural labour productivity needs to be reduced by directing modernizing efforts at females. In other words male 'bias' in planning for development needs should be overcome because it tends to reinforce traditional myths about male and female capabilities.

Inability to own land relegates women to the inferior position of landless agricultural labourers, dependent for their subsistence on men. The legally-sanctioned limitations that prevent women from owning land and other kinds of property, need to be continuously re-examined and redefined or gradually done away with to ensure equality in property ownership between men and women.

9. Though this study did not delve into the problem of inadequacy in the socialization of children in the absence of patriarchal authority or the male figure, we are compelled to mention it as a new area of research that has come to light as a result of this study. This is because the problem of deficiency in socialization and therefore breakdown of traditional morality may arise because of male out-migration.

10. Last but by far not the least, there is need for more research in this area. Data-based information is essential for appropriate development policy planning. This study's representativeness is naturally limited by size of sample and selection of locality. More similar research efforts need to be carried out to bring into contour the various regional differences so as to concretize social planning at the more localized level. The effects of male out-migration, in this way, can be studied more precisely and countered more appropriately based on locally-generated experiences and data.

APPENDIX A

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APPENDIX B.

QUESTIONNAIRE

Goodday, I am a student in the University of Nairobi interested in finding out more about the problems that are related to male out-migration this area. I would greatly appreciate any information you give in this connection. All that you say will be kept in as much confidence as is possible.

Date of interview -Date/month/year _____

Place of interview -Village/venue _____

Case Number _____

SECTION A.

Personal Biographic Data:

1. a. Respondent's Name _____
b. Age: _____ Born in 19 _____
c. Number of years of schooling:
d. Up to class: _____
2. a. When did you get married ?
Date/Month/Year
b. Husband's age: _____ Born in 19 _____
c. Husband's Number or years of schooling _____
d. Up to class _____
e. How many wives does your husband have in total ? _____
f. If more than one , when did he marry ? [Tick one]
A. Before migration
B. After Migration
C. Both before and after

D. Other (specify) _____

g. How many children does your husband have in total (yours included) ? _____

3. a. How many children do you have ? _____

b. What are their ages in order of birth ?

1st born Years old, born in 19 _____

2nd born Years old, born in 19 _____

3rd born Years old, born in 19 _____

4th born Years old, born in 19 _____

5th born Years old, born in 19 _____

6th born Years old, born in 19 _____

7th born Years old, born in 19 _____

8th born Years old, born in 19 _____

9th born Years old, born in 19 _____

10th born Years old, born in 19 _____

Others (specify) _____

SECTION B

Household Head Migration Data:

4. a. When did your husband migrate ? 19 _____

b. Where did he migrate to ? [Tick one]

A. Nairobi

B. Mombasa

C. Nakuru

D. Nyeri

E. Kisumu

F. Kakamega

G. Other(specify) _____

c. Was this the first time he ever migrated ?

Yes _____ No _____

d. If No, when else had he migrated ?

in 19 _____

e. How long did he stay away that time ? _____

f. When did he come back ? 19 _____

g. Why did he come back ? [Tick one]

A. He lost his job.

B. He had made enough money.

C. He resigned from his job.

D. He got into trouble.

E. He retired

F. Other (specify) _____

h. Why did he migrate this time ? [Tick all appropriate]

A. To seek employment (for higher wages).

B. To join friends and/or relatives.

C. To further his studies to enable him get a good
(high paying) job.

D. The city has more opportunities.

E. Our piece of land is inadequate for us.

G. Other(specify) _____

i. Did you participate in making this decision ?

Yes _____ No _____

j. If no, did he at least inform you ?

Yes _____ No _____

5. a. Is your husband working ? Yes _____ No _____

b. Is he

A. Employed [Tick the appropriate]

B. Self-employed

C. Other (specify) _____

c. How long did he take to get employment/self employment ?

A. Less than one month

B. One month

C. Three months

D. Six months

E. One year

F. More than one year.

G. Other (specify) _____

If E,F or G, Ask:-

d. Why did he take that long to get employment/self employment ?

A. Poor/no contacts

B. Lack of money

C. Nepotism

D. Few jobs

E. Poor/no qualifications

F. I do not know

G. Other(specify) _____

6. a. Do you know where he works/operates business ?

Yes _____ No _____

If No, Jump to question 7.

b. If Yes, where does he works/operate ? _____

c. What kind of work does he do ? _____

d. Is it a temporary or permanent job/business ? _____

e. How much does he earn per month ?

Ksh. _____ p.m.

7. a. Do you know where he lives ? Yes _____ No _____

If No, jump to Question 8.

b. If Yes, where does he live ? _____

c. Does he live alone ? Yes _____ No _____

d. If No, with whom does he live ?

A. Friends

B. Relatives

C. Other (Specify) _____

8. a. Do you know how much he spends on his subsistence p.m ?

Yes _____ No _____

If No, jump to Question 9.

b. If Yes, How much does he spend on house rent per month ?

Ksh. _____ p.m.

c. How much does he spend on water bills per month ? _____

Ksh. _____

d. How much does he spend on electricity bills per month ?

Ksh. _____ p.m.

e. How much does he spend on food per month ? Ksh. _____

f. How much does he spend on transport p.m ? Ksh. _____

g. Other (specify) _____

9. a. Does your husband send you money ?

Yes _____ No _____

b. If No, why ? _____

c. If yes, how much p.m ? Ksh. _____ p.m

d. By what means does he send it ? _____

e. Does he direct you on what to use the money on ?

Yes _____ No _____

f. What do you use it on ? [Tick all appropriate]

A. Children's education

B. Invest in farm production

C. Save/invest

D. Purchase Consumption items

E. Other (specify) _____

10. a. Has your husband ever failed to send it ?

Yes _____ No _____

b. If Yes, how many times ? [Tick one]

A. One

B. Two

C. Three

D. Four

E. More than four times

F. Other (specify) _____

c. Does/did he explain when he fails ?

Yes _____ No _____

d. What action do/did you take ? [Tick all appropriate]

A. I remind him (I insist)

B. I cut down on subsistence

C. I cut down on production

D. I do not do anything

E. Other (specify) _____

f. On whose initiative does he send you money ? [Tick one]

A. Mine

B. His

C. Both of us

D. Other (specify) _____

11. a. Do you ever send him anything ?

Yes _____ No _____

If yes, what ?

A. Food

B. Money

C. Clothing

D. Other (specify) _____

c. How often ? _____

d. When was the last time you sent him something ? _____

e. On whose request/initiative do yo send him anything?

A. Mine

B. His

C. Both of us

D. Other (specify) _____

12. a. Does your husband visit ? Yes _____ No _____

b. If No, why ? _____

c. If yes, How often ?

A. once a week

B. once a fortnight

C. once a month

D. once every 3 months

E. once every 6 months

F. once a year

G. Other (specify) _____

d. When was he last here ? date/Month/year _____

e. On whose request/initiative does he visit ? [Tick one]

A. Mine

B. His

C. Both of us

D. The children's(s')

E. Other (specify) _____

f. What does he bring with him during his visits ?[Tick all appropriate]

A. Agricultural implements/seeds.

B. Money.

C. Clothing/gifts.

D. Food items.

E. Other(specify) _____

h. For how long does he stay during his visits ?

A. A few hours

B. A weekend (2 days)

C. One week

D. Two weeks

E. Other (Specify) _____

i. Does he spend his days of leave here ? Yes _____ No _____

j. What does he do when he is around ?

A. Helps in farm activities.

B. Visits friends/relatives.

C. Does nothing constructive.

D. Other (Specify) _____

13. a. Do you visit him ? Yes _____ No _____

b. If No, why ?

A. He does not like it.

B. I am too busy here.

C. I cannot afford the journey.

D. I do not know the way.

E. Other (specify) _____

c. If yes, how often do you visit him ?

A. once a week

B. once a fortnight

C. once a month

D. one in 3 months

E. once in 6 months

F. once a year

G. Other (specify) _____

d. On whose request do you visit him ?

A. Mine

B. His

C. Both of us

D. The childrens'

E. Other(specify) _____

e. When was the last time you visited him ? _____

14. a. Do you take anything to him during your visits ?

Yes

No

b. If yes, what ?

A. Food items

B. Money

C. Both

D. Other (specify)

15. a. Do the children visit him ? Yes No

b. If yes, when was the last time they visited him ?

Month/year: _____

c. If No, why ? _____

SECTION C

Farm Production Data:

16. a. How many pieces of land do you own?

A. One (only this one)

B. Two

C. Three

D. More than three

E. Other (specify) _____

b. How big are they ?

1st piece _____ acres

2nd piece _____ acres

3rd piece _____ acres

Other (specify) _____

c. How did you acquire your first piece of land ?

A. Inherited

B. Purchased

C. Government allocation

D. Other (specify) _____

d. How did you acquire the second piece ?

A. Inherited

B. Purchased

C. Government allocation

D. Other(specify) _____

e. And the third ?

A. Inherited

B. Purchased

C. Government allocation

D. Other(specify) _____

f. If inherited, from whom ? _____

1st piece

2nd piece

3rd piece

Other (specify) _____

g. Inherited in which year ?

1st piece 19 _____

2nd piece 19 _____

3rd piece 19 _____

Other (specify) _____

h. If purchased, when ?

1st piece 19

2nd piece 19

3rd piece 19

Other (specify) _____

i. How much did each cost ?

1st Ksh. _____

2nd Ksh. _____

3rd Ksh. _____

Other(specify _____)

j. Who purchased them ? 1st piece _____

2nd piece _____

3rd piece _____

Other(specify _____)

k. Where did the money come from ? [Tick all appropriate]

1st piece _____

2nd piece _____

3rd piece _____

Other (specify) _____

- A. Savings
- B. Loan/Credit
- C. Sale of surplus
- D. Cash crop
- E. Husbands Remittances
- F. Other (specify)

1. Are they officially registered ?

1st _____ Yes _____ No _____

2nd _____ Yes _____ No _____

3rd _____ Yes _____ No _____

Other (specify) _____

m. If yes, under whose name(s) ? [Fill in one for each piece]

1st _____

2nd _____

3rd _____

Other (specify) _____

A. His

B. Mine

C. Both of us

D. The children's

E. Other (specify) _____

17. a. What crops do you grow on each ? [list as appropriate for each piece]

1st piece _____

2nd piece _____

3rd piece _____

Other (specify) _____

A. Maize

B. Beans

C. Potatoes

D. Tomatoes

E. Carrots

F. Cassava

G. Others (specify) _____

18. a. What acreage is under food production in each ?

1st piece _____ acres

2nd piece _____ acres

3rd piece _____ acres

other (specify) _____

b. What are the yields of each crop in each piece per year in bags ? [For questions b and c, fill in all appropriate and add crops left out]

1st piece 2nd piece 3rd piece Other(specify)

Maize

Beans

Potatoes

Tomatoes

Carrots

Cassava

c. Can you try to remember the yields the year before your husband left (in bags) ?

1st piece 2nd piece 3rd piece Other(specify)

Maize

Beans

Potatoes

Tomatoes

Carrots

Cassava

19. a. Did you have a surplus harvest last year ?

Yes _____ No _____

b. How much of each crop from each piece ? [Fill in all appropriate and add crops left out]

1st piece 2nd piece 3rd piece Other(specify)

Maize

Beans

Potatoes

Tomatoes

Carrots

Cassava

c. Do you sell your surplus harvest ? Yes _____ No _____

d. if No, why ? _____

e. If yes, how much did you make out of this last year ?

Ksh. _____

20. a. Do you grow any food crops specifically for sale ?

Yes _____ No _____

b. If Yes, which crops do you grow ? [List as many]

1st piece _____

2nd piece _____

3rd piece _____

Other(specify) _____

c. How much money did you make out of this last year ?

Ksh. _____

d. Were you doing this even when your husband was here ?

Yes _____ No _____

e. If No, why were you not doing it then ? _____

21. a. Do you keep cattle ? Yes _____ No _____

b. When did you start cattle rearing ? 19 _____

c. How much did you spend buying the first lot and on the other necessary preparations ? Ksh. _____

d. Where did you get this money ? [Tick all appropriate]

A. Sale of farm surplus

B. Cash crops

C. Husbands remittances

D. Loan/credit

E. Other (specify) _____

e. How many do you have currently ? _____

f. Are they grade or ordinary cattle ? _____

g. What do you feed them on ? _____

h. How much does their upkeep cost in a month ?

Ksh. _____

j. Where do you get this money from ? [Tick all appropriate]

A. Sale of farm surplus.

B. cash crop.

C. Husband's remittances.

D. Loan/credit.

E. Savings.

F. Other (specify) _____

22. a. How much milk do they produce in a day ?

_____ Kg/day.

b. Do you sell the milk ? Yes _____ No _____

c. How much of it do you sell ? _____ Kg

d. How much money do you get out of this each month ?

Ksh. _____ p.m.

e. What do you do with this money ? _____

f. Where do you sell the milk ? [Tick all appropriate]

A. Dairy

B. Individual buyers

C. School(s) and other institutions around here.

D. Other (specify) _____

g. Do you ever sell the cows ? Yes _____ No _____

h. If yes, when was the last time you sold any ?

Month/year _____

i. How much did you sell it/them for ?

Ksh. _____

j. Why did you sell the cattle ? [Tick one]

A. To pay fees

B. To settle a hospital bill

C. To pay off a pressing debt/loan

- D. To raise money for investing
- E. To assist a relative/friend
- F. To raise money for subsistence
- G. Other (specify) _____

k. Did you consult your husband before doing it ?
 Yes _____ No _____

l. If No, why ?

m. What did you do with the money ? _____

23. a. Do you keep poultry ? Yes _____ No _____

b. When did you start ? 19 _____

c. How much did you spend buying the first lot and on
 the other necessary preparations ? Ksh. _____

d. Where did you get this money ? [Tick all appropriate]

A. Sale of surplus

B. Cash crops

C. Husband's remittance

D. Loan/Credit

E. Savings

F. Other (specify) _____

e. How many do you have currently (chicks included) ? _____

f. What do you feed them on ? _____

g. How much does their upkeep cost in a month ?

Ksh. _____ p.m.

h. How many eggs do they lay in a day ?

_____ Eggs/day

i. Do you sell the eggs ? Yes _____ No _____

j. How much do you make out of this in a month ?

Ksh. _____ p.m.

k. Do you consume any eggs ? Yes _____ No _____

24. a. Do you ever sell the chicken ? Yes _____ No _____

b. When was the last time you sold any ?

Month/year _____

c. Why did you sell ?

A. To pay fees

B. To settle a hospital bill

C. To pay off a pressing debt/loan

D. To raise money for investing

E. To assist a relative/friend

F. To raise money for subsistence

G. Other (specify) _____

d. How much did you make out of this ?

Ksh. _____

e. Did you seek your husbands' permission before doing so ?

Yes _____ No _____

f. If No, why ? _____

g. What did you do with the money ? _____

25. a. Do you keep goats ? Yes _____ No _____

b. If yes when did you start ? 19 _____

c. How much did it cost you to buy the first lot and for the other necessary preparations ? Ksh. _____

d. Where did you get the money from ? [Tick all appropriate]

A. Farm surplus

B. Cash Crop

C. Husband's remittances

D. Savings

E. Loan/Credit

F. Other (specify) _____

e. How many do you have currently ? _____

f. What do you feed them on ? _____

g. How much does their upkeep cost you in a month ?

Ksh. _____ p.m

26. a. Do you sell any ? Yes _____ No _____

b. If yes, when was the last time you did so ? _____

c. How much did you make out of this ?

Ksh. _____

d. Why did you sell ? _____

- A. To pay fees
- B. To settle a hospital bill
- C. To pay off a pressing debt/loan
- D. To raise money for investing
- E. To assist a relative/friend
- F. To raise money for subsistence
- G. Other (specify) _____

e. Did you consult your husband before doing so ?

Yes _____ No _____

f. If No, why ? _____

g. What did you do with the money ? _____

27. a. Do you have cash crop(s) in your shamba(s) ?

1st piece Yes _____ No _____

2nd piece Yes _____ No _____

3rd piece Yes _____ No _____

Other (specify) Yes _____ No _____

b. If yes, which one(s) ? [Fill in all appropriate]

1st piece

2nd piece

3rd piece

Other (specify) _____

- A. Coffee
- B. Tea
- C. Pyrethrum

- D. Other (specify) _____
- c. What acreage is under cash crop ?
- 1st piece _____ acres
- 2nd piece _____ acres
- 3rd piece _____ acres
- Other (specify) _____
- d. When did you start cash crop farming ? 19 _____
- e. How much money did it cost to start ?
- Ksh. _____
- f. Where did the money come from ? [Tick all appropriate]
- A. Savings
- B. Loan/credit
- C. Farm surplus
- D. Husbands Remittances
- E. Other (specify) _____
- g. On whose initiative was it started ? [Tick one]
- A. Mine
- B. His
- C. Both of us
- D. Other (specify) _____
- h. How much do you spend on the maintenance of those cash crops in each piece per year ?
- 1st piece _____ Ksh./per year
- 2nd piece _____ Ksh./per year
- 3rd piece _____ Ksh./per year
- Other (specify) _____

i. What farm inputs do you use ? [List as many] _____

28. a. How often is each picked in each piece in one month ?

A. Coffee

1st piece _____

2nd piece _____

3rd piece _____

Other (specify) _____

B. Tea

1st piece _____

2nd piece _____

3rd piece _____

Other (specify) _____

C. Pyrethrum

1st piece _____

2nd piece _____

3rd piece _____

Other(specify) _____

D. Other cash crop(s) (specify)

1st piece _____

2nd piece _____

3rd piece _____

Other (specify) _____

b. How much of each is picked each session in all pieces ?

A. Coffee

B. Tea

1st piece _____ kg

1st piece _____ kg

2nd piece _____ kg

2nd piece _____ kg

3rd piece _____ kg

3rd piece _____ kg

Other (specify) _____ kg

Other (specify) _____ kg

C. Pyrethrum

D. Other (Specify)

1st piece _____ kg

1st piece _____ kg

2nd piece _____ kg

2nd piece _____ kg

3rd piece _____ kg

3rd piece _____ kg

Other (specify) _____ kg

Other (specify) _____ kg

29

a. How much does cash crop farming earn you in one year ?

A. Coffee Ksh. _____

B. Tea Ksh. _____

C. Pyrethrum Ksh. _____

D. Other (specify) _____ Ksh. _____

b. Total cash crop(s) earnings Ksh. _____ per year.

c. Who collects the payments/bonuses from the cooperative society ? [Tick all the appropriate]

A. Myself

B. My husband

C. Both of us

D. Relative(s)

E. Other (specify) _____

d. who is the cooperative signatory ? [Tick all appropriate]

- A. Myself
- B. My husband
- C. Both of us
- D. Relative(s)
- E. Other (specify) _____

SECTION D

Division of Labour Data:

30. a. What are your tasks in this home currently ? [List as many]

- 1. _____ 2. _____ 3. _____
- 4. _____ 5. _____ 6. _____
- 7. _____ 8. _____ 9. _____
- 10. _____

b. What were your tasks before your husband left ? [List as many]

- 1. _____ 2. _____ 3. _____
- 4. _____ 5. _____ 6. _____
- 7. _____ 8. _____ 9. _____
- 10. _____

c. What were his tasks while he was here ? [List as many]

- 1. _____ 2. _____ 3. _____
- 4. _____ 5. _____ 6. _____
- 7. _____ 8. _____ 9. _____

d. Did you take up any of his tasks when he left ?

Yes _____ No _____

e. If yes, which ones ? [list as many]

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____

f. If No, who performs the ones he was performing ? _____

i. Did you drop any of your tasks to take up his ?

Yes _____ No _____

j. If yes, which ones ? [List all] _____

k. Who performs these tasks now ? [Tick the appropriate]

- A. Myself
- B. Hired labour
- C. Mutual aid groups (Ngwatio)
- D. Friends and/or relatives
- E. The family
- F. Other (specify) _____

l. Did you have any joint tasks ? Yes _____ No _____

m. If yes which ones ? [List as many] _____

n. Who performs them now that he is away ?

- A. Myself
- B. My husband (when on leave or during visits)
- C. Mutual aid groups (Ngwatio)
- D. Friends and/or relatives
- E. Hired labour
- F. The family
- F. Other(specify) _____

o. Have you violated any of the myths by taking up male tasks ? Yes _____ No _____

p. Do you feel overloaded/overburdened ? Yes _____ No _____

31. a. Besides your children is anybody else living here with you ? Yes _____ No _____

b. If yes, how many ? _____

c. Are they related to you ? Yes _____ No _____

d. Why are they living with you ? _____

32. a. Do you hire labour ? Yes _____ No _____

b. If yes, how much does this cost you each year ?

Ksh. _____ per year.

c. How many labourers on average do you hire in a year ? _____

d. Were you hiring labour even when your husband was here ? _____

Yes _____ No _____

33. a. Do you have village cooperatives (mutual aid groups) ?

Yes _____ No _____

b. If Yes, what tasks do they perform ? [List as many]

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____

c. Do you participate in the mutual aid groups ?

Yes _____ No _____

d. If No, why ? _____

34. a. Apart from the above duties are you otherwise employed ?

Yes _____ No _____

b. If yes, how many days in a week do you work ? [Tick one]

- A. once a week
B. Twice a week
C. Thrice a week
D. Four times a week
E. More than 3 times a week
F. Other (specify) _____

c. How far is your place of work from

here _____ km.

d. What sort of work do you do ? _____

e. To whom do you delegate your duties when you go to work ? _____

f. How much do you earn per month ? Ksh. _____ p.m

g. Did you obtain this employment before or after your
husband's migration ? Yes _____ No _____

h. Does he know that you work ? Yes _____ No _____

i. What does he feel about it ? [Tick one]

A. He is indifferent

B. He is happy about it

C. He does not like it

D. Other (specify) _____

j. Whose decision was it that you get employment ? [Tick one]

A. Mine

B. His

C. Both of us

D. Other (specify) _____

k. Is this your first employment ? Yes _____ No _____

l. If No, when else were you employed? 19 _____

SECTION E

Family Consumption Data:

35. a. What is your family's monthly net income per month ?

Ksh. _____

b. Who decides what is to be done with the money ?

[Tick one]

A. Myself

B. My husband

C. Both of us

D. Other (specify) _____

c. What do you use the money on ? [Tick all appropriate]

A. Childrens' education

B. Running the household

C. Farm Production

D. Saving/investing

E. Other (specify) _____

36. a. How many of your children are in school ?

A. In primary _____

B. In secondary _____

C. In high School _____

D. In university _____

F. In college/training _____

G. Other (specify) _____

b. How much do you spend on their education in the form of fees, uniform, building funds/etc per year ?

A. Primary Ksh. _____

B. Secondary Ksh _____

C. High school Ksh. _____

D. College/training Ksh. _____

F. Other (specify) Ksh. _____

c. Where do you get this money from ? [Tick all appropriate]

A. Sale of surplus

B. Husbands remittances

C. Savings

E. Loan/Credit

F. Other (specify) _____

37. a. Has any of your children been sent out of school due to lack of one of them ? Yes _____ No _____

b. If yes, when ? 19 _____

c. How many times ? _____

d. How many children ? _____

e. How much was needed ? Ksh. _____

f. What did you do about it ? _____

38. a. Since your husband left have you invested in any kind of property ? Yes _____ No _____

b. If yes, what kind ? _____

c. How much did it cost ? ksh. _____

d. Source of money for the investment ? [Tick all appropriate]

A. Savings

B. Husbands' remittances

C. Loan/Credit

D. Sale of Surplus

E. Cash crop

F. Other (specify) _____

e. Is it an income generating investment ?

Yes _____ No _____

f. If yes, how much do you get out of it in a month ?

Ksh. _____ p.m

g. Is it officially registered ? Yes _____ No _____

h. If Yes, under whose name is it registered ? [Tick one]

A. My name

B. My husband's name

C. Both our names

D. One of the children

E. Other (specify) _____

i. Did you consult your husband before making this investment ? Yes _____ No _____

j. If No, why ? _____

39. a. Do you have a bank account ? Yes _____ No _____

b. If yes, Is it personal or joint with your husband ? _____

c. When did you open this account 19 _____

d. Who opened this account ?

A. Myself

B. My husband

C. Both of us

D. Other (specify) _____

40. a. Have you taken any loan or Credit facilities this year ?

Yes _____ No _____

b. If Yes, how much ? Ksh. _____

c. From where ? _____

d. What did you take it for ? _____

e. Whose decision was it that you take it ? [Tick one]

A. Mine

B. His

C. Both of us

D. Other (specify) _____

41. a. How has his migration affected:-

1. Farm production ? _____

2. Family integrity ? _____

Thank you very much. That is all for now.

1 Correlation Matrix for B2

variabl	v158	v159	v161	v143	v208	v072	v080	v084	v085	v086	v087	v099	v103
v158	1.000												
v159	.1669	1.000											
v161	-.1293	.3679	1.000										
v143	.1729	.3436	.0443	1.000									
v208	.0689	.0426	.4148	.3416	1.000								
v072	.1079	.1298	.4083	-.0195	.3802	1.000							
v080	.0911	.1322	.0064	.1456	.3619	.0703	1.000						
v084	-.1416	.0874	.3367	-.3437	.3142	-.3371	-.1405	1.000					
v085	-.0619	.4038	.3502	-.3118	.2914	-.2693	.0491	.5744	1.000				
v086	-.1693	.3206	.3178	-.2673	.2816	-.3041	-.0427	.5254	.6125	1.000			
v087	-.0941	.4587	.3828	-.0800	.3146	-.2573	-.0969	.4251	.5302	.5563	1.000		
v099	-.2482	.4043	.4058	-.3683	.3414	-.4361	-.0692	.7135	.6716	.5919	.4540	1.000	
v103	-.1401	-.1171	.0218	-.0506	.0982	.0542	-.1016	.0277	-.0232	.0013	.0843	.0241	1.000
v104	.1501	.0904	.0266	.1240	.0489	.0012	.0922	.0367	-.0152	-.0364	.0292	.0305	.0770
v105	-.0816	-.0845	.4701	-.2515	.3142	-.2051	.0395	.7014	.5105	.4174	.3925	.5426	-.0105
v106	-.0118	-.0391	.3173	-.2734	.3168	-.2922	-.0357	.6270	.5268	.4696	.4312	.5489	.6141
v107	.0216	.0735	.3405	-.1892	.3248	-.2792	-.0123	.4886	.5048	.4491	.4300	.4670	.1187
v108	-.0141	-.0117	.3820	-.2135	.3968	-.2814	.0643	.7059	.4536	.3315	.3614	.5089	.0184
v110	.2302	.1099	.1646	-.0766	.0408	-.0120	.0465	.0468	.1683	.0347	.0354	.1331	.0501
v119	-.2522	.0272	.1007	.0717	.0816	.1338	.0695	-.0640	.1800	.0556	-.0159	.0973	.1601
v120	.1410	.0150	.0135	.1743	.0242	.1348	.1325	-.0647	.0372	.1316	.1693	.0557	.3026
v121	.1990	.1678	.1297	-.0609	.0123	-.0093	.1938	.4083	.1518	-.0576	-.0578	.3007	.0983
v123	-.1161	.0807	.1623	-.0725	.0468	-.0520	-.0873	.1130	.0264	.1063	.1150	.2068	.1151
v130	.0340	-.1646	-.1332	-.3281	.1943	.0676	.0228	-.0681	-.0518	.0199	-.0474	.0718	.1404
v132	.0111	-.3581	-.1896	-.5629	.1082	.0520	.0049	.1814	.1540	.1518	-.0060	.1150	.1105
v135	.0220	.0601	.1630	-.2358	.1609	.0920	.0053	.5327	.5072	.3050	.2838	.4243	.0262
v138	.0330	.0612	.1924	-.5221	.3468	-.1954	-.1000	.6364	.5846	.4231	.3302	.5427	.0781
v145	.0145	.1348	.3589	-.2513	.4689	-.2399	-.0047	.4731	.6154	.4538	.4026	.5448	.1035
v165	.1110	.4688	.4523	-.1674	.4899	-.2769	.06454	.4850	.5479	.4191	.3295	.5404	.0736

v104 v105 v106 v107 v108 v110 v119 v120 v121 v123 v130 v132 v135 v138 v145 v155

1.000
 .0617 1.000
 .0469 .8000 1.000
 .1101 .6820 .8161 1.000
 .0873 .7817 .7279 .6496 1.000
 .3693 .0644 .0434 .0496 .0232 1.000
 -.0360 .1045 .0054 .0978 .0396 .-0027 1.000
 -.0848 .0177 .-0692 .-0382 .-0771 .-0122 0.4782 1.000
 -.0322 .2086 .1690 .3214 .2139 .1479 .7051 .3752 1.000
 -.0888 .3135 .2367 .2774 .0971 .0829 .0936 .1124 .0298 1.000
 -.0549 .-1008 .-1507 .-1557 .-1075 .0164 .0430 .1251 .0711 .0060 1.000
 -.0254 .1300 .2420 .1171 .1644 .0614 .-0377 .-1617 .0804 .-0524 .1393 1.000
 .0332 .7467 .5005 .5684 .5710 .0467 .0461 .0576 .2796 .2661 .-1195 .0611 1.000
 -.0129 .7088 .5828 .5778 .6528 .0966 .0552 .-0734 .3108 .1324 .-0620 .3035 .1524 1.000
 -.0078 .0141 .6438 .7617 .4652 .1614 .1409 .0415 .4728 .2814 .0875 .1571 .7149 .7089 1.000
 .0344 .5726 .5755 .5327 .4562 .1915 .2024 .-0177 .3887 .1731 .-1413 .0258 .4866 .6097 .7097 1.000

