

THE ROLE OF RURAL-URBAN MIGRATION IN THE URBANIZATION
AND ECONOMIC DEVELOPMENT OCCURRING IN KENYA

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Preface

Representatives from 132 nations assembled in Vancouver in June of 1976 to convene HABITAT, the United Nations Conference on Human Settlements. The Conference was a global inquiry into solutions of the critical and urgent problems of human settlements created by the convergence of two historic developments: unprecedentedly high rates of population growth and massive rural to urban migration.

Rapidly growing populations strain health and education budgets, complicate efforts to utilize a nation's manpower efficiently, and exacerbate problems connected with the provision of adequate supplies of food, energy, water, housing, and transport and sanitary facilities. A better understanding of the dynamics and consequences of population growth, particularly with regard to resource and service demands, is therefore an essential ingredient for informed policy-making.

The Human Settlements and Services Area at IIASA is developing a new research activity that is examining the principal interrelationships among population, resources, and growth. As part of the preparatory work directed at the design of a case study focused on Kenya, the HSS Area invited Professor Henry Rempel of the University of Manitoba to visit IIASA in an advisory capacity. Dr. Rempel is a specialist on economic development and has published several articles describing migration and urbanization patterns in Kenya. In this paper, presented at a seminar in Laxenburg, Dr. Rempel draws particular attention to migration's contribution to Kenya's structural transformation.

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Papers of the Population, Resources and Growth Study

1. Nathan Keyfitz, *Understanding World Models*, RM-77-18, April 1977.
2. Andrei Rogers, *Migration, Urbanization, Resources, and Development*, RR-77-14, June 1977.
3. Roman Kulikowski, *Optimization of Rural-Urban Development and Migration*, RM-77-41, August 1977.
4. Frans Willekens, *Spatial Population Growth in Developing Countries: With a Special Emphasis on the Impact of Agriculture*, internal working paper 1977, forthcoming as a Research Report.
5. Henry Rempel, *The Role of Rural-Urban Migration in the Urbanization and Economic Development Occurring in Kenya*, RM-78-12 .

Abstract

This paper focuses on rural-urban migration in Kenya after independence in 1963 and includes a brief survey of the historical forces that shaped the urbanization process. The basic thesis is that rural-urban migration is a rational response to development in Kenya. Migration does not shape this development, it is merely one symptom of the growth.

Data were collected from a survey conducted by J.R. Harris, M.P. Todaro, and the author in 1968 and the 1969 Population Census. The influence of education, age, land, and income on the decision-making process is analyzed. The effects of migration on rural and urban areas are discussed; however, the conclusions reached are tentative because available information is limited. The paper concludes by identifying important areas of further research in migration and urbanization in Kenya.

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The Role of Rural-Urban Migration in the Urbanization and Economic Development Occurring in Kenya

INTRODUCTION

The purpose of this paper is to summarize the state of knowledge on urbanization in general, and rural-urban migration in particular, in Kenya. The dominant sources of data are the Population Census, 1969 (Republic of Kenya, 1971a) and a survey carried out by J.R. Harris, M.P. Todaro and the author in December, 1968 in eight of the largest urban centers in Kenya.* The survey was conducted on the basis of a stratified random sample of adult males who had moved to one of the eight urban centers in the post-independence period (December, 1963) and were still residents there as of December, 1968.

The topics discussed in the paper include: the extent of urbanization in Kenya; a brief survey of the historical forces shaping the urbanization process in Kenya; a discussion of rural-urban migration as a response by some rural households to the type of development occurring in Kenya; and a summary of known effects of this rural-urban migration on the migrant, the rural areas and the urban centers. The paper concludes with an identification of the important questions of urbanization and rural-urban migration in Kenya that cannot be answered adequately on the basis of knowledge available at present.

THE EXTENT OF URBANIZATION

According to the 1969 census the population of Kenya was 10,942,705 of which 98 per cent was designated as African. As in other developing countries, the rate of population increase has been rapid, 3.4 per cent annually from 1948 to 1969.

* A description of the survey, including a copy of the questionnaire used, is provided in the Appendix of Rempel (1970).

The average rate of increase for Kenya Africans increased from 3.3 per cent during the 1948 to 1962 period to 3.6 per cent from 1962 to 1969.

The 1969 census lists 936,780 people resident in the 11 urban centers with population in excess of 10,000. Of this total 91 per cent were identified as Kenya Africans. Between the 1962 and the 1969 census the average annual rate of increase of African population in the 11 towns was 9 per cent. All the other urban centers had below average rates of growth with Nanyuki experiencing less than the average rate of population growth for Kenya.

Table 1 shows the relative contributions of natural population increase and net-migration as the sources of urban growth in Kenya. Net-migration accounts for 76 per cent of the

Table 1. The relative contributions (per cent) of natural population increase and net-migration to the growth of urban population in Kenya: 1969 census.

Urban Centers	Born in Town		Not Born in Town (Net-Migration)		Not Stated		Total African Population	
	Male	Female	Male	Female	Male	Female	Male	Female
Nairobi	16.9	25.9	82.0	72.9	1.1	1.2	257,795	163,284
Mombasa	25.0	36.0	74.6	63.0	0.4	1.0	112,494	74,656
Kisumu*	13.6	15.7	84.4	82.1	2.0	2.2	24,059	18,758
Nakuru	18.3	27.1	81.1	72.4	0.6	0.5	23,624	18,566
Eldoret*	13.1	19.1	77.6	77.7	9.3	3.2	13,884	10,312
Thika	16.8	26.6	82.9	73.0	0.3	0.4	9,971	6,603
Nanyuki	23.4	26.9	76.1	72.6	0.5	0.5	5,926	5,042
Kitale	20.4	30.2	79.2	69.3	0.4	0.5	5,786	4,380
Kericho	27.5	34.0	72.2	65.5	0.3	0.5	5,372	3,680
Nyeri	17.8	47.7	81.0	51.1	1.2	1.2	5,363	3,552
Malindi	44.6	42.4	54.0	56.4	1.4	1.2	4,438	3,150
Total	19.2	28.1	79.7	70.7	1.1	1.2	468,712	311,983

* The numbers for Kisumu were increased by a scale of 1.77 to reflect the expanded town boundaries. The numbers for Eldoret were increased by a scale of 1.558 to reflect more realistic population totals for Eldoret.

current urban population. The numbers of males and females born in each town are similar, but the relative contribution of net-migration is smaller for females than for males in most cases. As a result, the average sex ratio (males per 100 females) is 150 with a range from 118 for Nanyuki to 158 for Nairobi.

The actual flows, by source and destination, are given in Rempel (1977, Table 4:3) or Rempel and Harris (n.d., Table 3-1 and 3-2). The latter source, (Table 3-4), also provides the flows of recent male in-migration to eight of the urban centers as obtained in our 1968 survey. According to this survey, one out of every 14 men interviewed had moved to a second town during the five year period while one out of every 80 was surveyed in a third town. This shows that 15 per cent of the observed migration was urban-to-urban. Nairobi and Mombasa were both dominant senders as well as receivers of urban-to-urban migration. Therefore, we do not see a basis for arguing that step-migration is occurring in Kenya.

The urban in-migration was dominated by several sources: three of the five districts in Central Province, Kiambu, Muranga and Nyeri; Kitui and Machakos districts in Eastern Province; three of the four districts in Nyanza Province (Kisii is an exception); and the Kakamega District in Western Province. Nairobi and Mombasa tend to attract sizable numbers from most parts of Kenya. With the possible exception of some of the towns in Rift Valley Province, the remaining towns attract migrants primarily from their respective surrounding districts. Residents from Coast Province move primarily to two towns in that province.

When viewed from the urban perspective, the rate of urbanization is high and the magnitude of the in-migration represents a threat to the established urban population. But, the extent of urbanization in Kenya is still so small that urban in-migration is removing only a small portion of the total rural population. Prior to 1969 the rapid urban growth was absorbing only one of every four new entrants to the rural labor force (Rempel, 1974, p.3).

DETERMINANTS OF THE URBANIZATION EVIDENT IN KENYA

With the possible exception of Malindi, a tourist area on the Kenya coast, the major urban centers in Kenya are all direct products of the European settlement in Kenya. Mombasa and Kisumu are the two terminal points of the Uganda Railway. The other eight are all located in the former White Highlands.

The place of the African in this colonial scheme was to provide cheap wage labor (Rosberg and Nottingham, 1970, pp.20-1), deemed necessary for rapid economic growth. The colonial administration assumed Africans would be more productive working for Europeans than in their own areas. This decision shaped government policy on African access to such economic opportunities as land, transportation, education, investment in improved agriculture, and production of certain cash crops.

The use of monetary incentives to induce an adequate labor supply was rejected because Africans were thought to be unresponsive to changes in money wages. A series of taxes--poll tax, hut tax and then import duties on goods demanded by Africans--were introduced, and subsequently increased when more labor was required. Although the expressed purpose of these taxes was to raise revenue, the Commission Report by Lord Moyne in 1932 indicated that Africans received few benefits from their substantial contribution to the colony's tax revenues (Ingham, 1968, p.337).

Although the Europeans preferred non-wage means of obtaining adequate labor supplies, they were not able to prevent some employers from increasing wages during periods of rapid economic expansion. Alternatively employers reduced all wages to produce more labor given the level of cash requirements for tax purposes. For example, in 1920-21 all European employers agreed to reduce wages by one-third (Van Zwanenberg, 1972a, p.14). By 1952 the average wage for unskilled labor was Shs. 25 per month which was considered to be inadequate to provide for the basic needs of a worker (Rosberg and Nottingham, 1970, pp.204-5). A government committee set up in 1952 to study African wages found that

many Africans received an "inadequate wage" for the work they performed.

One of the more effective means for obtaining labor at low cost was to have Africans, with their families and a limited number of cattle, live on European estates. Large numbers entered into such squatting relationships, especially those Africans whose land had been alienated. This approach to the problem was altered somewhat by the Kenya Land Commission Report, accepted by the British Government in 1938. The report argued for more intensive land cultivation in the European areas based on increased European migration and a large, mobile African labor force. The Africans were to serve their time in the European areas but their roots, family, and cattle were to remain in the reserves and the laborers were expected to retire there.

It is this conception of African labor which prevailed in the urban areas throughout most of the colonial period. Little concern was shown for the well-being of workers, few amenities were provided, and no provision was made for family living in the African sections of the towns (Van Zwanenberg, 1972b, p.14). In this setting the urban workers could not improve their productive capability nor could they develop a permanent urban way of life. They "...had to maintain an economic, social, and political stake in their own tribal areas in order to meet the minimum requirements of sustenance and security for themselves and their families." (Rosberg and Nottingham, 1970, p.205). Therefore, by the time of independence, even though a number of Africans were employed in towns, it was not possible to speak of an urban labor force.

Since independence the Kenyan economy has displayed some commendable advances. For example, the annual real rate of growth of Gross Domestic Product (GDP) through 1972 was 6.8 per cent (Republic of Kenya, 1974, p.148). Also, during this time the number of secondary schools available and the number of new entrants into secondary schools had both more than doubled while the number of secondary school graduates had more than

tripled (Kinyanjui, 1973, p.79). A number of other favorable examples could be cited.

Less commendable is the unequal distribution of the benefits from these advances. The scanty evidence indicates that most of the benefits from growth are accruing to a small portion of Kenya's population; approximately 5 per cent of the households receive 50 per cent of the GDP (Rempel, 1975, Table 1). These households include the owners of large scale businesses and farms, skilled and semi-skilled employees, and owners of smaller businesses and cash crop farms.

The origins of this particular domination of the economy date back to at least the mid-1950s when effective power of the economy passed from the white settler community to the urban based Federation of Kenya Employers. Although no supporting data are provided, Hunter argues that in the mid-1950s there was little or no difference in real earnings between urban and agricultural workers (Hunter, 1969, p.121). The Carpenter Report of 1954 advanced a formal argument for a high-wage economy as a means of achieving a more stable labor force (*Ibid.*, pp.121-2). The inclusion of family responsibilities in calculating the minimum wage was part of this argument.

The Carpenter Report was merely verbalizing what was evident already in the larger manufacturing firms: the movement to a high wage, limiting the labor force by increasing the capital intensity of production, reorganizing operations to minimize supervision costs, and offering relatively attractive wages to reduce labor turnover and hence the cost of providing on-the-job training. From this time on there emerged, even among Africans, what has been termed an 'aristocracy of labor'; the receiving of wages and benefits significantly above the level of the majority of employees in either unskilled jobs or in the more traditional industries (Van Zwanenberg, 1972b, p.16). By 1969 money income per employee of urban, formal sector activities was estimated to be seven or eight times that of rural activity (Republic of Kenya, 1971b, pp.41-2). According to the Development Plan, average urban

household income in 1972 was five times that of the average rural household (Republic of Kenya, 1974, p.95).

This concentration of income and wealth in the hands of a few, places these people in a privileged role by virtue of their position in the economy. Not only do their wealth holdings enable them to claim virtually all of the rent and operating surpluses generated in the economy, but also they are able to control the important means of production and dominate the demand for the economy's output.

The taste preferences of this wealthy minority are rather different from that of the other 95 per cent of the population and generate demand for the type of goods and services, which require technology and capital beyond the capability of existing or potential Kenyan businessmen. To overcome constraints, foreign firms have been invited to supply the required technology and capital, with protection against imports provided as an inducement where necessary.* These firms draw their technology from external sources, thus driving the nature of production into a high wage-low labor content per unit of output. This type of production serves to perpetuate the concentration of income and wealth in the hands of a few.

As a means of obtaining and retaining such firms a particular type of infrastructure has been provided in certain urban localities which, in turn, induces other firms and government to locate in these same urban centers. As a result, in 1968, 45 per cent of all formal sector employment was concentrated in eight towns which accounted for some eight per cent of Kenya's population. Six-tenths of this 45 per cent was located in Nairobi which provided the most rapid growth of formal sector job creation even though it had the highest level of wages and was experiencing the fastest growth in wages over time.

* This 'openness' of the Kenya economy fosters a rather different growth path than the standard growth models of the development literature. The latter tend to be based on internal demand conditions such as were observed in the relatively 'closed' Japanese economy.

In summary, the basic structure of the economy has carried over from the colonial period. Those people who lack access to sufficient rural means of production to meet their growing aspirations view urban based, formal sector employment as one means of obtaining a larger part of Kenya's growing economic pie. Shortly after the restrictions to movement of the Mau Mau period were removed in 1959, the urban part of the economy evolved into an excess labor supply situation, in contrast to the labor shortage evident earlier in the colonial period. Current high levels of urban unemployment and the extensive development of the urban informal sector reflect this movement into the urban 'employment lottery'.

RURAL-URBAN MIGRATION AS ONE TYPE OF HOUSEHOLD RESPONSE TO KENYA'S DEVELOPMENT PATH

It is important to keep in mind that only a minority of those who lack access to sufficient resources in their home area have chosen an urban migration destination. Of the persons surveyed outside of their respective districts of birth in the 1969 census, only 34 per cent of the males and 25 per cent of the females were found in one of the 11 major urban centers (Rempel, 1977, Table 4:2)*. This high degree of selectivity of rural residents who chose to migrate requires some discussion. In this section we summarize the known similarities and differences between the men in the migration sample and the men living in rural areas.

Who Migrates

One factor in the selection process is education. The more educated are more likely to migrate than the less educated for

* Actually these percentages understate somewhat the relative importance of rural-urban migration. The urban in-migration totals exclude movement from rural areas in a district to towns located in that same district. This would apply to all urban centers except the cities of Nairobi and Mombasa.

a variety of reasons. First, the extent of information about conditions in the towns available to individual rural residents is directly correlated with education. Second, because of the better access to information and greater ability to adapt to new situations, the educated are more likely to undertake the risk of a rural-urban move. Third, the return realized for an additional year of education is higher in towns than in rural areas. Fourth, given the high level of unemployment in towns, the probability of being selected from a given stock of unemployed will vary directly with the level of education.

All these effects of education are expressed through such variables as the level of wages in the rural and urban areas and the probability of obtaining employment. A less direct effect of education is the expectations of the family that has contributed to an individual's educational expenses. If he is successful in the urban scene he has the reward of a good return on a wise investment, and the family which has contributed to his education can expect to share in this reward. The changing economic conditions in towns require ever higher levels of education to assure such urban rewards, but the expectations and their effect on rural-urban migration persist.

There is considerable evidence in our sample of an association between education and the propensity to migrate (Rempel and Harris, n.d., Table 5-1). The men without formal education are represented poorly in the migration sample relative to the proportions in the rural areas. Men who have completed five or more years of schooling are represented disproportionately in the sample of migrants. In general, the more education completed the more over-represented is the group in the migration sample.

The 1968 survey information on the timing of the rural-urban move also provides support for the hypothesis that a move to towns was expected of the educated. Sixty per cent of the men with some formal education were in school in the quarter prior to migration while 91 per cent with some secondary education were in school immediately prior to migration. Of the men who had

completed primary education but had not continued on to secondary education, two-thirds had passed the Kenya Preliminary Examination. This would indicate that the completion of a particular stream of schooling is a propitious time for migrating because a transition into the labor force is required.

A second selection factor is age. In part, the tendency for a disproportionate number of the rural young to move to the towns reflects the correlation between age and education. Because of the rapid expansion in educational opportunities after independence, many of the better educated Kenyans are relatively young. There are several additional economic reasons for the higher tendency of the young to migrate. First, the potential time span for collecting the difference in expected income streams between urban and rural locations is longer for younger men, thus providing a greater incentive to invest in a spatial move. Second, the degree to which the future is discounted tends to vary directly with age, and as a result, the expected gains from a move are less for older men.

An alternative explanation is the hypothesis that some time spent in an urban center may carry a degree of prestige bordering on initiation into manhood. This explanation implies that the urban stay probably will be temporary and it reduces the importance of differences among age groups in the length of time horizons or the magnitude of the rates of discount. In their study of urbanization in Africa, William and Judith Hanna propose a combination of these two alternatives (Hanna and Hanna, 1971). Placing primary emphasis on the economic determinants, they also note the social compulsion of the younger generation to defer to the elders. Because of this, ambitious youths migrate to towns in order to obtain the freedom needed to realize their ambitions.

The 1968 survey confirmed the expected youthfulness of the migrants. The median age of the men at the time of migration was between 22 and 23 years, and more than 80 per cent of the men were less than 30 years old (Rempel and Harris, n.d. Table 5-3). The propensity to migrate is consistently highest in the

20-24 age category. Although the proportion in the 25-29 age category is actually higher than in the census, except in the Coast Province, the difference for most provinces is rather small. The proportion of migrants over the age of 30 is considerably smaller. For the young, 15-19 years, the sample and the census percentages are similar, except for Coast Province where there are proportionately more in the migration sample than in the census.

The identification of the economic variables operative in the migration selection process is more difficult because the rural data available are not directly comparable to those obtained in our survey. The year 1969 has been selected as the reference point because more data are available for that year. In addition to the population census, surveys were made of small farm and settlement scheme employment and of the operation of small/scale, non-agricultural, rural enterprises. Although a reference point in the 1964 to 1968 period would have been preferable, the year-to-year structural changes in rural economic activity tend to be small. As a result, the use of 1969 data does not inject any known bias into the analysis.

Comparing the activity of the men in our migration sample with the available information on the activity of rural males in the 1969 census, we find an obvious difference in the high proportion of men in school in our sample (*Ibid.*, Tables 5-5 and 5-6). Assuming that the self-employed in the census survey are either farmers or marginally employed, the sum is 69 per cent. This proportion is well above the 26 per cent observed as either in farming or unemployed in our migration sample.

If the comparison is limited to men in our sample who were not in school prior to migration, then the proportion engaged in farming or unemployed rises to 55 per cent with a range from 24 per cent to 69 per cent for young men in Rift Valley Province respectively. However, all of these young men in Rift Valley Province, 62 per cent of these young men in Western Province, and 42 per cent of the 55 per cent average for the total sample were

unemployed. Therefore, it would appear that the migration selection process draws heavily from those who either lack the opportunity to farm or who choose not to farm.

Of interest are some exceptions to this general rule. Of all the men not in school, a slightly larger proportion engaged in farming prior to migration are younger men. This unexpected result is caused by an above average proportion of younger men farming in Eastern and Coast Provinces and a well below average proportion of older men engaged in farming in Central Province. Therefore, the lack of farming opportunities in Central Province as an important explanation of the high rate of out-migration is supported by the evidence presented here.

The available evidence in our survey indicated that only a small proportion of men are farming because 69 per cent lacked immediate access to land (*Ibid.*, Table 5-7). Of these landless migrants more than half no longer have a father or their fathers are landless as well. Therefore, more than one-third of the migrants are presently landless and have no prospect of inheriting land. Of the 14 per cent who claim to own land and whose fathers possess land, approximately one-half refer to the land as their land even though the father still holds it. For the total sample, only some 10 per cent of the men possess or are likely to inherit more than 5 acres of land.

Our survey results lie between those reported by Ross for Nairobi (Ross, 1973). He found 74 per cent of his Mathare Valley respondents were landless, but only 41 per cent of the respondents in Shauri Moyo and Karikor claimed to be without land. One possible explanation for these differences is that the rapid population growth in the rural areas has increased the number of landless in recent years. An alternative and more likely explanation is that the longer term residents of Nairobi are using their urban earnings as a means of obtaining land in the rural areas.

An alternative measure of land availability is calculated for each province by finding the average number of acres of agricultural land per resident adult male.* With some minor variations, for the 31 per cent of the men in our sample who have access to land, landownership is similar to the average amount of land available in each province. However, in Central Province the amount of land owned per landholder exceeds the average amount of land available.

As we have seen, very few migrants own any land. For those migrants in our sample who have land, access to land does not appear to be less than for the rural population in general. However, more than two-thirds of the men do not have direct access to land at the time of their rural-urban move. This limitation is most evident in Central Province which is also the major source of urban in-migration.

We have observed that migrants, prior to migration, have limited access to cash income opportunities in rural areas. It is of interest to compare the income of those migrants who are not in school with the cash income of rural residents (Rempel and Harris, n.d., Table 5-9).

The average cash income of men prior to migration is Shs. 95 per month. The income of men with some secondary education is more than four times the average but the number of men involved is only six per cent of the total sample. Most of the income is derived from regular wage employment, with a few men doing quite well as the self-employed. Net cash revenue from a farm is an insignificant part of the total income. This reflects, in part, the limited access to land, but it indicates as well that most of the men who are farming obtain only small amounts of cash income from these farms. This is especially evident in Eastern and Coast Provinces where the above average access to land does not generate an above average level of farm income.

* High potential land is defined as agricultural land with a minimum of 35 inches (40 inches in Coast Province) of rainfall annually.

The available information on employment income in the rural areas indicates that wage levels on small farms and in settlement schemes are somewhat lower than modern sector agricultural wages, with the latter being well below the non-agricultural modern sector wage levels (*Ibid.*, Table 5-10). Therefore, the range of wages paid in rural areas varies considerably, depending on the type of employment. In part, the Shs. 338 per month for non-agricultural modern sector employment includes a premium paid for education. Such a premium is less evident in agricultural employment.

In addition, several other pieces of information are available for Kenya for 1969. First, some 620,000 small-holders average less than Shs. 100 per month from cash and food crops grown, while 250,000 small-holders receive between Shs. 100 and 180 per month from their farms. Second, according to an unpublished 1969 survey of non-agricultural enterprises, average monthly wages paid for men are Shs. 103, ranging from Shs. 87 for casual employees to Shs. 118 for regular employees. Third, net income of the proprietors of these enterprises average Shs. 414 per month. Of these proprietors 75 per cent are farmers as well. Finally, the average monthly income per household from all sources including subsistence agriculture, is estimated at Shs. 223.

A comparison of our sample with these data indicates that the wage levels of employed men in the migration sample are similar to modern sector wages paid in the rural areas. The wage level of the men with primary education, most typical of the rural pattern, is only Shs. 11 per month below the average rural modern sector wage. Conversely, cash income from farming is very low. It is questionable whether many of the farmers in the sample produce enough food to bring their farm incomes to the Shs. 100 a month ceiling observed for the majority of the rural small-holders.

We conclude therefore that the migrants lack access to commercial farming opportunities. In addition, wage levels for the employed compare favorably with the rural average. What

rural push is exerted is more in the form of limited access to such opportunities. In order to obtain at least comparable economic opportunities to the non-agricultural rural wage, the majority of the men in the sample must turn to the urban scene.

The Determinants of Rural-to-Urban Migration*

We can summarize the general understanding of the migration decision-making process by a set of testable hypotheses. The range of relevant variables, however, is constrained by the data available.

The first set of forces operating on the decision-making process is the extent of economic opportunities in agriculture in the various districts. Two factors are crucial: access to good agricultural land and opportunities for cash crops to individual land owners. Access to land is bounded by the density of population per hectare of high potential agricultural land. The existence of land does not necessarily mean that the local people have access to it, because it can be in the form of large estates. For this reason the measure of the extent of commercial agriculture practiced in a district is limited to that land held as either small scale farms or settlement schemes. The expectation is that the extent of migration from any one district will vary directly with the number of people per hectare and inversely with the extent of cash cropping practiced.

The second set of forces is the employment opportunities available in towns relative to what is available in the home area. Relevant variables are the respective wage levels in the two places and the probability of obtaining employment at this going wage. Ideally the wages should be expressed in real terms because of the differences in the cost of living in the two locations. The proportion of the labor force engaged in modern

* The material in this section is drawn directly from the regression results reported in Rempel (1977).

sector employment can be used as a measure of the probability of obtaining employment. In practice this proportion is influenced directly by the in-migration response to employment opportunities. What is relevant here, however, is the prospective migrant's perception of the employment situation which need not include the realization that many others are likely to respond in the same manner. What may trigger the initial response is the creation of new job opportunities rather than the stock of unemployed relative to a given level of jobs available. The extent of the rural-urban migration varies directly with the magnitude of the variables in the urban centers and inversely with their magnitudes in the rural areas. The same applies to non-economic determinants such as the extent of amenities available in the source and destination areas.

A third set of forces is the intervening factors in the rural-to-urban move. These include the actual monetary costs of the move to each possible destination. There are also the psychic costs of separation from a home area. These are correlated with the cost of the move because the degree of separation is a function of the ease with which one can return to the home area for periodic visits. In addition, the extent and the quality of information available about possible destinations vary directly with the cost of maintaining contact between each town and rural area. The quality of information available can be improved and the psychic costs reduced by the presence of friends or relatives in the destination area. Therefore, migration flows between two areas vary inversely with the cost of transport and the degree of separation between two areas, and directly with the extent of clan contacts in the particular urban center.

Finally, there are the personal factors affecting the migration decision.* Central to our postulated decision-making

* The age of migrants and the level of education completed are relevant personal factors in the migration decision-making process but, given the nature of the data, measures for these variables cannot be developed.

process is the extent of the aspirations for a way of life not readily available in rural areas. In a large part, such aspirations are culturally determined. Therefore, a set of five dummy variables are used for the four major ethnic groupings plus all other tribes, to measure the variation among ethnic groups of rural-urban migration, holding other variables constant. A more direct measure of aspirations in a given district is based on the assumption that the same aspirations which determine the desire for education determine the desire for urban opportunities. On the basis of this assumption we postulate that the extent of rural-urban migration varies directly with the proportion of primary age school children receiving formal education in each district.

A double logarithm, least squares regression was run for the total sample, males and females.* The explanatory power of the model was good, with coefficients of determination (R^2) of 0.84, 0.78 and 0.81 respectively. All coefficients of the dummy variables were significant and the variation in the magnitude of the coefficients indicated that there were differences among the ethnic groups in their propensity to migrate. The ranking of the ethnic groups from the highest to the lowest propensity is Nilotic, Western Bantu, Coastal Bantu, Central Bantu and Other Tribes. For males the propensity to migrate is somewhat higher in all cases, with the largest increases over females in the Nilotic and the Coastal Bantu groups.

The coefficients of the one explicit measure of an absolute rural-push force, the number of persons per hectare of high potential agricultural land, are not statistically significant. In part this reflects the crudeness of the measure since high potential is defined solely in terms of the amount of rainfall

* The actual regression results are provided in Rempel (1977, Table 4:7). The data sources and the method of measuring the variables are given in Table 4:1 of the same article. The dependent variable used is the per cent of the total number of people born in the district i who are counted in urban center j in the 1969 census. The matrix includes 31 district source areas and 10 urban destinations. The town of Malindi and the former Northern Province had to be dropped because not all relevant data were available.

received and ignores other relevant ecological factors. However, the lack of rural push caused by a high population-land ratio does not rule out the pressure of landlessness in some districts caused by a lack of access to the land because of local ownership patterns. The available evidence indicates a moderate push force. The coefficients for the per cent of the small scale agriculture and settlement scheme land devoted to cash crops are consistently negative and significant. The migration elasticity of cash crop opportunities is larger for females, -0.14, than for males, -0.10.

The migration effect of economic opportunities as measured by average wages supports the contention of a rural push relative to the urban pull. The coefficients for the urban wage have the expected positive sign while the rural wage coefficients are negative. All coefficients are statistically significant. With an elasticity of 3.43, a one per cent increase in the average urban wage (Shs. 385), will cause an additional 0.002 per cent of the rural population to move to towns. Conversely, a one per cent increase in district wages (Shs. 208) will deter 0.0018 per cent of the rural population from migrating to towns. The migration impact of wage changes is somewhat larger for males than for females.

The impact of employment opportunities on migration is rather contrary to expectation. The per cent of the estimated labor force engaged in modern sector employment has an unexpected negative sign for males and for the total sample. These negative coefficients are statistically significant. The deterrent effect on migration of the urban employment rate is much larger for males than for the total sample. Similarly, the impact of the employment rate in rural areas has an unexpected positive sign for both males and females.

There are two possible explanations for these results. First, prospective male migrants may view employment opportunities in terms of clan contacts available in an urban center rather than of actual employment realities. In our 1968 survey the two

dominant reasons given by the migrants for selecting a particular destination were: 1) the best possibility of obtaining employment and 2) the presence of friends or relatives in that town. While only 38 per cent of the men received assistance from clan contacts in obtaining their first job, more than 80 per cent received food, housing or both from clan contacts upon arrival. Second, migration may be triggered by the number of new jobs created. The extent of the rural-urban migration response to these new employment opportunities increases the level of unemployment in those towns receiving the largest proportion of in-migrants. Because our variable for urban jobs created has a simple correlation coefficient of 0.9 with our urban income measure, the effect of jobs created on the migration rate is already captured in the coefficient for the urban wage level.

The measure of the skill content of the modern sector employment available in each location is significant, but only for males do the *urban* coefficients have the expected positive sign. All the coefficients for this measure in *rural* areas have an unexpected positive sign. For males, the combination of these variables indicates that the more the availability of skilled employment opportunities in a district, the more the chance of being selected for skilled jobs in those towns where the proportion of skilled employment to total employment is greatest. Because of the lower level of education among females, however, the search for employment by this group need not be related to the skill content of the job opportunities in a particular town.

The role of amenities in towns relative to districts has the expected positive sign but is significant for females only. This would indicate amenity availability is not a significant determinant of migration for males. However, the possibility still remains that the desire for urban amenities is really expressed through income because income is an essential prerequisite to urban amenities.

The previously proposed role of clan contacts in the migration process is confirmed for the total sample and for men (but not for women where the coefficient is insignificant). For the total sample, a one per cent increase in the availability of clan contacts in the towns increases the proportion of rural residents moving to the towns by 0.0002 per cent. For males it is 0.0005 per cent. Therefore, the impact of clan contacts is considerably less than the impact of economic opportunities in various towns.

Furthermore, the measure for distance consistently has a negative coefficient which is highly significant. The negative impact of distance on migration is greater for males than for females. Also, the impact of distance is greater than that of clan contacts but somewhat less than that of income.

In our earlier discussion we indicated that in various rural areas there are differences in the level of aspirations for more than basic subsistence. These aspirations relate to what urban life has to offer, including formal education for children, and encompasses employment in towns as a means of achieving these aspirations. The coefficients for the district education variable are positive and significant when entered without the dummy variables for ethnic groups but are significant for females only when the dummy variables are included. This indicates that the variables are measuring a similar phenomenon.

In summary, the regression results point to the importance of economic opportunities as determinants of observed migration. Although there is no real evidence of an absolute rural push, the rural population is responding to the prospects of better paying jobs in the towns when possibilities for cash cropping are limited. The degree of such a response varies somewhat among ethnic groups. The availability of jobs, the level of wages paid, and the rate of growth of wages over time all serve to attract migrants. The relative importance of employment versus wage levels cannot be sorted out readily. Also, whether wages must be raised to attract sufficient labor for the jobs available is not considered here.

These results are consistent with the hypothesized selective nature of the rural-urban migration process. The young have fewer attachments in the rural areas which must be given up to realize better economic prospects in towns. The educated are subject to less risk because of better information and higher probability of employment. Also, the rate of return on education is higher in urban employment. In general, the impact of economic variables is greater for males than for females, thus making the decision-making process for females more complex, because of the wider range of variables involved.

The Degree of the Urban Commitment of Migrants

One important issue is whether urban in-migrants plan to stay permanently or whether they are merely circulating between rural and urban areas. Earlier studies on migration have noted a strong tendency of migrants to circulate (Elkan, 1960; Mitchell, 1962; Southall, 1962). More recently, doubt has been cast on the validity of these earlier studies (Etherington, 1967; Bienefeld and Sabot, 1972).

In an attempt to assess the degree of urban commitment, the men in each urban center were asked, "Do you wish to stay here for the rest of your life?" (Question 38). Those who answered no were asked further, "How much longer do you wish to stay?" (Question 39). The responses to questions 38 and 39 indicated that 59 per cent of the men considered themselves a permanent part of the urban labor force. An additional 15 per cent were uncertain about their future migration plans.

The men with some secondary education were more intent on remaining permanently. The difference between the two educational groups in their intentions to remain was significant at the one per cent level. With reference to land ownership, it was the men who own land that was used to produce cash crops who were most intent on remaining for some time while the men who had land still in the hands of their respective fathers

were thinking in terms of a temporary stay. For the 60 per cent of the sample who had no land, the future migration intentions and the reasons for leaving were almost identical to that of the total sample.

Of the subset that had fathers who possessed land, those whose fathers owned six or more acres of land were least permanent in their migration intentions. Within this subgroup, of the 38 per cent who planned to leave or were uncertain, 4 per cent intended to return to a shamba, 7 per cent wanted to return to buy or improve a shamba, and 31 per cent were target workers. It was not clear that the desire to leave was determined by a stronger desire to return to an agricultural alternative.

Of the 15 per cent who planned to leave within 5 years, approximately one-third fit the labor circulation category while another third were thinking of leaving because they were unemployed or wished to improve their employment position elsewhere. Of the men uncertain about their future plans, 31 per cent were in the labor circulation category and 43 per cent were concerned about improving their employment position. Combining the information from these two subsets, only 9 per cent of the total sample clearly fitted the designation of temporary migrants. The survey results confirmed the conclusions of recent literature, that urban in-migrants of the latter half of the 1960's were more likely to consider their urban stay as permanent.

One possibility that had to be considered was the status of men who planned to leave or who were uncertain about their future plans. If these men were recent arrivals, the above information would understate the importance of temporary migrants. In order to consider this, the distribution of the four future migration possibilities was determined for each of the five years in which the migrants had arrived. The variation of the observed distribution from expected values was found not to be statistically significant. Therefore, the hypothesis

that the distribution of men who were considering future migration was concentrated among the more recent arrivals, had to be rejected.

The men who were considering an additional move were asked, "Where do you think you will go?" (Question 42). Of the 366 men who responded to this question, 20 per cent were planning to move to one of the other seven urban centers. Of the remaining 80 per cent, 78 were planning to move back to their province of birth while two per cent were considering a move to another province.

Furthermore, the men who were planning to leave within five years and the men who were uncertain about future migration plans had access to more land than the other men in the sample. The differences in the amounts of land owned between the men who planned to leave or who were uncertain about leaving versus the men who planned to remain permanently were statistically significant. The level of availability of this rural alternative appeared to have some bearing on the degree of urban commitment.

The sample data pointed to a rather high degree of urban commitment, which may be due more to the superior urban economic opportunities than to an urban way of life. For example, 16 per cent wanted to leave because they were unemployed and another 22 per cent wanted to improve their employment position elsewhere. In the total sample, the men who were employed experienced an average wage increase from Shs. 286 to Shs. 322 a month during the first two years after migration. The men who were employed but uncertain about their migration intentions experienced a smaller increase, from Shs. 295 to Shs. 299 per month. They started at a slightly higher wage but during the first years after migration their relative wage deteriorated to 90 per cent of the average wage for all employed men. It is possible that this relative deterioration was a major cause of their uncertainty about the future. For the others, the degree of urban commitment may have been a function of the degree of employment, income security, and satisfaction.

A final piece of evidence indicating that the basis for urban commitment was primarily economic, was the fact that 35 per cent of the men planned to stay throughout their working life only. Whether they retire to their rural home areas or not when the time comes remains to be seen. William and Judith Hanna (1971, p.47) in their brief survey on rural ties, suggested that the desire to eventually return home may be more symbolic than real. Plotnicov (1965), on the basis of field work in Nigeria, concurs with the conclusion of the Hannas.

SOME OF THE OBSERVED EFFECTS OF RURAL-TO-URBAN MIGRATION

Our study of migration in Kenya did not place primary emphasis on the effects of the migration that occurred. Therefore, much of this section is based on indirect evidence, and the conclusions reached should be regarded as tentative.

The Effects on the Migrant

Assessing the effect of migration on migrants depends on the manner in which migration is defined. According to Mabogunjie, migration is completed only when the person involved has undergone "a permanent transformation of skills, attitudes, motivation, and behavioral patterns such that a migrant is enabled to break completely with his rural background" (1970, p.2). According to Mitchell (1959, pp.38-40) such a transformation occurs when the centripetal forces back to the village have been eroded sufficiently by urban economic security and political and social involvement that they no longer build up to the point of exceeding the centrifugal forces away from the village.

Although we argue that the degree of urban commitment of recent migrants is high, the level of economic well-being and the extent of economic security for many migrants does not permit

a complete break with the rural home area *.

In our sample, 36 per cent of the men are married. For 60 per cent of the married men the wives are resident in a rural area. For some, this is because of insufficient establishments in town. For others, it is the inability to pay urban living costs for a family. For those with access to land it may be an inability to give up the subsistence food crop production by family members. For many, whether married or single, it is simply a matter of keeping open a rural option should current employment cease because of lay-off, accident, or health problems (Weisner, 1972).

Gutkind describes a process whereby in-migrants derive initial support from urban based relatives and then, if not successful in obtaining formal sector employment, merge into the informal sector, establishing relationships with others in a similar plight and, in some cases, becoming more politicized (Gutkind, 1967; Gutkind, 1973). For women without a viable rural option, the urban employment options are so limited that urban existence frequently has meant engaging in some semi-legal activity (Bujra, 1975).

The Effects on the Rural Areas

As stated earlier, the extent of rural-urban migration prior to 1969 has removed approximately one out of every four new entrants into the rural labor force. Therefore, one cannot speak of general shortages of rural labor because of rural-urban migration.** As a result, the migration has not exerted signifi-

* Elkan (1976) argues that the extent of contact with rural home areas by men in Nairobi is sufficiently strong that one cannot speak of the Nairobi labor force becoming a proletariat.

** The absolute number of rural male laborers has declined in particular localities (Moock, 1973), but rural-rural migration will have played an important if not dominant role in such cases.

cant upward pressure on rural wages, large commercial farms have remained viable in their present form, and there has not been significant pressure for increased employment of capital in agriculture as an alternative to labor. Possible exceptions are the good farming areas adjacent to the major urban centers which have been subjected to considerable demand increases.

However, the selective out-migration of males has resulted in a large number of rural households with a female head. These women have continued subsistence food crop production on their farms. The fact that many of their husbands have been able to tap an alternative income stream in the form of urban employment has reduced the incentive to employ improved agricultural production techniques on the land of these women. At the same time, there have been reports that agricultural extension workers tend to ignore the female farmers.

Although rapid urbanization is occurring, the internal terms of trade have moved against agriculture and in favor of industry (Republic of Kenya, 1971b, p.42). Several factors are involved here: the concentration of urban buying power in the hands of a few with taste preferences for imported goods, government controlled prices, and imperfect competition in the processing and distribution of food in urban areas.

A third impact of migration is urban-to-rural remittances. According to a sample drawn from lower and middle income groups of Nairobi, 21 per cent of earned urban income was being remitted (Johnson and Whitelaw, 1974, p.474). In our sample the average amount was 13 per cent of earned urban income. Such remittances play an important role in the rural reas. They provide the means to pay off debts, purchase food and consumer goods, educate children, purchase better health care, finance further out-migration, improve rural housing, purchase land, and provide the means for productive investment in rural areas. The available evidence indicates that remittances are spent primarily on consumption and very little is invested in rural

development (*Ibid.*, p.475; Moock, 1973, p.314; Weisner, 1972; Parkin, 1971). Nevertheless, the local rural economy is stimulated and rural-urban income differentials are reduced somewhat. Because it is not the poorest families or the poorest regions that generate the rural-urban migration, the remittances serve to hinder the equalization of intra-rural distribution of income.

Another significant effect of the rural-urban migration on the rural areas is the increased preference for education. There is some evidence that funds that would normally be invested in agriculture now are being diverted to pay for school fees (Gwyer, 1972; Moock, 1973). However, it is proving difficult to introduce the curriculum reform needed to make formal education more relevant to the development efforts required in rural areas, thus preparing young people for formal sector employment.

Finally, the rural-urban migration has provided better access to superior health care in towns. This is an important, immediate benefit even though it has some longer term adverse implications for population growth.

The Effects on the Urban Areas

One immediate effect of urban in-migration is a demand for facilities such as housing, schools, health care, and sewage systems. The extent of this pressure in Kenya and the government's ability to meet the increased demand is documented in a recent Ford Foundation study (1973). The large number of migrants represent a threat not only to the continuing functioning of urban facilities, but also to the government's ability to maintain and expand these facilities. Given that most of the migrants are not accompanied initially by their families and that the people who remain unemployed longest frequently are staying in temporary housing (Collier and Rempel, 1977) the significance of this latter aspect can be overstated.

A second important factor is the effect of the rapid increase in the urban labor force on the urban wage structure. Initial theoretical work on migration started with the assumption that wages were constrained from declining by such institutional factors as government imposed minimum wages and union power (Harris and Todaro, 1970). The data available, however, indicate that few of the formal sector firms set their starting wage as low as the urban minimum wage. Our analysis shows that the postulated role of unions on wage rates cannot be substantiated (House and Rempel, 1976a), and that the excess supply of labor has not served to depress formal sector wage levels (House and Rempel, 1978). In the manufacturing sector, the industries which expand employment most do not find it necessary to raise wages in order to attract the required labor force (House and Rempel, 1976b). Our overall conclusion is that a subset of formal sector firms, which operate in a "protected" labor market, set the modern sector wage structure at a level well above the supply price of labor (Rempel and House, 1977). This institutionally set wage has been instrumental in causing urban in-migration but has not been responsive to the extent of the migration.

The excess in-migration that cannot be absorbed in this "protected" part of the labor market must compete for employment opportunities with the "unprotected" part of the formal sector or turn to the urban informal sector. The informal sector consists of a combination of entrepreneurs who have voluntarily given up formal sector jobs for better income earning self-employment, those who are least employable in the formal sector, and some who are secondary income earners (Rempel and Lobdell, 1977, ch.5). Although the size of the urban informal sector would have been less had the urban population grown less, the informal sector is not the place where in-migrants queue and subsist while seeking formal sector employment.

AREAS FOR FURTHER RESEARCH

The basic thesis of this paper has been that rural-urban migration is a rational response by particular rural households to development in Kenya. The migration will not serve to shape this development significantly; it is merely a symptom of the economic growth that is occurring in particular localities.

If this thesis is valid, further research can take place at two levels. One level is the continued study of the symptoms of development. First, the dynamics of how the urban labor market operates is little understood. Some topics involved here are the immediate trigger of a particular migration, the process of job search, the degree of job-mobility, the extent of labor turnover, and the role of the informal sector. Second, the correct specification and estimation of employment in Todaro's urban expected income variable is still to be realized. If individual migrants fail to take into consideration the fact that many will respond to new job openings in town, the level of unemployment after migration will hardly be representative of what each perceived to be his respective likelihood of obtaining employment. Also, the relationship between changes in employment and changes in the state of net rural-urban migration has not been investigated adequately (Godfrey, 1973). Third, assessment and measurement of the effects of migration, especially in rural areas, still requires further work.

The questions are quite different when considering the actual determinants of the overall migration process. To begin with, there does not exist a model of rural development. Theory has focused on agricultural development and on such regional aspects as location, but the integrated advancement of agriculture, non-agricultural rural activity, and towns is a dynamic process that has not been analyzed adequately. In order to do this, more needs to be known about: inter-regional and inter-sectoral flows of goods and services; the production relationships that characterize formal and informal sector activity in rural and urban areas; the manner in which income is distributed

in both areas; the manner in which taste preferences are formed in an open economy; and the impact of government monetary foreign exchange and price policies on rural output and income. Of primary importance are: 1) industry level studies of production functions; 2) household budget studies of income distribution and income elasticity of demand for domestically produced goods; and 3) studies of inter-sectoral and inter-regional trade and resource flows.

Second, it has yet to be determined whether required structural change in an economy can proceed in a gradual fashion. If so, what are the central changes and are alternatives possible? The ILO Report for Kenya (1972) has made a good beginning. Leys (1975) has criticized the Report on the grounds that the government is not likely to follow policy recommendations that have adverse effects on its interests. There is much truth in this, however, one must know what the crucial leverage points are in order to make useful recommendations for a development path which involves all the people in the realization and the benefits of structural change.

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