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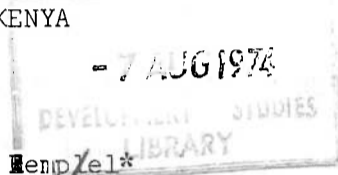
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THE DIVERGENCE OF PRIVATE FROM SOCIAL  
COSTS IN RURAL-URBAN MIGRATION:  
A CASE STUDY OF NAIROBI, KENYA

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ABSTRACT

In Developing Economies the level of urban wages tends to induce more people to seek employment in the towns than can be employed at this wage level. The existence of these urban unemployed causes the private costs of migration to diverge from the social costs. The individual rural resident decides to remain or migrate on the basis of perceived private costs of migration. The effect of a decision to migrate on the economy is the social cost of migration. In our study we consider the determinants of different levels of private and social costs associated with different stocks of urban unemployed. In addition, utilizing survey data on Nairobi, Kenya, an attempt is made to quantify the major private and social costs of migration to determine whether they diverge significantly. On the basis of these estimates some policy options for limiting urban unemployment caused by urban in-migration are considered.

## INTRODUCTION

In a survey of research on migration in Africa, Derek Byerlee suggests that it is likely that the private and social returns to migration diverge and he calls for research to determine the magnitude of this divergence (1, p.16). Our study is a partial response to this request. Data collected in a 1968 survey (see Appendix) are used to measure the divergence of private from social costs of in-migration into Nairobi during the period 1964 to 1968. Such a limited study may arouse criticism from those who would wish a more balanced approach dealing with both costs and benefits. We would like to indicate at the outset that we are in no way implying that the costs outweigh the benefits of migration. We conclude with a discussion of policy issues which indicates ways of modifying the costs without jeopardizing the benefits.

## URBAN IN-MIGRATION AND URBAN UNEMPLOYMENT

The general pattern of rural-urban income differentials in Kenya indicates a distinct monetary advantage for a typical rural resident who moves to a city or town and is successful in obtaining some form of employment. For the migrants in our sample the average rural-urban income differential was 117 shs. per month, 182 per cent above average rural income. If the migrant was fortunate enough to find regular employment in the urban center during the first year after migration, the average differential increased to 147 shs. per month, a 230 per cent increase. This potential improvement in cash income was purchased at the price of a rural-to-urban move and the cost of subsistence in an urban setting while participating in a lottery, "the urban economy game" (6, p.3).

Given the magnitude of rural-urban wage differentials, the urban centers attract more migrants than can be employed at the prevailing urban wage. Therefore, there are at least two major forces at work which are determining in-migration: first, the positive influence of a large rural-urban wage differential which may be countered to some extent by the second, the migrant's perception of his ability to acquire a job. According to Todaro, the migrants consider the economic gains to be made from the rural-urban income differential but they also take into consideration the probability of obtaining urban employment

(22, p. 5). This probability varies directly with the urban rate of new employment creation and inversely with the ratio of urban job seekers to the number of existing urban job opportunities (Ibid., p. 23). If real wages are increasing faster than unemployment, then the migrant's expected income may be the same or increase coincidentally with the rising numbers of unemployed. This may also occur when wages and job availability are increasing proportionately or the rate of job creation is faster than the increase in real wages. Therefore, at constant or rising urban real wages, the creation of one additional job in the urban sector results in more than one additional rural resident responding in the form of a rural to urban move.

The existence of a significant rural-urban income differential creates a state of disequilibrium in the economy and emergence of large numbers of migrants is a response to this. Equilibrium is achieved and positive rural-urban migration checked when the level of urban unemployment leads to a marginal expected urban real income equal to the marginal rural real income. Thus this model is committed to an equilibrium situation in which significant levels of urban unemployment exist. The greater the differential between rural and urban wage levels, the larger the stock of urban unemployed needed to bring the rural-urban distribution of labour into equilibrium. As long as a rural-urban expected real income differential persists, the migrant can hope for a positive increase in his welfare as a result of migration. Society as a whole experiences the negative effects of high levels of urban unemployment.

#### THE DIVERGENCE OF PRIVATE FROM SOCIAL COSTS IN RURAL-URBAN MIGRATION

In practice, private costs cannot easily be distinguished from social costs. The approach here is first to estimate all those costs which the individual migrant incurs in his search for urban employment.<sup>1</sup> The costs to society of the rural-urban move include all of these private costs plus the costs associated with the urban unemployment caused by the inappropriate urban wage level relative to the rural income possibilities. In the sample, migrants into Nairobi were unemployed for an average of 3.5 months before obtaining their first job or before engaging in self-employment.<sup>2</sup> In the second part of this section we estimate as

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1. Much of the empirical analysis in this section is taken from (3).

2. A limitation of our survey is that we do not know how many men arrived in Nairobi between 1964 and 1968 but had left prior to the survey. The possible bias on our cost estimates of this limitation in the data is discussed later in the paper.

many of the social costs as possible based on 3.5 months of unemployment. Accurate measurement of the costs of migration would have required the use of socially optimal prices and wages, but for practical reasons measurement had to be based on observed average prices and wages. Finally, changes in private and social costs are correlated with changes in the size of the stock of urban unemployed and changes in the type of men who move into the towns.

#### Private Costs

(1) Average Rural Income Forgone: The first private cost to be considered is the income forgone by the migrant when he leaves his rural place of employment. This cost will be particularly significant to him before he acquires urban employment. In his decision-making process the migrant compares what he will give up -- rural expected real income, with what he hopes to gain -- urban expected real income, perceived in terms of the prevailing real wage rate and the probability of obtaining employment. If the difference between the two is sufficiently large, he will decide to move.

Cash income in the rural areas was used as a measure of rural income forgone. In selecting the relevant value of cash income, we considered two factors. First, the length of unemployment after migration was related to the type of employment prior to migration. Those migrants who were either part-time employed or unemployed before they came to Nairobi waited the greatest average length of time for employment (4.5 to 5 months). The group which experienced only slightly less difficulty in obtaining urban employment was individuals who had been students before migration. The unemployed school-leavers embodied 16 per cent of the total migrant sample while the previously part-time employed or unemployed who remained unemployed represented 3 per cent of the total migrant sample.

Second, there were differences among the migrants in the realized levels of rural income. The men with a maximum of primary education averaged 62 shs. per month while the men with some secondary education averaged 70 shs.<sup>3</sup> The few who were wage-employed averaged

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3. All migrants who were students prior to migration were excluded in the calculation of these averages.

279 shs. per month while the self-employed averaged 53 shs., and average farm income was 2.3 shs. per month.

Since these two factors had opposite effects, the length of unemployment is higher for the men with below-average rural income. For the average length of unemployment the figure 3.5 months was used and for the average rural income the figure 64 shs. per month was used. Therefore, on average each migrant paid 224 shs. in the form of rural income forgone to participate in the urban employment lottery.

(2) Average Cost of the Move: The second private cost is the expense of the move itself and the cost of maintaining contact with the home area. Costs involved include actual travel expenses plus the psychological cost of being removed from family and friends. If a migrant has the possibility of making contact with friends and relatives in the urban center, then the psychological strain of estrangement may be decreased. We hypothesize that the greater the costs of the move, the larger the differential in expected income necessary to pull the migrant to the urban center. Other things equal, as the probability of obtaining urban employment declines, the people who are most distant in an economic and social sense are most likely to forgo a rural-to-urban move.

The average distance travelled by the unemployed migrant sample was 114 miles. There are differences in the average distance travelled by the migrants who were unemployed for different lengths of time, but no consistent pattern emerges. It is the men who were unemployed for a maximum of three months and the men who were unemployed for more than a year who travelled above average distances. Since only a small proportion were unemployed longer than a year and since there is no obvious causal link between length of unemployment and distance travelled, the average of 114 miles is used. The approximate cost per mile of bus transportation is 0.1 shs. so that the average cost of the moves per migrant is 11.4 shs.

Unfortunately this measure does not indicate the total cost to the migrant. If the migrant is accompanied by his wife, some of the psychological costs of the move are removed but monetary costs increase. In the total sample of unemployed migrants, 16 per cent of the men were accompanied by their wives, 63 per cent were single, and 21 per cent of the men were married but did not bring their wives with them. The psychological costs of the move can also be measured by the existence of family or relatives living in the urban center. When the migrants were asked why they chose to come to Nairobi, some did indicate they had come

because of the presence of friends or relatives. For the unemployed migrants in Nairobi, 75 per cent had obtained their information about Nairobi from relatives or friends who, we assume, are living in Nairobi. The migrants' second source of information regarding Nairobi was either family (67 per cent) or friends (17 per cent). From this evidence we might conclude that the psychological costs of the move are not as great as one might anticipate. However, it is impossible to quantify these costs.

(3) Average Cost of Urban Subsistence and Job Search: The final private cost is the cost of subsistence and the cost of job search upon arrival in the urban center. To the extent that a person has savings or has others on whose resources he can draw to cover this cost, the greater will be the capability to risk a period of unemployment in order to obtain desired urban employment. If this cost can be passed on to others, it ceases to be a private cost except in the sense of the discomfort of cramped living and the obligations which must be repaid at some future date.<sup>4</sup> If the migrant cannot depend on either of these methods, he will need to resort to peri-legal activities such as beer-brewing or traditional services such as operating a sidewalk shoeshine stand or, as a last resort, engage in begging.

The additional cost of subsisting in Nairobi was not easy to estimate but we arrived at a figure based on the food and rental requirements of one migrant on a monthly basis. The Development Plan 1970-74 states that for a family with an income of less than 199 shs. per month the upper limit to rental payment is 50 shs. per month (13, p. 508). Family size over our study period increased from 4.2 to 4.6 persons (Ibid.); therefore, an approximate expenditure per person on rent is 10 shs. per month. It is possible to imagine that some of the migrants who cannot find shelter for themselves due to lack of money or friends would remove this cost by living out of doors (but anti-vagrancy laws make this difficult).

The food necessary to keep a man alive was also difficult to estimate. The Statistical Abstract for 1968 gives the average amount spent on food for the middle income earners by household size (12, p. 174). For one person, expenditure for consumption of maize

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4. To the extent that assistance comes from family members with an expectation of repayment or subsequent assistance to other family members, it remains basically a private cost involving a transfer of income in kind.



and pulses equals 23 shs. per month. We may safely assume that, although this constitutes a small fraction of the total food bill of the middle income earner, a man living at subsistence level in Nairobi would confine himself primarily to items such as these. The Central Province Survey of Urban Consumption concluded that food per household member costs 32 shs. per month (11, p. 65). From these figures we suggest that for a man to survive in Nairobi he must spend between 15 and 20 shs. on food per month.

Additional cost for the unemployed is the cost of urban transit while job hunting, which costs about 0.1 shs. per mile, and the cost of a newspaper, which is 0.6 shs. These two items will vary in amount, depending on the amount the migrant is able to spend. He might not be able to afford either; however, we will estimate that he will spend on them a minimum of 4 shs. per month. The average cost of subsistence and job search to the migrant for 3.5 months of unemployment will be 85 shs. for shelter, 61 shs. for food and 14 shs. miscellaneous for a total cost of 110 shs. for a minimum standard of comfort.

Whether these costs remain to be handled by the migrant or whether the unemployed are looked after by family and friends will determine whether these costs are private or borne by society. The migrants claim that 88 per cent did receive assistance in the form of food and housing from others. Thus we are talking about 12 per cent of the unemployed and how they support themselves. Some unemployed migrants were receiving money from relatives living outside of Nairobi; however this amount was greatest in 1964 when they received on average 0.3 shs. per month. Some unemployed men claimed they obtained miscellaneous income from unspecified sources, the mean value of which was 13 shs. per month. This explains how some of the unemployed supported themselves without the aid of family or friends.

#### Social Costs

(1) Average Urban Production Forgone: The first of the social costs is the urban production forgone during the time of the move and while the migrant searches for employment in the urban area. The exact value of this production forgone cannot be determined because the magnitude of the urban in-migration will affect the urban marginal product of labour. The maximum value of the production forgone by the typical migrant will be the current marginal product of the urban employed. The lower extreme, if large numbers migrate, will be the marginal product of the

rural employed. In our estimate of production forgone we provide a range of values based on these two extremes. In any case, the value of the urban production forgone is net of the rural production forgone by the migrant (see (1) under Private Costs). The value of urban production forgone will be a function of the migrant's education and job experience and will vary directly with the degree of urban unemployment.

Fifty-six per cent of the migrants who experienced some unemployment had some primary education, 36 per cent had some secondary, and 8 per cent were without formal education. These figures are comparable to the distribution of the total sample of migrants (56, 33 and 11 per cent respectively). The average length of unemployment of the migrants in these education categories did not differ except for the migrants with no education, who waited an average of 5.5 months to obtain jobs. Of those who had qualifications other than a secondary certificate, few had any training which would enable them to work at skilled jobs. Of the 147 who were unemployed in Nairobi, two had trade training and were unemployed from 13 to 15 months and one had a teaching certificate. This is also similar to the total sample of migrants and as a result we may conclude that those who were unemployed did not have inferior vocational training when compared to the total migrant sample. Young men were predominant in the sample of unemployed but made up 46 per cent of the total sample. The average length of time each wage group waited for a first job also emphasizes the significance of the younger men in the ranks of the unemployed. They average 5.9 months of unemployment compared to 3.5 months for all migrants.

Since the education and training differences between the unemployed and the total sample were slight, we concluded that the cost to the economy of the unemployed is not reduced due to any supposed inferiority on their part. The average income of the employed in the first quarter after migration was 266 shs. per month (primary - 155, secondary - 382, no education - 153). Therefore, for an average of 3.5 months of unemployment, the estimated maximum cost to the economy due to unused manpower is 707 shs. per rural-urban migration (931 minus the average rural income forgone of 224 shs.). As stated earlier, if large numbers migrate, the marginal product of the employed urban worker will decline so that the above estimate represents a maximum net value of urban production forgone. The lower limit is the marginal productivity for the rural employed. For the men with some primary education, the

average rural wage was 150 shs. per month.<sup>5</sup> For 3.5 months of unemployment the minimum value of net production forgone is 301 shs.

(3.5 x 150)  
- 225

(2) Average Cost of Urban Amenities: An additional social cost of the urban in-migrant is the use of amenities essential to urban living. Unemployed migrants make demands on housing (net of reduced housing demand in the origin area), sewer, water, streets, electricity and some of the social amenities such as medical services and schools (net of what was available in the area of origin). This social cost per migrant varies directly with the degree of crowding in the use of existing amenities and the level of amenity provided. Any decision by government to alleviate the overcrowding in amenity use will create employment as well as greater amenity availability. Therefore, migration will be induced by the increased probability of obtaining employment. Further, for a given rural-urban expected real income differential, one might also argue that differences in the urban versus the rural standard of living may enter as an inducement to migrate.

The cost of providing urban amenities for the unemployed is a cost which the city facilities must bear whether or not it is the migrant or his relatives who pay for it. Unfortunately we are not able to determine a value for this cost. The subject was studied according to the housing categories in which the migrants were living (3, chap. III). Those districts with the greatest numbers and proportions of unemployed migrants were: medium cost, medium density housing; low cost, high density housing; and temporary housing.

In medium cost housing the majority of unemployed migrants were living with relatives who were earlier migrants to Nairobi. These migrants experienced short periods of unemployment before obtaining their first jobs (1 - 2 months). With relatively low density the use of government supplied facilities did not appear to be unduly heavy. The major social cost which these migrants imply is the influence they have on their hosts. Continual demands being made on a family in this housing category may have a discouraging consequence for the wage earner.

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5. The wage premium for secondary education is considered to be negligible in the rural areas.

In low cost housing the average length of unemployment of its migrants was four months. The cost of these unemployed may be expected to be greatest of all the housing categories since much of the housing is government or employer subsidized. Also the high density conditions which exist here make the presence of unemployed individuals even more costly. Those migrants employed and living in these parts of Nairobi have incomes comparable to, and at times greater than, those living in medium cost. As a result, they are no less able to support their unemployed relatives but the uncomfortable living conditions might have stronger psychological costs for the hosts.

Temporary housing experienced the highest rates of unemployment-- from 4 - 5 months per migrant. The costs of the unemployed in this category are reduced however since some facilities necessary in the heart of town are not necessary out here, e.g. sanitary and sewerage facilities may be kept down to a minimum relative to the demands made on low cost housing. Here families are in a much better position to help their relatives with potential for mutual benefit in self-help projects.

Further costs to the economy were considered with regard to the marital status of the migrants and the permanency of residence. Sixty-three per cent of the men who did experience some unemployment were single, 16 per cent of the unemployed were accompanied by their wives to Nairobi, and, of this 16 per cent, seven men remained unemployed for at least two years. Those men who were married but unaccompanied by their wives made up 21 per cent of the migrants who had difficulty finding jobs upon arrival in Nairobi. Eighty-four per cent of the unemployed migrants, therefore, were no further burden on the city. The men whose wives came to Nairobi with them implied further costs to the municipality such as increased demands on health services, educational facilities, housing and related facilities. If the wife of the unemployed migrant is employed in the urban sector, the private costs and not the social costs are reduced.

It has been proposed by Joan Nelson that the migrant's expectation of residential permanency will influence his demands on the urban center (18). If the migrant plans to return to his village at some future date (regardless of the length of urban residence or the reality of his expectations), he will not have the same attitude towards his living conditions as he would were he to look on the city as his permanent home. He will look on his discomforts as temporary whereas a resident will look for ways to improve his condition. For those migrants who were

unemployed in Nairobi, 36 per cent planned to stay in Nairobi for the rest of their lives, 64 per cent planned to leave, and of those unemployed almost two years, 27 per cent still chose to remain in Nairobi while 72 per cent planned to leave. In the housing categories the proportions intending to stay were 35 per cent in low cost, 47 per cent in temporary and 18 per cent in medium cost housing, implying greater costs to the municipality due to higher standard of living expectations.

(3) Other Costs: There are other social costs related to urban unemployment which are difficult to measure and often impossible to quantify. These include potential political and social unrest and the formation of more permanent groups of unemployed creating the possibility of the up to now irremediable "culture of poverty". Potentially these costs may represent the heaviest burden to the economy but we are not in a position to measure them. When the migrant makes his decision to migrate, he does so with some level of knowledge regarding his employment potential and some expectations about the preferred type of employment. The probability of frustration and unrest will vary directly with the magnitude of the difference between expectations and reality, perceived possibilities and the actual situation. The likelihood of more permanent unemployment will vary inversely with both the individual's skill level and the extent of his options to return to his home area or move to some alternative location.

The dissatisfaction of the unemployed migrants was considered but was limited by the available data. The unemployed were asked what they thought was the main reason for their unemployment. Four answers were anticipated: (1) too little education; (2) tribal discrimination; (3) government not trying hard enough to create jobs; and (4) trade unions only looking out for the welfare of their own members. The strongest response was in the first category. Those in the latter three groups are more prone to political unrest, if not action, than those who see personal skill inadequacy as the cause of their unemployment. The longer the migrants remained unemployed, the greater the tendency towards discontent. This question was also broken down by education groups. While 45 per cent of those in the primary education group blamed their failure to obtain employment on the lack of education, only 31 per cent of the secondary students did. Fifty-five per cent of the unemployed with primary education or less could be called discontented while 69 per cent of the secondary students were.

Summary of Average Costs

We have measured the average values of those costs which can be quantified. The divergence of private from social costs can now be more readily seen. The value of production forgone by the Kenya economy for the average migrant unemployed 3.5 months is: rural production forgone, 224 shs.; net urban production forgone, a range of 301 to 707 shs.; total production forgone, a range of 525 to 931 shs. Two further costs have been quantified for the average migrant: the average cost of the move - 11.4 shs., and the cost of urban subsistence - 110 shs. (These may be a social cost only if provided by friends or relatives.) Therefore, it is possible for private costs of migration to equal 345 shs. while the social costs are somewhere within the range of 646 to 1,052 shs. per migrant.

These values for social costs are to be considered as minimum values for a number of reasons. First, such important costs as use of urban facilities and the costs associated with political and social unrest could not be quantified. Second, those migrants who came to Nairobi but returned prior to the survey could not be included in the calculations. We hypothesize that these men returned because they could not obtain satisfactory employment in Nairobi or because they had above average rural income opportunities. In either case, the inclusion of these men would have increased the value of social costs. Finally, only actual unemployment was considered in the estimates. Since the value to society of the output of some of the men who resorted to employment or self-employment in the informal sector as a means of subsistence is likely to be less than their social cost while in Nairobi, they represent an increase in the social cost caused by the inappropriate urban wage.

Changes in Social and Private Costs

According to our migration model, the creation of one new job above the existing rate of job creation will attract more than one additional migrant. Therefore, even if average private and social costs of an unemployed migrant remain constant, an increase in the rural-urban expected real income differential will cause increasing social costs for the economy in the form of a larger stock of urban unemployed. Furthermore, for a given stock of urban unemployed, if the characteristics of these unemployed migrants change, then the social cost of this stock

of unemployed will change as well. As a result we formulate here a series of hypotheses on the likely changes in the costs of migration caused by an increase in the rural-urban expected real income differential (type "a"), and by a change in the characteristics of the unemployed migrants (type "b").

1 (a) The cost of the marginal unemployed migrant in terms of rural income forgone will increase if the rural-urban income differential increases. Some migrants who previously would not migrate, due to insufficient rural-urban wage differential will, with an increased urban wage, find sufficient incentive to migrate. This implies that they have a higher rural income than the migrants who left previously. This higher rural income also increases the migrant's opportunity cost of making the move; so a similar effect to that stated above would be realized if this migrant perceives an improved probability of obtaining urban employment, even if the urban wage has remained constant.

2 (a) When the incentive to migrate increases, the migrant more distant from the urban center or with a less common cultural heritage will migrate and thus increase the private cost of migration.

2 (b) The financial cost of moving per migrant increases if he takes his family with him but this increased financial cost may be offset by a reduced psychological cost in the form of increased security.

3 (a) The private costs of urban subsistence and job search increase as more migrants are induced into the urban areas by an increased rural-urban real income differential. Since increased incentives were necessary to induce migration, these individuals will be more likely to have to bear the costs of their own subsistence. The increased stock of unemployed migrants means that the individual will have less ability to receive aid from relatives or friends who are experiencing increasing demands. At the same time the cost of subsistence may increase as a result of the pressure from increased demand.

3 (b) Higher education of the unemployed implies greater private costs since their expectation of urban living standards will be higher than that of the migrants of previous times who, with less education, had fewer material wants.

4 (a) Urban production forgone will increase if increased migration is induced by an increase in urban wages but will remain the same if induced by increased job opportunities.

4 (b) Because opportunities for high wage employment for the better educated are much better in urban centers than in rural areas, the gap between rural and urban productivity will tend to increase as the level of education provided increases.

5 (a) An increase in social costs will result from the heavier demands being made on existing urban facilities by increased numbers of migrants. Higher urban densities will increase the discomfort of all and will induce government efforts to provide more facilities.

5 (b) With an increase in the level of education, expectations with reference to living conditions and amenity will increase. Therefore, over time the social cost of unemployment will increase.

6 (a) With higher levels of unemployment, more people will experience the frustration of unemployment. The marginal unemployed migrant will be more prone to join a group which has negative political implications because larger numbers of unemployed make communication easier and such a group more powerful and, therefore, more likely to survive.

6 (b) A change in the composition of the unemployed over time will result in increased political and social unrest. The unemployed will now be better educated and will be less likely to blame themselves for their inability to find jobs but rather will blame government, trade unions and the business firms.

Since we lack a sufficient time span over which to observe any trend in costs, it is not possible to quantify changes in private and social costs. It would appear though that the costs of migration are likely to increase in the immediate future. The Kenya government has made a strong commitment to promote rural development but rural-urban wage differentials are still increasing. Also, the government has placed great emphasis on increasing the levels of education of its rural population. As a result, the general level of educational achievement in the labour force has risen in Kenya and continues to do so. Finally, with increased levels of income in the urban centers, more married men will be able to afford to bring their families with them, which increases the costs per migrant.

#### POLICY IMPLICATIONS FOR RURAL-URBAN MIGRATION CONTROL

For the purpose of this paper we take as given both the existence of an urban unemployment problem and the need during the process of economic development for a transfer of labour resources



from agricultural to non-agricultural activity. For example, in Kenya during the time of our survey, the pronouncements of some public officials, the debate in the Kenyan Parliament and the statements of some social scientists led one to believe that Kenya was beset with an urban unemployment problem bordering on crisis proportions. Although it was not clear which of the above mentioned costs concerned the politicians and social scientists most, it was clear that the magnitude of these costs was sufficient to warrant serious consideration of various means of controlling the net flow of labour into urban centers. However, given Kenya's desire for economic development, a certain amount of rural-to-urban shift in population is essential; so the questions before us are: when should this shift in the spatial location of the population take place and what measures should be adopted to control the flow of migrants.

For the Councillors of Nairobi the obvious and most desirable solution is not to control rural-urban migration but to introduce measures to ensure jobs and housing for the unemployed. Such measures would benefit the city both by removing the disadvantages of the existence of unemployed migrants as well as by stepping up economic activity in the city. This will not provide a solution to the problem, however, because of the immense task involved in providing housing and jobs for 15 to 20 per cent of the labour force (5, p. 6; 22, p. 5). Even this accomplishment would not provide a solution because the provision of more jobs and more housing will only induce further migration. An experiment in 1964 (and later in 1970), designed to increase urban jobs and reduce unemployment had only a temporary effect, contributing more to raising expectations for the rural reserve army of potential migrants than to realizing them (10, pp. 529-543).

An alternative approach to resolving the urban unemployment problem would be a subsidy to industry of sufficient magnitude to cover the opportunity cost of the urban job (prevailing wage minus the value of the output of an additional job). In this way industry can be induced to hire more labour. Given the migration decision-making mechanism utilized here, Harris and Todaro have shown that such a wage subsidy will not improve overall welfare without some restriction of migration in-flow (9, p. 137).

Therefore, a third option is to control the urban in-flow either in conjunction with an urban industry wage subsidy as proposed by Harris and Todaro or as an independent strategy. The Kenya government

is pursuing such a policy in an indirect manner in the form of moral suasion by President Kenyatta calling on the urban unemployed to return to their land and in the form of "anti-vagrancy" legislation which empowers the Courts to order some urban unemployed back to their home area. Although such a policy may well be beneficial to the Kenyan economy in the short-run, given a minimum average social cost per unemployed migrant in the range of 646 to 1,652 shs., it is not in the economic self-interest of the individual migrant who has a sufficiently high probability of purchasing a higher urban income stream at an approximate average cost of 345 shs. Furthermore, such action would redistribute income in favour of the already wealthier urban centres.<sup>6</sup> Over time the total economy would lose as well since the marginally employed would merely be forced to remain in the rural areas, which would serve to dampen development efforts in these areas.

The difficulty with these three proposed solutions is that they are designed to counter the symptoms, expressed in the form of mounting social costs, rather than the causes of the problem. Although Harris and Todaro explicitly recognize the inappropriate urban wage as the cause of the problem, they assume it is legislatively determined and thus do not consider the determinants of the rural-urban wage differential.

The persistent rural-urban wage differential is a function of three major factors. First, the inherited colonial wage structure, the need to employ expatriates since Independence and the international mobility of some groups have served to ensure international levels of remuneration for some of the employees in the major urban centers. The presence of international companies in large numbers aggravates the situation. Second, government policies with reference to import substitution, trade licensing and minimum wages have encouraged a choice of technology which results in a relatively small, high-productivity, high-wage labour force in the major urban centers. Third, productivity in the rural areas has not increased at a sufficient rate to keep pace with the productivity increase of the employed in the urban areas. In some rural areas the population pressure on the land is too severe to enable the

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6. Harris and Todaro demonstrate that the rural areas will suffer a net welfare loss from migration control policies if the price elasticity of demand for the rural output is less than one.

absorption of a rapidly growing labour force in production characterized by rapid growth in labour productivity.<sup>7</sup> In other rural areas where out-migration has exceeded labour force growth, the remaining population has lacked the ability to adapt to an alternative, more productive set of production techniques.<sup>8</sup>

Therefore, the fourth and, in our opinion, preferred option is to recognize the causes of the rural-urban wage differential and to remedy these causes. For the Kenya government this will involve a re-examination of its industrial strategy as well as increased rural development efforts. By integrating the rural economy into the total economy and thus enabling the rural population to respond to new market opportunities with new production techniques, it will serve over time to reduce the rural-urban wage differential and enable the Kenya economy to realize the welfare optimum possible under a competitive wage in a properly functioning market. Such a rural development strategy would include education and training designed to enable the rural population to develop and absorb new technology, furthering development of transportation and marketing systems to integrate the total economy and developing a number of growth centers throughout Kenya.

On the basis of a comparison of the 1962 and the 1969 Census, the inflow of adult population into Nairobi was estimated to be 90,800.<sup>9</sup> If each of these men experienced 3.5 months of unemployment on arrival in Nairobi, then, on the basis of our average social cost per migrant the annual cost to the Kenya economy of this growth in the Nairobi labour force was in the approximate range of Kf418,977 to Kf682,297. For 1964 these values represent from .13 to .21 per cent of Kenya's Gross Domestic Product. Therefore, a considerable reduction of social cost can be purchased with some expenditure in rural development. The opportunity cost of creating a rural job which induces one unemployed

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7. Evidence collected in several rural areas indicates that the parents who cannot provide land for their children have channelled the available investment funds into education as a means of enabling their children to seek employment in the towns and cities (17, 8).

8. The elements of this inability in rural areas to adapt to changing land-labour ratios has been developed by Koo (14).

9. The estimate was based on the difference between the 1969 African male population (Census, Vol. II, Table 3) and the 1962 African male population (Census, Vol. I and II, p. 36). The difference was then multiplied by the proportion of total African male population, age 20 years and older, according to the 1969 Census (Vol. III, Table I).

migrant in Nairobi to return to his home area is the value of the new output of that migrant since his output forgone in Nairobi is zero. This approach to the problem will reduce the social cost of migration without jeopardizing the benefits to be derived from rural-urban migration.

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APPENDIX

The Survey of Rural-Urban Migration in Kenya\*

The costs of migrant unemployment are based on data taken from the questionnaires given to a representative sample in Nairobi and Nairobi Extra-Provincial District in 1968. The sample was made up of African males who had migrated to Nairobi between 1964 and 1968 and who had come from either another urban center or a rural village for the purpose of finding employment. No attempt was made to interview either those migrants who had chosen not to migrate or those migrants who had returned to their place of origin. In order to obtain a random sample a set of buildings were selected using a table of random numbers in each of the six housing categories in Nairobi according to the distribution of the total population. (Information regarding migrant distribution was not available.) Fifty-seven questions were asked of the migrants by University of Nairobi students. The information obtained includes the length of unemployment of each migrant before acquiring a first job; a measure of their productive potential based on (1) their previous rural employment, (2) their level of education, and (3) their vocational training as it compares to those already productively employed; the types of housing they live in; and the political attitudes they express.

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\* A complete description of the Survey and methodology will be found in Henry Rempel, "Rural-to-Urban Labour Migration: An Interim Report," Nairobi: Institute for Development Studies, Staff Paper No. 39, (August, 1968).

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