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Source: *International Migration Review*, Vol. 8, No. 4, (Winter, 1974), pp. 543-566

Published by: The Center for Migration Studies of New York, Inc.

Stable URL: <http://www.jstor.org/stable/3002204>

Accessed: 30/04/2008 11:47

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Rural-Urban Migration in Africa: Theory, Policy and Research Implications

Derek Byerlee¹

I. INTRODUCTION

Throughout the developing world, countries are experiencing rapid rates of urbanization. In Africa, urban growth rates are among the highest in the world, averaging about 7 percent annually, with several cities having growth rates in excess of 10 percent. Associated with this urbanization has been a large increase in open urban unemployment which generally exceeds 10 percent of the urban labor force and consists largely of young school-leavers.²

Although rapid urbanization and its associated unemployment is due partly to high population growth rates, rural-urban migration accounts for over half the growth of most African cities. At the same time, out-migration of labor from agriculture has been one factor leading to national food deficits and rising food prices in many African countries.³ For these reasons, there is wide-spread concern that the rates of rural-urban migration should be slowed. From an economic viewpoint, the mass of urban unemployed coupled with at least seasonal labor deficits in rural areas represents under-utilization of resources and contributes to inequitable distribution of income. But more importantly to the policy

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² For further discussion of urban growth rates and urban unemployment in Africa, see C. R. Frank, "Urban Unemployment and Economic Growth in Africa," *Oxford Economic Papers*, 20 (July 1968), pp. 250-274. Also, Michael P. Todaro, "Income Expectations, Rural-Urban Migration and Employment in Africa," *International Labour Review*, 104:5 (1971), pp. 387-414.

³ For a review of the evidence that labor is a limiting factor in African agriculture, see Derek Byerlee and Carl K. Eicher, "Rural Employment, Migration and Economic Development: Theoretical Issues and Empirical Evidence from Africa," *The Place of Agriculture in the Development of the Developing Countries*, ed. by E. A. G. Robinson (London: Macmillan, forthcoming 1974).

makers, the urban unemployed and high rates of urbanization pose strong social and political reasons for reducing the flow of migrants to the city.

There is now general agreement that rural-urban migration should be an integral part of national policy analysis and planning, but little agreement on the impact of various policies such as education, minimum wage legislation, agricultural taxes and rural industrialization on the rate of rural-urban migration. Despite considerable research on African rural-urban migration, there is still an inadequate understanding of the rural-urban migration process and its implications for economic development.

It is the aim of this paper to examine from a theoretical standpoint the process of rural-urban migration in Africa and its role in economic development with a view toward proposing a research agenda to address key policy issues. We do this in three stages. First, the large body of theoretical and empirical knowledge of the rural-urban migration process in Africa is briefly reviewed emphasising those characteristics which are most important in Africa and the deficiencies in our present understanding of rural-urban migration. Second, this knowledge is synthesized into a theoretical framework for analysing rural-urban migration with emphasis on economic variables. This framework is then used to explore some of the policy implications of present-day rural-urban migration for economic development in Africa. Finally, priority areas for future migration research are discussed with particular reference to improve theory, improved methodology and the integration of migration research and policy analysis.

II. OVERVIEW OF AFRICAN RURAL-URBAN MIGRATION

In Africa, the migration of labor both in colonial times and presently has been particularly important in the development process. During colonial times a combination of factors such as the freedom to move across colonial boundaries and the imposition of taxes by colonial governments led to well established "circular" streams of migration. Typically men migrated from their village for a period of two to five years to work in mines, plantations and factories, sometimes at considerable distances from their home area.⁴ The fact that often men would make such a trip several times during their lifetime to earn cash income, led to

⁴The significance of circular streams of migration has been discussed in Walter Elkan, "Circular Migration and the Growth of Towns in East Africa," *International Labour Review*, 96 (December 1967), pp. 581-589. Also, William M. Vogel, "Is Labor Migration of Decreasing Significance in the Economics of East Africa," Occasional Paper No. 34 (Syracuse: Program of East African Studies, Syracuse University, 1970).

the well known "target income" hypothesis and the notion of backward-bending labor supply curves.⁵

More recently, with increasing unemployment in urban areas, the competition of a growing body of school drop-outs, and the closing of international boundaries with independence, the short-term migrant is gradually phasing into a permanent migrant who either has a wage job and will not risk giving it up to return to the village or who is self-employed in the urban small-scale sector in the hope of obtaining a wage job.⁶ The focus of this overview is the recent literature on rural-urban migration (particularly since independence), reviewed from an economist's perspective. Earlier reviews by Gugler, Panofsky and Hutton have adequately covered the short-term labor migration of earlier periods.⁷

Characteristics of Migrants

Contemporary African rural-urban migration is a selective process in the sense that migrants generally have certain characteristics that distinguish them from their population of origin and which form the basis for constructing a theory of migration. In Africa, our knowledge of the characteristics of migrants is dominated by the work of Caldwell who surveyed 14,000 persons in both rural and urban areas of Ghana.⁸ In addition, surveys by numerous other authors provide a good coverage of these characteristics in other parts of Africa.

⁵Critical reviews of these concepts are provided by Marvin P. Miracle and Bruce Fetter, "Backward Sloping Labor Supply Functions and African Economic Behavior," *Economic Development and Cultural Change*, 18 (January 1970), pp. 240-251 and Elliot J. Berg, "Backward Sloping Labour Supply Functions in Dual Economies: The Africa Case," *Quarterly Journal of Economics*, 75 (August 1961), pp. 468-492.

⁶Circular streams of migration are still common in Southern Africa particularly from Malawi, Botswana, Lesotho and Swaziland to South Africa. Another type of "circular" migration not discussed here and also still common, is rural to rural seasonal migration in areas of Africa with a pronounced dry season. For example, in the savannah region of West Africa, seasonal migrants leave home at the end of harvest to work in the tree crop zone of the south, returning again at the beginning of the next growing season. See particularly, Ralph E. Beal and Carmen F. Menezes, "Migrant Labor and Agricultural Output in Ghana," *Oxford Economic Papers* 21 (March 1970), pp. 109-127.

⁷Hans E. Panofsky, "Migrant Labour in Africa—A Bibliographic Note," *The Journal of Modern African Studies*, 1:4 (1963), pp. 521-529; Josef Gugler, "The Impact of Labor Migration on Society and Economy in Africa: Empirical Findings and Theoretical Considerations," *African Social Research*, 6 (1968), pp. 463-486 and Caroline R. Hutton, "Rates of Labour Migration," *Nkanga 6: Urban Growth in Sub-Saharan Africa*, ed. by Joseph Gugler (Kampala: Makerere University, 1970).

Demographic Characteristics. Early studies of African migration have noted the high proportion of men in the rural-urban migration streams. In recent times, however, the proportion of women has increased and, in fact, Caldwell⁹ finds that women comprise almost half of rural-urban migrants in Ghana.¹⁰ In part this increase in the proportion of women is associated with more permanent migrants bringing their families to town.

The average African migrant is young. In Ghana, Caldwell estimates that the highest propensity to migrate occurs in the 15-19 year age category.¹¹ Rempel notes a peak for the 20-25 age group in Kenya,¹² while Callaway estimates that three-quarters of the migrants to Ibadan in Nigeria are school-leavers between 15 and 25 years of age.¹³ In fact, both Caldwell in Ghana¹⁴ and Ominde in Kenya find evidence that after the age of 45, the number of returning migrants exceeds the number of out-migrants from rural areas.¹⁵

Educational Characteristics. Studies of rural to urban migrants consistently show a positive association between education and the propensity to migrate. The Ghanaian survey revealed that 65 percent of respondents with no education had never migrated and did not intend to migrate, compared to only 17 percent for those respondents with some secondary schooling.¹⁶ Sabot in Tanzania provides the most comprehensive analysis of the relationships between education and migration.¹⁷ His results not only reveal the higher propensity to migrate

⁸ John C. Caldwell, *African Rural-Urban Migration: The Movement to Ghana's Towns* (Canberra: Australia National University Press, 1969).

⁹ *Ibid.*, p. 59.

¹⁰ In contrast reviews of Latin American rural-urban migration report that women are more important than men in rural-urban migration. See Robert N. Thomas, "Internal Migration in Latin America; Analysis of Recent Literature," paper presented to the National Conference for Latin American Geographers (Muncie, Indiana: Ball State University, 1967); also, Bruce Herrick, "Urbanization and Urban Migration in Latin America; An Economist's View," *Latin American Urban Research*, Vol. I, ed. by Francine F. Rabinovitz and Felicity M. Trueblood (Beverly Hills, California: Sage, 1970).

¹¹ Caldwell, *op. cit.*, pp. 58-68.

¹² Henry Rempel, "Labor Migration into Urban Centers and Urban Unemployment in Kenya" (unpublished Ph.D. dissertation, University of Wisconsin, 1970).

¹³ Archibald Callaway, "Educational Expansion and the Rise of Youth Unemployment," *The City of Ibadan*, ed. by P. C. Lloyd, A. L. Mabogunje and B. Awe (London: Cambridge University Press, 1967).

¹⁴ Caldwell, *op. cit.*, Chapter 8.

¹⁵ Simeon H. Ominde, "Internal Migration of the Economically Active Age Group in Kenya," *Ost Africanische Studien*, ed. by H. Berger (Nurnberg: Alexander Universitat, 1968).

¹⁶ Caldwell, *op. cit.*, p. 62. Similar results were obtained in Kenya by Rempel, *loc. cit.*

¹⁷ R. H. Sabot, "Education, Income Distribution and Urban Migration in Tanzania" (unpublished paper, Economic Research Bureau, University of Dar es Salaam, 1972).

of educated persons but also show that this propensity has increased over time as secondary school-leavers form a higher proportion of total rural-urban migrants.

Economic Characteristics. Perhaps because of the difficulty of obtaining income data, surprisingly little information exists on the income and wealth status of rural households from which migrants originate. Many authors have interpreted the high out-migration from densely populated regions to mean that migrants originate from poor households.¹⁸ Significantly, however, rural-urban migrants in Ghana tend to originate in households of above average wealth, although this could arise because of the effect of more wealthy households on education of household members and hence, the propensity to migrate.¹⁹ Alternatively, it is possible that the higher income households may be partly the result of remittances of migrants from urban to rural areas.

When migrants are classified by occupation prior to migration, over half are found to be school-dropouts without any previous occupation. The remainder are made up of farmers and self-employed craftsmen with the skill level of craftsmen apparently having little effect on the propensity to migrate.²⁰

The Process of Rural-Urban Migration in Africa

A large number of rural-urban migrants are school-dropouts who depart within a year after finishing school. Many have visited the city previously but their choice of destination is largely influenced by the presence of relatives and friends already in town.²¹ Generally these relatives and friends will act as a source of support while searching for a job.²² However there is generally little available information on the process by which migrants phase into the urban labor force and urban living. Nor is there evidence on the number of migrants who return to rural areas if they fail to obtain a job.

The rate of migration almost always declines with the distance of the urban area from the rural area of origin. There is evidence that many migrants follow a step migration pattern, first migrating to the nearest

¹⁸ For example, Walter Elkan, *Migrants and Proletarians* (London: Oxford University Press, 1960).

¹⁹ Caldwell, *op. cit.*, p. 82.

²⁰ For example, Caldwell, *op. cit.*, p. 59 and Rempel, *loc. cit.*

²¹ Caldwell, *op. cit.*, Chapter 5; Rempel, *loc. cit.* and Caroline R. Hutton, *loc. cit.*

²² In some cases these extended family relationships are being replaced by kin or tribe based voluntary associations. See for example, Kenneth Little, *West African Urbanization: A Study of Voluntary Associations in Social Change* (Cambridge: Cambridge University Press, 1965).

town and then later to a larger urban area.²³ However, the distance migrated generally increases with the level of education with the most educated migrants often being drawn to the capital city.

The rural-urban migrant often retains particularly close ties with his village through frequent visits and remittances of cash and gifts. Because of the communal land tenure system, a migrant generally has claim to his land even when residing in the city and after the age of 45, many migrants retire to their home area.²⁴ The remittance system acts, in fact, to maintain rights to land and can be considered as a form of security for retirement.

In summary, the African migrant exhibits many of the characteristics of migrants in other regions (e.g., the U.S., Asia and Latin America). For example, he is younger, better educated and generally chooses a destination where relatives and friends are already present. However, two characteristics of rural-urban migration which stand out in Africa need to be explicitly treated in any theoretical analysis. First, the social system and, particularly the land tenure system, increases mobility between urban and rural areas and contributes to the close ties between urban migrants and rural areas of origin as evidenced by frequent visits and cash remittances to rural areas. Second, the dominance of school-leavers in the migration stream is particularly strong in Africa relative to other regions such as Asia and Latin America where illiterate landless laborers and tenants make up a considerable proportion of the migrants.²⁵ It is this large out-migration of educated youth which is of most concern to policy makers. They deprive the rural areas of a valuable human capital and add to the ranks of the urban unemployed.

Theories of Rural-Urban Migration in Africa

The extensive studies of African migration by anthropologists, sociologists and geographers and more recently economists provide a large body of information on the characteristics of migrants, but despite this have failed to yield an established theory for analysing rural-urban

²³ G. R. Collins, "Movement of Population from Rural to Urban Areas in Sierra Leone with Special Reference to Economic Aspects and to the Colony Rural Areas," *Record: International Institute of Differing Civilizations*, 27 (1952), pp. 152-171 and Joel Gregory, "Migration in Upper Volta," *African Urban Notes*, 6:1 (1971), pp. 44-52.

²⁴ The significance of the African land tenure system is discussed by P. F. M. McLaughlin, "The Policy Relationship Between Individual Rights to Land and Migrant Labour Systems in Africa," *Civilizations*, 14:1 (1964), pp. 12-18.

²⁵ The most extensive review of rural-urban migration studies in developing countries is provided by Pamela H. Brigg, "Migration to Urban Areas," (Economics Staff Working Paper No. 107, World Bank, 1971).

migration in Africa. Most researchers have recognized the overriding importance of economic motives in the decision to migrate. For example, respondents to survey questions such as, "Why did you migrate?" have nearly always stressed economic motives such as higher incomes and better employment opportunities. Other researchers have casually observed that "push" factors associated with high population densities determine rural areas of out migration, while high urban wage rates "pull" migrants to the city.²⁶ None of these studies, however, rigorously establishes a relationship between economic variables and migration; and more importantly, they do not address important policy issues such as the impact of urban wages on migration.

More recently with the interest of economists in migration, a number of observers such as Lewis,²⁷ Frank,²⁸ Eicher, *et. al.*²⁹ and Todaro³⁰ have noted a significant and widening rural-urban income disparity in several African countries. However, secondary data on average rural incomes and urban minimum wages are used in these comparisons without recognizing the problems inherent in this approach to measuring rural-urban income disparities.³¹ Knight³² has made the most careful comparison of rural and urban incomes using various sources from Ghana. His results vary considerably depending on the source of data used but the rural-urban income disparity he observes is not as wide as generally believed.

These studies of course assume that the rate of migration depends on the magnitude of the rural-urban income differential. A few studies have attempted to quantify the impact of economic variables on migration. Beals, Levy and Moses used Ghanaian census data and regression techniques to show that *interregional* migration depends on per capita regional income, distance, and urbanization in both the sending region

²⁶ Elkan, *Migrants and Proletarians*, *loc. cit.*

²⁷ W. Arthur Lewis, *Reflections on Nigeria's Economic Growth* (Paris: Organization for Economic Cooperation and Development, 1967).

²⁸ Frank, *loc. cit.*

²⁹ Carl K. Eicher, Thomas Zalla, James Kocher and Fred Winch, *Employment Generation in African Agriculture* (East Lansing: Institute of International Agriculture, Michigan State University, 1970).

³⁰ Todaro, *loc. cit.*

³¹ The problems of estimating rural incomes from secondary data are well known. In addition using minimum wages as the relevant urban income fails to recognize that most urban workers are employed in the so-called traditional sector. See Peter H. Thormann, "The Rural-Urban Income Differential and Minimum Wage Fixing Criteria," *International Labour Review*, 102:2 (1970), pp. 127-148.

³² J. B. Knight, "Rural-Urban Income Comparisons and Migration in Ghana," *Bulletin of the Oxford University Institute of Economics and Statistics*, 34 (May 1972), pp. 199-228.

and the receiving region.³³ Likewise, Sabot attempted to analyse rural-urban migration in Tanzania using census data.³⁴ The regression equations generally gave poor explanatory power although rural-urban differences in per capita income sometimes had a significant effect. Generally, however, these studies have used crude economic indicators such as population density and regional per capita income which only very partially describe the economic environment in which the decision to migrate is made and do not constitute a theory of migration suitable for policy analysis.

Recently, two major attempts to formulate a theory of migration in developing countries with particular reference to Africa have been made by Gugler³⁵ and Todaro.³⁶ Gugler considers migration flows from a sociological perspective and although his theory recognizes the dominance of economic motives his central concern is with the interaction of economic and noneconomic factors in the decision to migrate and he does not provide an explicit treatment of economic variables. He does however attach key importance to strong rural-urban ties in explaining African rural-urban migration.

The Todaro theory on the other hand, explicitly treats economic variables. In order to explain rural-urban migration in the face of urban unemployment, he hypothesizes that rural-urban migration is determined by the rural-urban differential in the present value of *expected* earnings, computed from the probability that a migrant will be unemployed in the urban area.³⁷

Although the essential elements of the Todaro model of migration have been empirically tested in the U.S. and other developed countries,³⁸ as yet

³³ Ralph E. Beals, Mildred B. Levy and Leon N. Moses, "Rationality and Migration in Ghana," *The Review of Economics and Statistics*, 49 (November 1967), pp. 480-486.

³⁴ Sabot, *loc. cit.*

³⁵ Josef Gugler, "On the Theory of Rural-Urban Migration: The Case of Sub-Saharan Africa," *Migration*, ed. by J. A. Jackson (Cambridge: Cambridge University Press, 1969).

³⁶ Michael P. Todaro, "A Model of Labor Migration and Urban Unemployment in Less Developed Countries," *The American Economic Review*, 59 (March 1969), pp. 138-148.

³⁷ Johnson has refined the Todaro model to include the rate of urban job turnover and the rate of creation of new jobs as additional factors affecting the probability of obtaining a job. See George E. Johnson, "The Structure of Rural to Urban Migration Models," *Eastern Africa Economic Review*, 1 (June 1971), pp. 29-46. Likewise, Fields has expanded the Todaro model to include employment in the urban small scale sector and the cost of job search. See Gary S. Fields, "Rural-Urban Migration, Urban Unemployment and Underemployment and Job-Search Activity in LDCs," (Discussion Paper No. 168, Economic Growth Center, Yale University, 1972).

³⁸ See for example, C. E. Bishop, "Economic Aspects of Changes in Farm Labor Force," *Labor Mobility and Population in Agriculture* (Ames, Iowa: Iowa State University Press, 1961) for evidence of the expected income hypothesis in the U.S. Likewise, Johnson finds the rate of

the empirical evidence from Africa is inconclusive. Rempel conducted an extensive survey of urban migrants in Kenya as a specific test of the Todaro model. Although regression analysis of the data showed "no consistent evidence of the importance of a rural-urban expected income differential as an attractive force to urban centers,"³⁹ the study suffered serious weaknesses such as the exclusive emphasis on studying rural-urban migration only in the urban area. Sabot has assembled evidence from Tanzania that the educational composition of the rural-urban migration stream has adjusted to changing employment opportunities in urban areas.⁴⁰ Finally Levi⁴¹ has indirectly tested the Todaro model in Sierra Leone, but again, because of poor secondary data such as officially registered unemployed and use of per capita food production as a proxy for rural incomes, his results are inconclusive.

Nonetheless Todaro's theory is clearly an important contribution particularly in its explicit treatment of the impact of *urban* incomes and *urban* unemployment on migration. However the Todaro theory and its derivatives are urban oriented and do not address such critical questions as the determinants of *rural* incomes, the role of *rural* education and information and noneconomic variables relating to the *rural* social system which are important to policy analysis.⁴² The following section develops a theoretical framework for analysing the individual decision to migrate on the premise that because decisions to migrate are made in rural areas a theory of migration should emphasise the rural environment in which that decision is made.

III. A THEORETICAL SCHEMA OF THE DECISION TO MIGRATE

The factors bearing on the individual decision to migrate are

growth of nonagricultural jobs and the rate of urban unemployment are significant determinants of outmigration from agriculture in the U.S. See George E. Johnson, "The Structure of Rural-Urban Migration Models," *Eastern Africa Economic Review* 1:1 (1971), pp. 29-46. Finally a recent paper by Todaro assembles evidence from several developing countries mostly outside Africa, to support the expected income hypothesis, Michael P. Todaro, "Rural-Urban Migration, Unemployment and Job Probabilities: Recent Theoretical and Empirical Research" (Conference of International Economics Association, Valescure, France, September 1973).

³⁹ Rempel, *op. cit.*, p. 109.

⁴⁰ Sabot, *loc. cit.* For example with the increased difficulty of primary school leavers obtaining an urban job, the proportion of primary school-leavers in the migration stream has declined and the proportion of secondary school-leavers increased.

⁴¹ J. F. S. Levi, "Migration and Unemployment in Sierra Leone," *Manpower and Unemployment Research in Africa: A Newsletter*, 4:2 (1971), pp. 20-25.

⁴² Some limitations to using the Todaro theory for policy analysis are discussed later.

portrayed in a generalized human capital framework in Figure 1.⁴³ Within this schema the decision to migrate, and the policy variables affecting this decision, can be segmented into (a) monetary costs and returns relating to rural and urban incomes, education, urban-rural remittances and labor market information and (b) psychic or nonmonetary costs and returns relating to risk, urban life styles, etc.

Monetary Costs and Returns to Migration

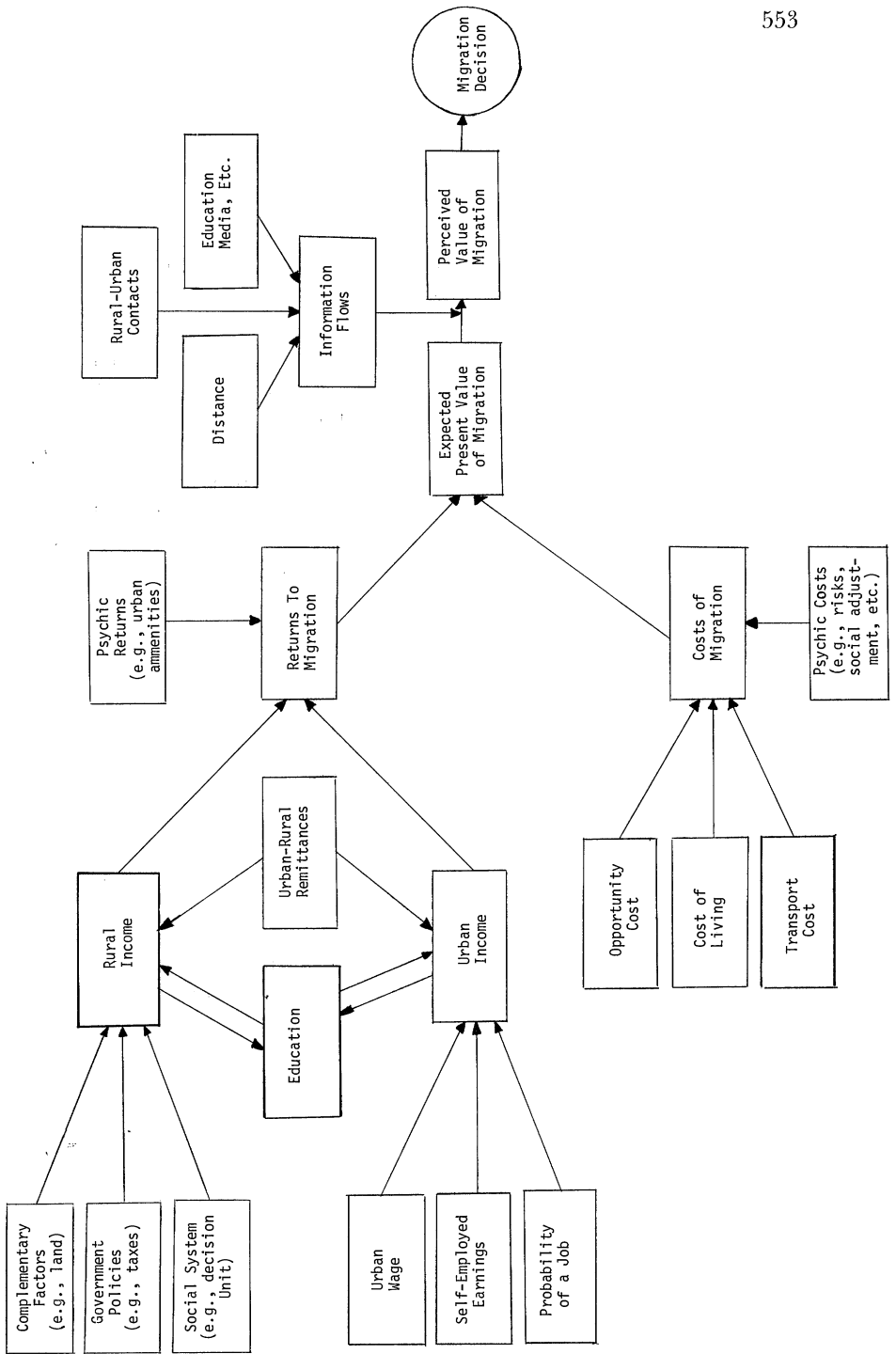
Rural Incomes. The returns to migration are given by the difference in rural and urban incomes. Here our model must be explicit with respect to the specification of rural and urban incomes. Knight shows that the relevant measure of a potential migrant's rural income varies according to the social system particularly (a) the decision making unit and (b) the agrarian system.⁴⁴ For example, he shows that whether the income foregone in rural areas as a result of migration is the average or marginal value of product depends on whether the household or individual is the decision maker. Likewise, if a rural-urban migrant cannot rent or sell his land because of the communal land tenure system, his opportunity cost in rural areas is the average rather than the marginal productivity of labor. The most relevant situation is likely to be the school-leaver who does not yet have access to land and who is strongly influenced in his decision by the total welfare of the household. In this case the household's foregone income is the marginal productivity of the migrant which depends in part on the age and sex of the migrant. In any event, both average and marginal productivity of labor in rural areas are determined by many variables including complementary factors of production, particularly land, and government policies such as taxes.

Urban Incomes. In urban areas, the dual structure of the urban labor market determines urban incomes. Because of institutional factors such as minimum wage legislation, workers in the large-scale or modern sector

⁴³The human capital approach to migration was developed in Larry A. Sjaarstad, "The Costs and Returns of Human Migration," *Journal of Political Economy*, 70 (October 1962), pp. 14-22. For empirical applications of the human capital approach to migration in the U.S., see Samuel Bowles, "Migration as Investment: Empirical Tests of the Human Investment Approach to Geographic Mobility," *Review of Economics and Statistics*, 52 (November 1970), pp. 356-362; also, Richard F. Wertheimer, *The Monetary Rewards of Migration Within the United States* (Washington, D.C. The Urban Institute, 1970). The approach has also been applied with modifications in Brazil by Gian S. Sahota, "An Economic Analysis of Internal Migration in Brazil," *The Journal of Political Economy*, 76:2 (1968), pp. 218-245. Generally, however, these studies have not focused on the migration decision of individuals and have used narrow cost-return measures to explain migration.

⁴⁴Knight, *loc. cit.*

Figure 1. A Framework for the Analysis of the Migration Decision.



generally receive a wage rate higher than that dictated by market forces, while workers in the small-scale sector receive a competitively determined wage rate.⁴⁵ Following Todaro, the urban income is the present value of expected earnings computed from the probabilities that a migrant will receive a job in the large-scale or small-scale sectors or, alternatively, remain unemployed. The probability of obtaining a job varies with the rate of unemployment for the migrant's educational-skill classification and may also vary with time, as the migrant establishes more contacts.

Private Returns to Education. Of particular importance in determining the magnitude of the rural and urban incomes differential is the private returns to education in rural and urban areas.⁴⁶ Preliminary evidence indicates that there is substantial divergence in rural and urban returns to education.⁴⁷ Part of this, of course, is to be expected from the opportunities for higher paying jobs for educated persons in urban areas but in Africa the divergence may be more so, because of the orientation of school curriculums to urban occupations and the undue emphasis on educational qualification for jobs in the modern sector, even though many of these jobs are relatively unskilled.⁴⁸

Rural-Urban Remittances. In specifying the rural-urban income differential the remittances of urban earnings to rural areas may affect the magnitude of both rural and urban incomes, depending upon the assumptions regarding the decision making unit. If the individual is the decision unit with respect to migration, the rural-urban income differential is the difference in income of the individual in rural and urban areas. Urban-rural remittances then reduce the rural-urban income differential by reducing urban income of migrants and increasing the income of rural nonmigrants. If, however, the household—defined here to include migrants located in urban areas—is regarded as the relevant decision making unit, remittances are merely an intra-household transfer of income and would not enter into the decision to migrate, which is determined by the difference in total household income before and after migration.

⁴⁵ For a more rigorous definition of the small-scale and large-scale sectors, see Byerlee and Eicher, *loc. cit.*

⁴⁶ An additional factor ignored in this analysis is the possible difference in returns to physical capital in rural and urban areas. This may be most important for small-scale entrepreneurs who own marketable assets and are considering migration.

⁴⁷ Evidence that the returns to education are low in rural areas compared to urban areas is given for Tanzania by Sabot, *loc. cit.* and for Kenya by Michael P. Todaro, "Education and Rural-Urban Migration: Theoretical Constructs and Empirical Evidence from Kenya," (Conference on Urban Unemployment in Africa, Institute for Development Studies, University of Sussex, 1971).

⁴⁸ Sabot, *loc. cit.*

Costs of Migration. Migration, in addition to monetary returns, incurs some monetary costs, such as the opportunity cost of the time spent moving, transport costs, costs of acquiring job information (e.g., visits to urban areas) and the generally higher cost of living in urban areas (see Figure 1). During the initial period of migration, these costs will be partly offset by the support of relatives and friends, although if the migrant is successful in securing a job he may in turn be obliged to support new migrants. The monetary costs of migrating may not be high but if credit is not readily available in rural areas, cash costs of migration may be a limiting factor for many potential migrants.

Labor Market Information. Given streams of returns and costs over time from migration, the present value of the "investment" in migration can be determined by conventional discounting procedures. However, the relevant variable in the decision to migrate is the *perceived* expected present value of migration. The difference between the perceived and actual value of migration is determined by the information available to the migrant. In practice, the most important sources of information are informal channels such as visits to urban areas, reports of relatives and friends, etc. Also information depends on distance from the urban area and the education of potential migrants (see Figure 1).

Psychic or Nonmonetary Costs and Returns

The above formulation of the migration decision considers only the monetary costs and returns to migration. In addition, there are likely to be various "psychic" costs and returns involving both economic and noneconomic factors but which cannot be readily converted to monetary units. In particular, by using the expected value of incomes we neglect the impact of risk which has generally been ignored in migration theories—perhaps because migrants in developed countries minimize risk by securing a job before moving. In particular, we have noted the uncertain nature of urban incomes which may be a deterrent to a risk adverse person. But in rural areas, too, risk is important, particularly through the impact of weather and export prices on agricultural income. Therefore, the variance of both rural and urban incomes may determine the magnitude and direction of migration flows.

In addition to risk, psychic costs of migration include the costs of breaking old and setting up new social contacts, and the costs of overcrowding, pollution, etc. associated with urban areas. On the other hand, there are psychic returns to migration such as the presence of social amenities in urban areas as in the "bright-lights" theory of migration. In

particular it is often asserted that education in rural areas leads to rejection of agricultural pursuits in favor of "easier" and more "prestigious" urban jobs. However, both McQueen and Foster find no prejudice of school-leavers against agricultural work where economic incentives in agriculture are comparable with urban areas.⁴⁹

These psychic costs and returns are by definition not directly measurable in money terms but proxy variables can often be used to account for them and perhaps a monetary value imputed to them.⁵⁰ For example, risk can be represented by variance of incomes and a "certainty equivalence" computed to obtain a monetary cost of risk.

Some Implications of the Model

The above framework for viewing rural to urban migration goes beyond conventional cost-returns analysis of the human capital approach by (a) including elements of the social system, (b) explicitly identifying determinants of rural and urban incomes and (c) introducing risk and other psychic costs of migration. Monetary costs and returns, where rural and urban incomes are properly specified, partly explain rural to urban migration. Thus, school-leavers are more likely to migrate since urban returns to education are higher and they have a longer time horizon in which to take advantage of the benefits of migration. However, psychic costs and benefits may also be important explanatory variables, particularly in rationalizing the decision of rural people *not to migrate*. For example, a school-leaver faces few risks. He migrates to the city with relatively low opportunity and travel costs and may be supported by relatives and friends in the city while searching for a job. Furthermore, a school-leaver who is unsuccessful in the city is usually free to return to his village and consequently has little to lose from migrating. In contrast, the cost for an established household head is likely to be considerably higher because of the need to transport and support a family. The risk of not obtaining a job is therefore high enough to act as a deterrent. Furthermore, the "cost" of breaking old and setting up new social ties and new life styles is particularly acute for older rural residents. Thus, psychic costs are expected to be least for school-leavers and increase with age. In general,

⁴⁹Albert J. McQueen, "Unemployment and Future Orientation of Nigerian School Leavers," *Canadian Journal of African Studies*, 3:2 (1969), pp. 441-462 and Phillip Foster, "Some Remarks on Education and Unemployment in Africa," *Manpower and Unemployment Research in Africa: A Newsletter*, 1:2 (1969), pp. 19-20.

⁵⁰Beals, Levy and Moses, *loc. cit.*, found urbanization *per se* was an explanatory variable for migration. Also, Rempel, *loc. cit.*, included an index of social amenities in his regression analysis of migration although it was not a significant determinant of migration.

economic incentives may be a necessary condition but not a sufficient condition for migration because of the presence of psychic costs and benefits.

The theoretical framework developed here recognizes the importance of a complex of variables in the decision to migrate and provides a broader medium for the analysis of policy. However, in using the above model of an individual's decision to migrate for policy analysis, some of the dynamic interrelationships between variables need to be considered. For example in Figure 1, not only does education influence rural incomes but there is an important "feedback" effect since education is partly a function of household incomes. Thus any policy which seeks to increase rural income must consider the impact on the demand for education and hence rural to urban migration. Furthermore in the long run, the impact of rural to urban migration on land tenure systems, rural incomes, urban wages, etc., must be considered. It may be useful, as Mabogunje recognizes, to analyse these dynamic effects through a "systems approach" to rural-urban migration.⁵¹

IV. IMPLICATIONS OF MIGRATION FOR ECONOMIC DEVELOPMENT

Migration is an integral part of the process of socio-economic development. In economic theory migration facilitates the mobility of labor and thus the efficient allocation of labor and its associated human capital over regions and occupations and in a competitive economy brings factor markets in different geographical areas into equilibrium.⁵² As such, the process of economic growth will be accelerated by removal of restrictions on free labor mobility. However, the view that free movement of labor from rural to urban areas maximizes social welfare, is complicated by the existence of several factors in Africa which lead to divergences in the private and social costs of migration and hence the need for national policies towards rural-urban migration and

⁵¹Akin L. Mabogunje, "Systems Approach to a Theory of Rural to Urban Migration," *Geographical Analysis*, 2 (January 1970), pp. 1-18.

⁵²The discussion here analyses rural to urban migration from an economist's perspective. The sociological effects of migration have been variously reviewed in Josef Gugler, "The Impact of Labor Migration on Society and Economy in Sub-Saharan Africa: Empirical Findings and Theoretical Considerations," *loc. cit.*: P. C. W. Gutkind, "Tradition, Migration, Urbanization, Modernity and Unemployment in Africa: The Roots of Instability," *Canadian Journal of African Studies*, 3 (Fall 1969), pp. 343-366 and Hilda Kuper, ed., *Urbanization and Migration in West Africa* (Berkeley: University of California, 1965).

urbanization. These factors relate to (a) distortions in factor markets, (b) capital transfers in migration, (c) externalities of migration and (d) income distribution.

Distortions in Factor Markets

Economists have argued that various price distortions such as high urban wage rates and agricultural export taxes have artificially increased the rural-urban income gap resulting in a premature exodus from the land and high urban unemployment rates.⁵³ Because of these distortions, the private returns to migration exceed the social returns and government action is required to reverse the effects.

Given a theory of migration, some of the welfare effects of migration can be derived. In particular, Harris and Todaro use the Todaro model of migration to show that as long as urban wage rates are set institutionally at a higher rate than that dictated by market forces, urban unemployment exists in equilibrium.⁵⁴ There is also a loss in total output if the marginal productivity of labor in agriculture is positive. Furthermore, they show that policies to decrease urban unemployment by increasing urban employment will be frustrated by the influx of new migrants from rural areas and as a result government policies should be directed toward increasing rural incomes and reducing urban wages. Moreover, the shadow wage rate in urban areas should recognize the loss of agricultural output resulting from induced migration.

While the Harris-Todaro analysis provides valuable insights on the impact of urban wages and urban employment on migration, it is not readily adaptable to analysing policies in rural areas. Thus within the assumption of the model that the economy is closed, an increase in agricultural output is likely to increase migration out of agriculture since agriculture's terms of trade fall while the urban wage rate is assumed institutionally fixed.⁵⁵

⁵³ For evidence of high urban wage rates, see Peter Kilby, "Industrial Relations and Wage Determination: Failure of the Anglo-Saxon Model," *The Journal of Developing Areas*, 1 (July 1967), pp. 489-520 and Elliot J. Berg, "Wages and Employment in Less Developed Countries," (Center of Research on Economic Development, Discussion Paper No. 1, University of Michigan, 1970).

⁵⁴ John R. Harris and Michael P. Todaro, "Migration, Unemployment and Development: A Two Sector Analysis," *The American Economic Review*, 60 (March 1970), pp. 126-142.

⁵⁵ For an analysis of these interactions, see Derek Byerlee, *Indirect Employment and Income Distribution Effects of Agricultural Development Strategies: A Simulation Analysis* (African Rural Employment Paper No. 9, African Rural Employment Network, Department of Agricultural Economics, Michigan State University, 1973). This study also explores some of

Price distortions also exist in rural areas. The effects of agricultural export taxes on the demand for labor in Nigeria has recently been analysed by Idachaba.⁵⁶ Although he concluded that in general agricultural export taxes would reduce the demand for labor in export crops, he did not quantify the impact on out-migration from agriculture as a whole. He did, however, investigate the possibility of subsidizing labor and land to offset the effect of adverse effects of export taxes on the demand for labor.

Other market imperfections may also lead to a divergence of the private and social benefits of migration. The unemployed migrant depends on city relatives for support reducing the private costs of migration below social costs. Furthermore to the extent that this reduces the savings of urban workers, the investible surplus is decreased. Finally, the price of food in urban areas may be increased by the additional demands of new migrants and the reduced labor force in agriculture and the resulting inflation may further distort factor prices.⁵⁷ The empirical relevance of these effects in Africa remains to be tested, but there is little doubt that with the factor price distortions existing in many African countries, the social costs of migration exceed the private costs and rural-urban migration is higher than is desirable on the grounds of economic efficiency.

Migration as a Capital Transfer

The highly selective nature of rural-urban migration with respect to education indicates that migration involves not only a transfer of labor but also a considerable transfer of capital from rural to urban areas.⁵⁸ Given that education represents a significant proportion of investment of African rural households, the currently high proportion of unemployed

the dynamic effects of increased urban employment and wages on migration which are not considered in the Harris-Todaro model. In particular, increased urban employment increases food consumption, and hence rural incomes, and partly offsets the migration response induced by urban employment.

⁵⁶ Francis Sulemanu Idachaba, *The Effects of Taxes and Subsidies on Land and Labour Utilization in Nigerian Agriculture* (African Rural Employment Paper No. 7, African Rural Employment Network, Department of Agricultural Economics, Michigan State University, 1973).

⁵⁷ Russel H. Brannon and Kurt B. Ansel, "A Re-evaluation of the Contribution of the Rural to Urban Labor Flow," (Unpublished paper, Department of Agricultural Economics, University of Kentucky, 1970).

⁵⁸ That education is regarded as investment by rural people is demonstrated by Sabot, *loc. cit.*, who notes a 12 percent decline in rural primary school enrollment in Tanzania in response to growing unemployment of school-leavers.

school-leavers in urban areas represents a misallocation of investible resources away from agricultural production. Furthermore, because of the emphasis on education as a criterion for modern sector jobs, even of low skill requirements, the private returns are likely to be higher than the social returns to education resulting in over-investment in education and further out-migration from agriculture.⁵⁹ Clearly, rural-urban migration has implications for educational policies particularly expenditure on rural education and the rural-urban orientation of school curricula.⁶⁰

Partly countering the transfer of savings from agriculture through migration of educated youth, are the remittances of urban migrants of cash and gifts to their home areas. This practice is widespread throughout Africa, but its magnitude is not known. Preliminary evidence from Kenya and Tanzania indicates that as much as 20 to 25 percent of urban incomes are remitted to rural areas.⁶¹ Conceivably cash remittances, by helping to overcome deficiencies in the rural capital market could have significance for rural development. For example, cash could be used as short-term working capital to hire labor at peak seasons or invested on a long-term basis in agriculture. On the other hand, remittances in the form of gifts of consumer goods will have little effect on the rural economy except as an important means of redistributing incomes from urban to rural areas. It may also be the case that a large part of urban-rural cash remittances is used in the education of younger relatives, thus reinforcing the stream of migrants to the urban centers.⁶²

Externalities Arising from Migration

In assessing the policy implications of rural-urban migration, the most difficult factors to quantify are the externalities of migration; that is, costs which are not internalized in private costs. These include some tangible costs such as increased public services of roads, sanitation, etc. in

⁵⁹ Sara S. Berry, "The Marketing of Migrant Labor Services in African Countries: A Relatively Unexplored Topic," *African Urban Notes*, 5 (Fall 1970), pp. 144-153.

⁶⁰ For analysis of capital transfers in international migrations, see Albert R. Berry and Ronald Soligo, "Some Welfare Aspects of International Migration," *Journal of Political Economy*, 77 (September/October 1969), pp. 778-794.

⁶¹ George E. Johnson and W. E. Whitelaw, "Urban-Rural Income Transfers in Kenya: An Estimated Remittance Function" (Unpublished paper, Institute of Development Studies, University of Nairobi, 1972).

⁶² Some of the capital flows noted here also occur in reverse, although at a lower level. Thus, government employees such as teachers, nurses, etc. are often posted in rural areas leading to some urban-rural flow of educated persons. Likewise, remittances of food from rural to urban households to initially support urban migrants are also common.

urban areas and intangible costs such as pollution, crime and decline in the quality of life associated with rapid urbanization. On the other hand, there may be some positive externalities of urbanization associated with increasing returns to scale in provision of public services.⁶³

In rural areas of the United States, Maddox⁶⁴ notes there may be some costs such as increased per capita costs of public services and depreciation of fixed assets associated with declining population with out-migration. These are not as likely to be important in Africa where rural populations continue to increase even in areas of rapid out-migration.

Research to assess these external costs of migration has not been carried out in Africa and indeed there is little research in this direction in other countries. Several countries are implementing population policies such as family planning but only a few countries such as Kenya and Tanzania have considered population *distribution* as an integral part of development planning.

Migration and Income Distribution

Migration can also affect social welfare by changing the pattern of income distribution. The implications of rural to urban migration for income distribution are not well understood. Within rural areas, rural-urban migration could reduce income disparities if migrants originate in the poorer groups of the rural population. In fact, the evidence suggests that in many cases school-leavers who migrate originate in wealthier households who can afford to educate their children, thus increasing income disparities in rural areas.⁶⁵

Rural to urban migration can also reduce the imbalance between rural and urban incomes, by equilibrating wages in rural and urban areas. This can be particularly so where urban-rural remittances are important. On the other hand, because the urban wage rate in the modern sector is fixed by institutional factors, rural to urban migration may have done little to reduce the income gap between farmers and urban wage earners.

⁶³ Koichi Mera, "On the Urban Agglomeration and Economic Efficiency," *Economic Development and Cultural Change*, 21 (January 1973), pp. 309-324.

⁶⁴ James G. Maddox, "Private and Social Costs of the Movement of People Out of Agriculture," *American Economic Review*, 50:2 (1960), pp. 392-402.

⁶⁵ Hathaway also suggests that increased income disparities in rural areas of the United States could have resulted from rural to urban migration. See Dale E. Hathaway, "Migration from Agriculture; The Historical Record and Its Meaning," *Agriculture in Economic Development*, ed. by Carl K. Eicher and Lawrence Witt (New York: McGraw Hill, 1964).

V. CONCLUSIONS: NEW DIRECTIONS FOR RESEARCH

This paper has analysed rural-urban migration in Africa at three levels. First, a brief overview of the theoretical and empirical evidence has demonstrated an abundance of knowledge on the characteristics of migrants and the migration process, but little information on the economic variables relevant to the migration decision. In the second section a framework for a more general theory of migration is proposed which incorporates information, education, psychic costs such as risk, and elements of the social system such as urban-rural ties and the land tenure system. In the third section it was shown that there was a clear need to formulate policy for controlling rural-urban migration because (a) factor price distortions, (b) distortions in the education system and (c) external costs of urbanization all suggest that the rate of rural-urban migration is generally too high even from the narrow viewpoint of economic efficiency. In addition, there is no reason to believe that rural-urban migration has reduced income disparities, while at the same time it has been a major factor in increasing urban unemployment.

This analysis of rural-urban migration in Africa leads to a number of research implications. In particular, future research by economists must be directed toward (a) improved theory of migration, (b) improved methodology for studying migration in Africa and (c) integrating the results of migration research into meaningful policy analysis.

Toward Improved Theory

The stage is now set in Africa for testing a number of important hypotheses to provide an improved empirical base for the theory of migration. Proceeding from the theoretical schema developed earlier (see Figure 1), an important first step is to quantify the various monetary costs and returns of migration to obtain some estimate of the expected present value of migration. To do this requires estimates of incomes in rural and urban areas disaggregated by age, sex, education and access to other productive factors such as land and capital. Beyond the monetary costs and benefits, the risk element in migration could be included by measuring the variance of incomes in both rural and urban areas.

This type of empirical analysis would enable estimation of the elasticity of the rate of rural-urban migration with respect to the rural-urban income differential or more precisely the present value of migration. Knowledge of this elasticity is important for policy purposes, to enable the impact on migration of rural development policies, urban employment generation, and minimum wage legislation to be estimated.

Beyond the empirical testing of hypotheses suggested by the above theoretical framework there are some unresolved issues which in large part center on the decision making locus of the household; that is, the extent to which individuals decide when and where to migrate. Important work by Wellisz and Lal is beginning to recognize the need to expand conventional economic theory based on individual utility maximization to analyse firm-household decision making.⁶⁶ Closely related is the need to understand the determinants of urban-rural remittances. Again factors such as the migrant's position in the household, rural household income and the migrant's income in urban areas are likely to be important. Finally, although the decision to migrate and the decision to educate are closely related there has been little research in Africa on the decision to educate. A more dynamic theory of migration requires knowledge of the impact of household income and urban-rural remittances on investment in rural education.

Toward Improved Methodology

Empirical studies of migration by economists in developed countries have been conducted almost exclusively using census and other official data. Although Beals, *et. al.* in Ghana, Mabogunje in Nigeria, and Sabot in Tanzania have attempted similar analyses of migration, African census data is of limited use for testing the economic theory of migration for several reasons.⁶⁷ First, the degree of accuracy of census data is variable. Thus, Mabogunje in Nigeria used the 1953 census rather than the disputed 1963 census.⁶⁸ In particular, there are rarely two consecutive censuses of equal accuracy and coverage for analysis of migration flows over time.⁶⁹ Second, African censuses often do not include information on income. Finally, because census data usually provides data on *region* of birth, they are more appropriate for analysis of interregional rather than rural-urban migration. However, census data does have a role in broadly delineating the major streams of migration.

⁶⁶ Stanislaw Wellisz, "Dual Economies, Disguised Unemployment, and Unlimited Supply of Labor," *Economica* (1968), pp. 22-51 and Deepak Lal, "Disutility of Effort, Migration and the Shadow Wage Rate," *Oxford Economic Papers*, 25:1 (1973), pp. 112-126.

⁶⁷ Beals, Levy and Moses, *loc. cit.*, Sabot, *loc. cit.* and Akin Mabogunje, "Migration Policy and Regional Development in Nigeria," *The Nigerian Journal of Economic and Social Studies*, 12:2 (1970), pp. 243-262.

⁶⁸ Mabogunje, *loc. cit.*

⁶⁹ A method of supplementing census data through field surveys to obtain migration flows has been tried in the Ivory Coast by Louis Roussel, "Measuring Rural-Urban Drift in Developing Countries: A Suggested Method," *International Labor Review*, 101:3 (1970), pp. 229-246.

Research on rural-urban migration in Africa must generate primary data through sample survey techniques. Much of the present knowledge of rural-urban migration in Africa has been contributed by extensive surveys of Caldwell in Ghana and Rempel in Kenya.⁷⁰ Both surveys were deficient in measuring economic variables—Caldwell because of limited economic data and Rempel because he excluded rural households.

Probably the best work that has been done in developing a methodology for studying migration in a developing country is the work of Speare in Taiwan who interviewed both rural and urban households to obtain economic data.⁷¹ In addition he assembled data on rural people's perception of urban employment opportunities and the flow of job information from urban to rural areas. However, Speare did have difficulty in obtaining useful estimates of incomes in rural and urban areas.

The type of methodology employed depends on the specific model to be tested, but in line with the argument developed earlier in the paper that studies of migration give more emphasis to the rural area of origin, it is suggested that initial data gathering efforts begin in rural areas. Because income data is usually difficult or impossible to obtain in "one shot" interviews, integration of migration research with ongoing production economics or household expenditure surveys would be a great advantage. Furthermore, questions directed at people's perception of urban opportunities should be included. Identification of absent household members or former village residents who have migrated in a given period of time (e.g., five years) will then enable followup "tracer" studies to obtain realized incomes and occupations in urban areas.⁷² Special efforts to include return migrants in the rural survey would enable a greater understanding of the causes and magnitude of the reverse urban-rural migration. In this way opportunity costs of migrants in rural areas, realized incomes of migrants, and perceived incomes of potential migrants can be obtained.

The type of survey outlined above would involve *intensive* interviewing of migrants, potential migrants and return migrants over time. Whereas large cross-sectional surveys at the rational level are useful in identifying migration streams and migrant characteristics, they are

⁷⁰ Caldwell, *loc. cit.*; Rempel, *loc. cit.*

⁷¹ Alden Speare, "A Cost-Benefit Model of Rural to Urban Migration in Taiwan," *Population Studies*, 25:1 (1971), pp. 117-130.

⁷² This type of "tracer" study has been successfully applied in a recent study by Nabila of Ghana. See John Nabila, "Processes of Cyclical Labor Migration in West Africa: A Case Study of the Migration of the Fra Fra in Ghana" (unpublished Ph.D. dissertation, Michigan State University, 1973).

generally based on "one shot" interviews which yield inadequate socio-economic data for testing migration theories. In particular reliable estimates of rural incomes can only be obtained through multiple visits to sample households. Hence with given research resources a move toward intensive interviewing of a relatively small sample is likely to yield the greatest advances in our understanding of the migration process. However if the migration researcher is able to (and willing to) conduct his research in conjunction with regular household expenditure or farm management surveys, considerable economies of scale can be realized in collection of socio-economic data and sample size can be greatly increased. Finally, a multi-disciplinary approach involving both economists and other social scientists could be most useful in combining the concern of economists for policy analysis with the established skill of other social scientists in intensive field research.

Integrating Migration Research and Policy Analysis

The economic and social importance of rural-urban migration indicates a clear need to integrate rural-urban migration and population distribution into national policy formulation and development planning. Almost every area of policy has direct and indirect effects on rural-urban migration. For example, in rural areas export taxes and restrictive credit policies adversely affect rural employment and incomes. In urban areas high wage rates are often the result of government wage policies. Education policies are particularly important because of the large number of school-leavers in the rural-urban migration stream. It may also be the case that unrealistic aspirations and poor information on urban unemployment are important factors which could be overcome by efforts to disseminate information on urban labor markets in rural schools and villages.

Finally, the externalities associated with rural-urban migration have implications for formulating a policy toward population distribution and industrial decentralization. Given these social costs of urbanization it may be desirable to provide incentives to encourage the development of small-scale industry in rural areas and smaller urban areas. The long-run implications of rural-urban migration for population distribution are particularly important in African countries because of their relatively early stage of urbanization.

The present paper has not been intended for advocating specific policies toward migration but rather to isolate the policy issues and the research needs to address these issues. If rural-urban migration and urbanization are to be effectively integrated into national planning, more

empirical research needs to be done in many areas including education, factor price distortions and the formulation of expectations and aspirations of rural people. The analysis developed here should provide an improved framework for organization and formulation of these applied research efforts.