

8. Rural Migration and Urbanization in Developing Countries: The Cases of India and Botswana

About half of the world's population lives in cities. But by 2025, nearly two-thirds will live in urban areas. All of the fastest-growing cities are found in the developing world. By 2015, seven cities will have grown to more than 20 million inhabitants. All but one of these will be found in the developing world. These are some of the findings of the UN, presented to the Habitat II conference in Istanbul in 1996. (For a full discussion of the challenges of urbanization, see Todaro and Smith, chapter 8.)

Urban population growth in the developing world is far more rapid than population growth generally; about half the urban growth is accounted for by migrants from the rural areas. Cities in the developing world are growing far more rapidly than those in developed countries. What drives migration? What effects does this have? The cases of India and Botswana are instructive in showing the value of the development theory of migration, as well as some areas where it needs to be extended.

Relative rates of urbanization are not higher in developing countries today than they were in the period of rapid urbanization of today's developed countries. But in today's developing countries this migration is different for at least two important reasons. First, it is much higher in terms of absolute numbers of migrants, and second, in recent years it has been taking place, in many cases, against a background of stagnant living standards rather than one of growth. Problems caused by urbanization like stress on infrastructure and other urban services are likely greater.

Shantytowns and similar makeshift settlements represent over one-third of developing country urban residences. Unchecked urbanization of the developing world is placing a strain on infrastructure and public health and threatens social stability.

About half of the urban labor force works in the informal sector of low-skilled, low-productivity, often self-employed jobs in petty sales and services. Still, this sector may generate up to a third of urban income, and features a low capital-intensity, low-cost training, waste recycling, and creation of surplus as well as employment creation.

Any economic or social policy that affects rural and urban incomes will influence migration; this in turn will affect sectoral and geographic economic activity, income distribution, and even population growth. Before the Todaro and Harris-Todaro migration models were introduced,

migration was widely viewed as irrational or driven by noneconomic motivations, sometimes termed the "bright city lights." Noneconomic factors influence migration decisions, but economic factors are now understood to be primary.

In the economic version of the bright city lights theory, people rationally migrated on the basis of costs and benefits. In this approach, it was assumed that if migrants appeared to be worse off, this was because other benefits were being overlooked, with the effect of making the migrants feel better off (or raising their overall utility).

The Todaro migration models postulate that observed migration is individually rational and that migrants respond to urban-rural differences in expected rather than actual earnings. Urban modern sector earnings are much higher than rural earnings, which may in turn be even higher than urban traditional sector earnings. Migration occurs until average, or expected rather than actual incomes, are equal across regions, generating equilibrium unemployment or underemployment in the urban traditional sector.

The extension of the model to consider equilibrium and effects of actions like increases in wages and probability of employment in the urban areas, undertaken by Harris and Todaro, shows that under some conditions, notably elastic supply of labor, creation of employment opportunities in cities can actually lead to an increase in unemployment by attracting more migrants than there are new jobs.

Despite being individually rational, extensive rural-urban migration produces social costs including lowered output and strains on limited infrastructure. In addition to its costs to crowded cities, excessive migration also imposes external costs on the rural areas emptied of better-educated, more venturesome young people as well as external costs on urban infrastructure and lost output. Relevant migration and employment policies include an emphasis on rural development, rural basic needs strategies, elimination of factor price distortions, and appropriate technology choice as well as appropriate education. Each is intended to increase the incentives for rural residents to remain in rural areas rather than migrate to cities.

Migrants tend to be younger and better educated than non-migrants, and come from all socioeconomic strata. Almost by definition they seem to show above-average entrepreneurial drive. Thus, paradoxically, migrants seem to have slightly better prospects in the rural areas than those who do not migrate.

India provides an interesting setting for a case study, because future urban migration is potentially so vast, and because a number of interesting studies have been undertaken there. Botswana offers a good counterpoint, because it has better published data and more advanced statistical analysis of that data has been undertaken there than for most developing regions.

One of the best detailed studies of the economics of rural-urban migration, providing some tests of the Todaro migration models and depicting the characteristics of migrants and the migration process, is Biswajit Banerjee's *Rural to Urban Migration and the Urban Labor Market: A Case Study of Delhi*.

Everyone who has been to a major city in a developing country has noticed the sharp inequality between those with modern sector jobs and those scratching out a living in the informal sector. But can the informal sector be seen as a temporary way station to the formal sector, or can the barriers between these sectors be explained by education and skill requirements that informal sector workers cannot hope to meet? Banerjee found that the idea of segmented formal-informal rural labor markets could be substantiated statistically. After carefully controlling for human capital variables, Banerjee was still left with earnings in the formal sector 9% higher than in the informal sector that were not explained by any standard economic factor.

We should not automatically assume that when we observe those with more schooling receiving higher earnings that this is a direct reflection of more skills learned in school. It may be that employers simply hire more educated workers as a way of selecting among their many job applicants. It should be noted that there are differences in wages across industries even in a developed country such as the United States. Even so, the earnings differences found in India were not nearly so dramatic as implied in some of the migration literature.

In the literature on urbanization, and in the anecdotes told about the informal sector by lecturers on development the world over, the typical laborer is characterized as self-employed or working on some type of piecework basis. But Banerjee found that only some 14% of his informal sector sample worked in nonwage employment. Interestingly, average monthly income of nonwage workers were some 47% higher than those of formal sector workers.

Banerjee argued that entry into nonwage employment was not easy in Delhi. Some activities required significant skills or capital. Those that did not were often controlled by cohesive "networks" of operators that controlled location of activities in various enterprises. Entry barriers to self-employment in petty services are probably lower in other Developing country cities.

Consistent with these findings, Banerjee found that mobility from the informal to the formal sector was low: there was little evidence that more than a very small minority of informal sector workers were actively seeking jobs in the formal sectors; and only 5 to 15% of rural migrants into the informal sector had moved over to the formal sector within a year.

Moreover, the rate of entrants into the formal sector from the informal sector was just one-sixth to one-third that of the rate of direct entry to the urban formal sector from outside the area. Informal sector workers tended to work in the same job almost as long as those in the formal sector; the average informal sector worker had worked 1.67 jobs over a period of 61 months in the city, while formal sector workers averaged 1.24 jobs over an urban career of 67 months.

Banerjee's survey data suggested that a large number of informal sector workers had migrated to the city attracted by the informal rather than the formal sector, coming to work in such occupations as domestic servants, informal construction laborers, and sales workers. Of those who began nonwage employment upon their arrival, 71% had expected to do so. The fact that only a minority of informal sector workers continued to search for formal sector work was taken as further evidence that migrants had come to Delhi expressly to take up informal sector work.

One reason for this focus on the informal sector was concluded to be the lack of contacts of informal sector workers in the formal sector. About two-thirds of direct entrants into the formal sector and some 60% of those switching from the informal to the formal sector found their jobs through "contacts." This overwhelming importance of contacts was taken to explain why some 43% of Banerjee's sample migrated after receiving a suggestion from a contact, which suggests that job market information is often available to potential migrants without their being physically present in the city. An additional 10% of the sample had a prearranged job in the city prior to migration.

Finally, there is on average a very short spell of unemployment following migration. Within one week, 64% had found employment, and although a few were unemployed for a long period, even averaging these in, the average waiting time to obtain a first job was just 17 days.

Banerjee also found that migrants kept close ties to their rural roots. Some three-quarters of the migrants visited their villages of origin and about two-thirds were remitting part of their urban incomes, a substantial 23% of income on average. This indicates that concern for the whole family appeared to be a guiding force in migration. It also suggests a source of the rapid flow of job market information from urban to rural areas.

In a separate study, A. S. Oberai, Pradhan Prasad, and M. G. Sardana examined the determinants of migration in three states in India—Bihar, Kerala, and Uttar Pradesh. Their findings were consistent with the ideas that migrants often have a history of chronic underemployment before they migrate, migrate only as a measure of desperation, and with the expectation of participating in the informal urban sector even in the long run. Remittances were found to be substantial and considerable levels of return-migration were also documented, among other evidence of continued close ties of migrants to their home villages.

Of course, Delhi in particular and India in general may be different from other developing areas. As a whole, these two studies have been taken as a challenge to the applicability of Harris-Todaro or other "probabilistic migration models," at least in the case of India, and suggest that they need to be extended to accommodate the apparently common pattern of migrating with the ultimate aim of urban informal sector employment.

But Banerjee's findings, fascinating as they are, do not necessarily represent as strong a case against the Todaro migration models as some (including Banerjee) have made them out to be. As Ira Gang has noted, one can modify the model to include in the urban area not only a formal sector, but a high paid informal sector, as well as a low-paid (or unemployed) sector. In this case, people will migrate looking for either a formal sector job or a high-paid informal sector job. This seems to be consistent with Banerjee's evidence. The assumption that keeps the essence of the Todaro models intact is that the wage of the formal urban sector exceeds the high-paid informal wage, which in turn exceeds the agricultural wage, and in turn exceeds the low-paid informal (or unemployed) wage. The particular formulations of the Todaro models are really no more than examples of a general principle—that migrants go where they expect in advance to do better, not where they do better after the fact. The essence of the ideas of the Todaro models do not depend on a particular notion of an informal or a formal sector.

Oded Stark's ideas on a family's use of migration can be a useful supplement to the Todaro models, and may apply to some of Banerjee's findings. In this view, a family will send members to different areas as a "portfolio diversification" strategy, to reduce the risk that the family will have no income. This approach is useful to explain any observed migration from higher- to lower-wage areas, and into higher-wage areas, but not necessarily the area with the highest expected wage. The basic idea of the Todaro models still applies, but this approach looks at families rather than individuals, and stresses risk aversion. Some evidence for this for the case of Thailand has been identified by Anna Paulson.

In other studies, the Todaro migration models have held up well without modification in other parts of the world. The survey by Dipak Mazumdar showed that the evidence is overwhelming that migration decisions are made according to rational economic motivations. But most of these have used macro-level data not really designed to address the Todaro hypotheses directly.

A study of migration behavior conducted by Robert E. B. Lucas in Botswana addressed such problems in the most economically and statistically sophisticated empirical study of migration in a developing country. His econometric model consisted of four groups of equations—for employment, earnings, internal migration, and migration to South Africa. Each group was estimated from microeconomic data on individual migrants and nonmigrants. Very detailed demographic information was available in the survey used.

Rural migrants in Botswana move to five urban centers (they would be called towns rather than cities in many parts of the world) as well as to neighboring South Africa. Lucas found that unadjusted urban earnings are much higher than rural earnings—68% higher for males—but these differences become much smaller when schooling and experience are controlled for.

Lucas' results confirm that the higher a person's expected earnings and the higher the estimated probability of employment given a move to an urban center, the greater the chances that the person will migrate. And the higher the estimated wage and probability of employment for a person in his or her home village, the lower the chances that the person will migrate. This result was very "robust"—not sensitive to which subgroups were examined or the way various factors were controlled for—and statistically significant. It represents clear evidence in support of Todaro's original hypothesis.

Moreover, Lucas estimated that at current pay differentials, the creation of one job in an urban center would draw more than one new migrant from the rural areas, thus confirming the Harris-Todaro effect. Earnings were also found to rise significantly the longer a migrant had been in an urban center, holding education and age constant. But the reason was because of increases in the rate of pay rather than in the probability of modern sector employment.

Taken together, the best-conducted studies of urbanization confirm the value of the Todaro migration models as the best place to start in seeking explanations of rural to urban migration in developing countries. But these studies underscore the need to expand these explanations of

migration considering that many today migrate to participate in the informal rather than the formal urban sector.

Workers who appear underemployed may not consider themselves as such, may perceive no possibility of moving into the modern sector, may be unable to effectively search for modern sector work while busy employed in the informal sector, and thus do not create as much downward pressure on modern sector wages as it would first appear. This may be one factor keeping modern sector wages well above informal sector wages for indefinite periods of time despite high measured urban underemployment.

Sources

Banerjee, Biswajit. *Rural to Urban Migration and the Urban Labor Market: A Case Study of Delhi*. Bombay: Himalaya Publishing House, 1986.

Banerjee, Biswajit. "The Role of the Informal Sector in the Migration Process: A Test of Probabilistic Migration Models and Labour Market Segmentation for India." *Oxford Economic Papers* 35 (1983): 399-422.

Cole, William E., and Sanders, Richard D. "Internal migration and urban employment in the Third World." *American Economic Review*. 75 (1985): 481-94.

Corden, W. Max, and Findlay, Ronald. "Urban Unemployment, Intersectoral Capital Mobility and Development Policy." *Economica*. 42 (1975): 37-78.

Gang, Ira N., and Shubhashis Gangopadhyay. "A Model of the Informal Sector in Development." *Journal of Economic Studies* 17 (1990): 19-31.

Gang, Ira N., and Shubhashis Gangopadhyay, "Optimal Policies in a Dual Economy with Open Unemployment and Surplus Labour," *Oxford Economic Papers*, 39 (1987) 378-387

Habitat (UNCHS), *State of the World's Cities*, 2001, <http://www.unchs.org/Istanbul+5/86.pdf>

Harris, John, and Michael P. Todaro. "Migration, Unemployment and Development: A Two-Sector Analysis." *American Economic Review* 60 (1970): 126-42 .

Lucas, Robert E. B. "Emigration to South Africa's Mines." *American Economic Review* 77 (1987): 313-30.

Lucas, Robert E. B. "Migration amongst the Batswana." *Economic Journal* 95, (1985): 358-82.

Mazumdar, Dipak. "Rural-urban migration in Developing Countries." *Handbook of Regional and Urban Economics*. vol. 2, New York: North Holland, 1987

Oberai, A. S., Pradhan Prasad, and M. G. Sardana. *Determinants and Consequences of Internal Migration in India: Studies in Bihar, Kerala and Uttar Pradesh*. Delhi: Oxford

University Press, 1989.

Paulson, Anna, "Insurance Motives for Migration: Evidence from Thailand," manuscript, Northwestern Univ., 2000.).

Oded, Stark. *The Migration of Labor*. Cambridge, MA: B. Blackwell, 1991.

Todaro, Michael P. "A Model of Labor Migration and Urban Unemployment in LDCs," *American Economic Review* 59, no. 1 (1969): 138-48.

United Nations. *An Urbanizing World: Global Report on Human Settlements*. Report presented to the Habitat II conference, Istanbul, 1996.

United Nations Population Division, *World Urbanization Prospects: The 1999 Revision*, New York: United Nations Population Division, 2000. Accessed at: <http://www.un.org/esa/population/publications/wup1999/urbanization.pdf>