

Economic Perspectives on Family and Migration*

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1 Introduction

Migration is a common topic studied by researchers from all social science disciplines. This attention reflects the complexity and importance of the flows. In this paper I present a non-technical overview of an economic perspective on migration decision making and contrast this approach with other social science perspectives.

While there are important disciplinary differences and particular insights offered by each discipline the similarities and commonalities connecting the approaches are so pervasive that frequently we fail to recognize them. Indeed, there is broad consensus on the set of potential determinants of migration, but disciplines differ on the relative weight or importance assigned to any particular determinant. And the commonalities are greater when we realize that sometimes disciplines label the same factor by different terms. Our descriptions of the forces involved are always shaped by our disciplinary attachments. For example, all the major perspectives see internal migration in the United States as purposeful. Who makes the decision and for what end varies by context and disciplinary perspective. Nevertheless, conferences like this are important for us to identify what makes us distinct, but they are also useful to emphasize our commonalities and the questions that bind us.

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2 An Economic Approach

The basic economic approach to migration posits that an individual moves because he or she expects to be better off by doing so. In more formal economic terms, migrants move because they expect the benefits to exceed the costs. This simple statement includes the basic building blocks of an economic approach.

2.1 Basic Elements

First, is the presumption that behavior is volitional - we are interested in moves that are voluntarily made. While refugees and political or religious dissenters have forced moves, internal migration flows in the United States are voluntary.¹

Second, the term “better off” implies directed behavior; the decision maker possesses the ability to ascribe some summary measure to his or her well-being connected to each decision, as each action has a payoff. In the simplest economic models payoffs are monetary and potential migrants are presumed to maximize their income or wealth. More generally, payoffs are modeled as both monetary and non-monetary, and economic agents are seen as maximizing “utility”.

Third, to have the ability to move implies the individual has “opportunities” as residence in the current location and at least one other location are possible. In the simplest model, there are only two location choices “here” and “not-here.” Richer models of migration behavior permit a large number of possible destinations. Characterizing the “opportunity set” of feasible locations requires measuring costs of migration and the characteristics of the locations which determine payoffs are central to every economic analysis of migration. The set of potential determinants is large: any factor that varies across destinations (locations) and influences the agent’s well-being is a potential determinant of migration.²

¹The forced relocation of the Katrina victims may be an important exception. While these weather-refugees had little or no choice on *whether* to move, they still had to decide where and when to move.

²Other approaches grapple with “macro” and “micro” representations. Empirical implementation of an economic model is almost always “multi-level” as some characteristics of locations use areal data, e.g., climate variables, or small-area statistics describing local economic conditions (e.g., strength of local labor market or

Notice as well with the introduction of more than two locations, it becomes interesting to understand the (optimal) sequence of migration decisions. This permits a more complex form of migration behavior and extends the analysis from “move-stay” to issues of destination choice, and migration dynamics.

Fourth, the term “expected” emphasizes that migration decisions are made on *ex ante* payoffs and costs, which may be different from *realized* payoffs and costs. Migration is forward-looking behavior, in which some costs are incurred immediately and with other costs and payoffs accruing in the future. Moreover, it is the agent’s subjective beliefs that matter, which may be quite distinct from easily measured (by the social scientist) objective payoffs and costs. A variety of expectation processes appear in the literature. However, to simplify the analytical framework for the last thirty years it has been common to assume that economic agents have *rational expectations*. Sometimes this is interpreted to mean perfect information or “no mistakes”, but this is wrong. Rather the force of the rational expectations assumption is enable the analyst to substitute objective (or empirical) probability distributions for individual’s subjective distributions. This implies economic agents are well-enough informed on their decision environment to be able to calculate expected payoffs and costs. The assumption of rational expectations is not innocuous as it is tantamount (in its common application) to assuming that beliefs are fully formed prior to migration.³ However, this sometimes begs the question as to how learning occurs and more subtly why everyone is equally well-informed.⁴

local industrial structure), while others summarize individual characteristics, such as age and other demographic variables.

³However, knowledge of one’s match to a specific location occurs only following the move. Although it is possible to acquire information on working conditions, residential conditions, local amenities, etc. from a distance, it is common to view the whole package as an experience good.

⁴Models of learning in which individuals acquire information either via migration or simply over time assume agents have a fair amount of information: they are able to characterize their uncertainty in terms of probability distributions whose functional forms are known, but whose parameters are unknown. The assumption of rational expectations is generally applied in these cases to mean that agents apply Bayes’ Law to update their beliefs on the unknown parameters of the distributions characterizing uncertainty. See, for example, El-Gamal (1994).

Finally, most economic models assume the “economic agent” is a single, independent decision-maker. The presumption of a single decision maker is perhaps the most controversial aspect of an economic approach. It follows historically from Samuelson (1956) who rationalized the fiction of the economic household, in which all members act *as if* there is a single decision maker. As discussed below, recent work in economics has relaxed this assumption.

2.2 Discussion

Since Sjaastad (1962) seminal work, the economic approach recognizes that costs and benefits associated with migration accrue over time. Migration is a form of human capital and is best thought of as an investment decision. Like other investment decisions it is forward looking, with expected costs and payoffs driving decisions. A major contribution of the approach is that it provides a two-fold explanation of the steep age gradient of migration, first documented by Ravenstein (1885) in his “Laws of Migration.” On the one-hand, the young move to “correct accidents of birth”; they move to their preferred location as soon as they become independent decision makers. Second, the young have a longer time horizon over which to amortize costs and to obtain payoffs from migration. Thus, smaller gains in net benefits are needed to induce the young to move than more senior individuals. Human capital models also posit that as age and tenure within a location increase ties to the community (some of which may be formed by children) and consequently increase the cost of moving. Human capital labels the latter as “location-specific investments”, which illustrates disciplinary-specific terminology applied to a widely recognized (though differently labeled) phenomenon.

The emphasis on expected payoffs implies that uncertainty and the probability distribution of payoffs are important. Todaro (1969) was one of the first to recognize the equilibrating role of employment probabilities in his model of rural to urban migration. One advantage of the economic model is that it offers a number of ways to model uncertainty and the role of information. Prospective migrants may be uncertain about payoffs and costs, and indeed, prospective migrants may differ in their attitudes toward risk, liquidity

to finance a move and insurance against unfavorable market outcomes following a move. Individuals are assumed to be risk averse and thus prefer stable consumption streams to risky payoffs that yield (slightly) higher expected payoffs. Here the role of information influences both the mean and the *variance* of expected payoffs and benefits. The presumption that individuals are better informed on nearby locations provides another rationale for the empirical pattern that migration flows decline with distance.⁵

To the extent a move entails a large fixed monetary cost, financing a move becomes important as financial institutions are not willing to lend money to individuals to leave the area. Here again families can play a central role in providing information and in helping to finance a move. Families can also provide an important form of insurance. Social insurance programs provide a safety net (in principle) for some families, while family members provide an important backstop. These types of intra-family exchanges have been extensively modeled and investigated in developing countries. In particular the role of information, credit constraints and intergenerational transfers have received the most attention.⁶

The basic elements of an economic model of migration interact in important ways. As suggested above, defining the actions and characteristics that yield utility identifies which payoffs must be measured at each location, and specifying the set of feasible locations identifies the opportunity set facing the individual or household. Indeed, the structure of costs and payoffs characterize the opportunity set. And for empirical implementation, the payoffs and costs must be measured at each location. The theoretical framework is general, but its empirical implementation is context driven. Hence, an empirical analysis of the mi-

⁵Forecasts on conditions of nearby locations have lower variance, which risk averse individuals prefer to other locations yielding the same expected net payoff.

⁶The effect of welfare benefits and particularly AFDC on migration decisions of poor women with children has a long history. The common perception, dating back to the English Poor Laws of the 19th Century, is that high welfare benefits attract poor (welfare-eligible) individuals from other locations, and retain poor among the local population. However, benefits may help finance a move for liquidity constrained households (i.e., access to welfare benefits may lessen poverty traps). The empirical evidence on the influence of AFDC benefits is mixed. See Brueckner (2000) for a summary of the literature. In principle, the same issue faces countries within the European Union, there however, language and cultural differences serve as barriers to migration.

gration decision of young workers will be different than an economic analysis of migration decision of retirees. The same expected utility maximizing framework applies to each, but the determinants of costs and payoffs for the two groups are quite different. Labor market factors are likely to be a primary determinant of migration choices for the young, while climate, recreational and health and fiscal amenities may be most salient for the elderly. One omnipresent feature of migration studies is that the sheer number of possible determinants means that no single study can include them all.

Selection is another omnipresent feature of every empirical study of migration. Many of the substantive questions seek to recover the causal mechanisms driving migration behavior. As is well-understood, the fundamental problem is that observed patterns may stem from true causal forces or may arise from unobserved individual characteristics of those who move. For example, if we observe large positive economic gain accruing to migrants (say as opposed to observationally equivalent stayers), is this evidence of the gain anticipated by the migrant or does the gain reflect characteristics of the migrant that may have led to above average economic payoffs had the individual not moved? At best, selectivity of migrants implies that the observed net returns reflect payoffs only of those who move.⁷ To extend the gains to an arbitrary person in the population requires additional information, particularly a behavioral model of how migrants are (self) selected from the population.

A theoretical framework, whether economic or otherwise, is needed to control for the effect of self-selection. For a number of health, education and welfare issues randomized social experiments have served as an important mechanism by which to break the grip of selection. Indeed, access to randomized trials would be a boon to migration research. And, use of the language of social experiments in which migrants are part of the “treatment” group and stayers are part of the “control” group sometimes helps us conceptualize the selection forces at work (e.g. Ham, Xianghong, and Reagan (2001)). Yet, the totality of residence in one’s life makes it virtually impossible to conduct credible social experiments involving migration.⁸ Moreover, the problem of selection in migration is much more

⁷In the evaluation literature, the estimated returns reflect the gains of “the treatment on the treated.”

⁸The Moving To Opportunity of the mid-1990s targeted a narrow subpopulation and considered essen-

difficult than in many applications in economics, such as those involving the selectivity of wages or of workers. At least in these applications panel data allows us sometimes to get observations on the same person for each outcome (e.g., in and out of the labor market) albeit at different points in time. However, for migration studies most individuals are “stayers” and we will see them only in a single location, and even the movers visit only a few locations. Thus, in migration studies we never observe anyone in all locations. Descriptive studies are useful for highlighting important flows and temporal patterns, but the ubiquity of selection means that an analytic framework is needed to unravel behavioral mechanisms.⁹

3 Multi-person households

A common complaint on economic approach is that it can not include family or social factors. This is not true, as the brief comment on family members as a source of information, liquidity and or insurance suggests. Rather most economists exclude family and social factors over difficulties over measurement and empirical implementation. The economic perspective on migration concentrates on economic on monetary factors. A wag might say that economists give short attention to the family and social networks because they are economists. A less cynical person appreciates that specialists concentrate on their specialities - economists give primary attention to economic and monetary factors, while sociologists pay particular attention to family and social factors, and psychologists look at psychological factors, and geographers concentrate on spatial patterns and characteristics. Each discipline recognizes the importance of other factors but is most interested in assessing only residential moves. On a larger scale in the late 1960s, the U.S. Department of Labor subsidized relocation of workers from the Mississippi Delta region to southern cities with growing economies. The program paid the relocation expenses, offered job training and subsidized wages. Yet, such relocations were only temporary – within 13 months fully 61 percent of the relocatees returned to their original locations. This is after more than a quarter of the eligible population declined the opportunity to relocate. See (Long 1988, pp. 169-170), and Black, Scott, Smith, and Simon (1975).

⁹Just to be clear, the non-randomness of the sample is in migration status – movers versus stayers., not in the overall sample rule of individuals or households.

ing the influence of determinants its perspective deems should be important. This is where the near-unbounded number of potential determinants and the need to restrict attention to “first-order” effects binds; we restrict attention to factors our discipline recognizes as important.

The conference web page asks:

How are financial benefit weighed against other factors such as proximity to extended family? To what extent does the location of non-immediate family members influence whether and where to move?

I would amend “financial” to “monetary”, but I consider this the largest unanswered question facing economic and sociological studies. At the root, economists are more willing to see individual action as paramount, whereas, sociologists are more likely to see the influence of a larger group determining behavior. And, virtually all studies recognize the influence of each factor. Using terminology of Harbison (1981) economists recognize the social group or network function of the family, but give virtually no attention to the family’s function as a socializer or trainer, and is mixed on recognizing the family’s function as the main subsistence unit. For the United States and other developed countries the family’s function as the main subsistence unit while important is limited. In developed countries the market or social institutes perform many of these activities reducing reliance on family provision. Nevertheless, economists recognize the importance of the family subsistence unit’s functions within developing economists as the literature review by Lucas (1997) and the collected works of Stark (1991) attest.

Data restrictions is the primary reason for the absence of estimates of the relative influence of economic and family determinants. I know of no large scale national data that can be used to estimate the relative importance of economic versus family factors. To do so requires that we have equally good measures of the economic factors and of the spatial distribution of the extended family members. There are no nationally representative data files that contain this information. For example, my colleagues designed the National Survey of Families and Households to be a comprehensive data source on the structure and composition of families. It contains only limited information on the location of family

members and equally modest information on income, assets and other economic variables. Since the mid-1960s, the National Longitudinal Surveys have collected detailed employment and earnings histories, and over time collected detailed demographic data. However, it too contains limited information on the geographic location of family members and only point-sampled information on the structure of the respondent's household. The survey designed (primarily) by sociologists (even gifted ones) contains limited economic information, and survey instruments designed (primarily) by economists contains limited information on the family, and both contain limited information on the spatial distribution of family members.

Summaries of the requisite data to study economic and family determinants of migration behavior have circulated for (at least) twenty-five years. For example, DeVanzo (1981) offered recommendations for survey designers on the information needed by migration researchers. Some of her recommendations include (pp. 120-123):

- Collect an event history of all residences with the finest geographic detail as possible. For longitudinal prospective studies, the first interview should collect retrospective information so that a complete event history can be constructed.
- Income data should be reported by component likely to have different effects on migration, e.g., earnings, returns on location-specific assets.
- "Information should also be collected on types of location-specific capital that yield non-monetary returns, e.g., friends and relatives. If at all possible, this information should be collected not only for the current location but also for potential future locations."
- Information on moves and personal characteristics that affect migration decisions should be collected for all members of a family.

Many of DeVanzo's recommendations were implemented in the Malaysian Family Life Survey, illustrating the feasibility of the data collection plan. However, the interview length of the MFLS is better measured in person-days than in minutes. The challenge is not that we

do not know what data to collect, the challenge is that the data collection effort is extremely costly.¹⁰

Data are available to support a more thorough economic analysis of migration decision making with nuclear families. As Mincer (1978) recognized twenty-five years ago, the most preferred location for a couple may differ from the locations preferred by each individual separately. This seemingly small insight has implications on migration and on *divorce* behavior. Instead of following Samuelson's fiction (Samuelson (1956)) that the couple acts *as if* there is a single decision making, Mincer allowed each member to have separate preferences and different opportunities across locations. Mincer adopts a simple framework in which couples are assumed to maximize the sum of their incomes. The couple has to decide where to live and whether to stay together. The couple will stay together if each person is better off married than being single. Mincer's basic insight is that an individual's maximum may not coincide with the joint maximization. Indeed, the location of the joint maximum may not coincide with the individual maximum of either spouse. This gives rise to notions of "tied-moves" and "tied-stayers" and sharp predictions on who should remain married and who should divorce. One of its interesting predictions is that the incidence of migration should increase soon after a divorce or separation (as the now independent individuals move from their "tied" locations). Mincer also predicted that these forces become stronger as women's labor force participation and earnings increase.

One mystery to me is why the migration decisions by married/cohabiting couples have received so little attention by economists interested in collective decision making.¹¹ Data

¹⁰On a positive note, collecting information on the geographic location of family members is somewhat less challenging than collecting comprehensive measures of intra-family transfers, as recently done in the Health and Retirement Survey and the Combined Women's Cohort of the National Longitudinal Surveys. Collecting the location of the family member could be obtained prior to collecting information on transfers. Residence at a point in time is concrete, well-defined (usually) and is a salient event. Transfers are more difficult as they are flows, are bilateral, and respondents frequently do not recognize many non-monetary exchanges as transfers.

¹¹Application of game theory to the family has been an active area of research for the last decade or so. The survey by Bergstrom (1997) is one of the best, while Bergstrom (1996) shows the breadth of ideas in this line of work.

limitations that inhibit ascertaining the effects of the family network on migration choices do not arise here. Mincer's work is now dated, with vastly different labor market and family structures now twenty-five years ago. And his analysis has some limitations. Most notably, Mincer conditions on marriage, and does not investigate who marries whom or the timing of marriage. With forward-looking behavior, individuals should at least partially anticipate the tensions created by differing geographically economic opportunities which should influence whether the couple marries. It may be simply that the analytical question is too difficult. To extend Mincer requires an explicit model of marriage, which for all the analysis by economists over the last thirty years remains elusive.¹² Nor does Mincer address the inherent dynamics implicit in the problem (i.e., a couple face these choices every period of marriage). As discussed, in the next section understanding these kinds of linkages among behavioral processors requires the static model be extended to a life cycle or life course framework.

4 Dynamics

The conference web page lists a number of stimulating questions on the determinants and consequences of migration. I have already mentioned the question on the relative importance of economic and family determinants, two other questions are

- To what extent does migration influence the timing and volume of fertility, and subsequent health, and which(?) families, who benefits from migration and who doesn't?
- Has the changing infrastructure of health care affected migration?

At its core, these questions ask about dynamic phenomenon, one in terms of individual life histories and the other of local conditions on individual behavior. To address them requires an explicitly dynamic framework.

¹²Economic models provide a rationale for co-residence, but are less convincing at explaining the difference between marriage and cohabitation. Yet, of course, in many dimensions, marriage and cohabitation are different behavioral states.

Sjaastad's perspective of migration as an investment activity emphasizes the dynamic aspect of migration – expected costs and payoffs to migration accrue over time. Viewed within a life cycle perspective, individuals (or families) decide whether and when to move. And, in frameworks with more than two locations, they also decide where to move. Indeed, with three or more locations within a multi-period framework, the decision-maker must decide on the *optimal* sequence of moves.

Allowing households to make multiple migration decisions substantially increases the model's complexity. Moreover, prior moves influence subsequent opportunities, giving these models their own natural dynamics. Bellman's Principle can be usefully applied to represent the decision problem. Kennan and Walker (2005) adopts a dynamic programming approach for analyzing the migration histories within the National Longitudinal Survey of Youth, 1979 Cohort. We find that earnings are an important (economic and statistical) determinant of migration flows and its inclusion significantly improves the model's fit to the migration flows within the NLSY79. Respondents in the NLSY79 are more likely to leave a poor local labor market but do not necessarily move to "the best" labor market as predicted by the model. Our findings are consistent with the interpretation that economic factors are an important determinant of migration. However, consistent with my criticism of the existing literature our analysis excludes family determinants.

Within dynamic frameworks, economists frame questions of decision making somewhat differently than other disciplines. For example, whether "migration influences the timing and volume of fertility" as queried by the conference web page can be used to illustrate this perspective. Within an economics perspective whether and when to move is a choice as is when and how many children to have. Thus, migration and fertility decisions are made simultaneously and depend on many of the same (exogenous) factors. That is, within a period, migration and fertility do not influence one another, but rather respond to costs and benefits associated with each. Migration and giving birth require resources (indeed many of the same resources) but it is the availability of resources (and relevant "shadow prices") that determine the choices made. Thus, for a household which decides to move and postpone fertility to a subsequent period, an economist would not say that

migration influenced fertility. Rather, it is the factors that led to the household's preferred sequence (move now, fertility later) given its circumstance led to this sequence of choices.

However, this dynamic decision making context naturally includes the influence of children (i.e., past fertility choices) on migration, and anticipated costs of future migration on fertility. The example of the previous paragraph concerns *simultaneous* decision making regarding fertility and migration. Decisions made in previous periods (e.g., savings, education, marriage, fertility) determine choices available in the current period, and expectations of future events also influence current decisions. Within this perspective migration and fertility choices are connected through the "primitives" of the decision making process: current opportunities (determined in part by decisions made in the past), expectations (anticipated future events and outcomes), and preferences (values assigned to different outcomes). The economic perspective thus provides a unified framework connecting several important demographic behaviors. And offers interesting conjectures on the linkages that can be taken to the available data.

Understanding migration decisions over a life time and the temporal ordering of important life events are among the greatest challenge to migration researchers. Here we can see the discipline and modeling challenges within the economic perspective. Any of a large number of factors may influence an individual to move from their current location. And, the special nature of the initial or "home" location, suggest that home will be a favored destination of natives who have moved away. The modeling challenge is motivate why it is *optimal* to move away and to return. That is, to model the factors that tie these two moves together. A common explanation for a sequence of moves builds on the idea of difference between expected and realized outcomes and the role of learning. An initial move is motivated by expected or anticipated outcomes. The move is made and the realized outcome is experienced. If the realized outcome is greatly different than expected, a second, corrective move may be required (which may be to home, given its the special nature) or learning may take place and the updated assessment of the costs and payoffs (at all locations) may induce onward migration.¹³ Interestingly, this perspective provides

¹³Pessino (1994) applies ideas of learning to migration in Peru.

an explanation for the commonly observed pattern that places of high in-migration also experience high out-migration (a behavior not easily rationalized by static models).¹⁴

Dynamic models are needed to study the temporal ordering of significant life course decisions and to correctly estimate behavioral factors. I expect there will be increasing attention by federal and state officials on the migratory patterns of the Baby Boomers. To the local government bodies, the group is large and high inflows can severely tax public services targeted for the elderly (e.g., assisted living, residential care facilities, community recreational activities, hospital, and health care services). And course, for understanding these flows, information on the geographic location of all the (adult) children is of paramount importance. The first move by the newly retired may be motivated primarily by climate or recreational opportunities. The second or subsequent moves is likely tied to health and support, for which an adult child may be key.

5 Conclusion

An economic approach to migration decision affords a coherent, parsimonious representation of the individual or family choice process. The simple economic model of monetary factors can be easily extended to include non-monetary (e.g., family and climate) factors as well. Commonly posed in a single decision period, the approach directly extends to include other life course decisions, such as marriage, fertility and retirement. Its reliance on isolated, individualistic decision makers can be reworked to include multi-person households, and thus narrow the gap between sociological and economic representations of the behavior. It is the coherency of the representation of behavior that is the primary virtual of the economic approach. The coherent analytical structure highlights the connections across decisions and over the life course to yield an integrated perspective on migration behavior.

¹⁴Out-migrants are in-migrants from prior periods who experienced unfavorable outcomes.

References

- Bergstrom, T. C. (1996, December). Economics in a family way. *Journal of Economics Literature* 34, 1903–1934.
- Bergstrom, T. C. (1997). *Handbook of Population and Family Economics*, Volume 1A, Chapter A Survey of the Theories of the Family, pp. 21–80. North Holland.
- Black, H. T., L. C. Scott, L. H. Smith, and W. A. Simon (1975, February). On moving the poor: Subsidized relocation. *Industrial Relations* 14, 63–77.
- Brueckner, J. K. (2000). Welfare reform and the race to the bottom: Theory and evidence. *Southern Economic Journal* 66, 505–525.
- DeVanzo, J. (1981). *Migration Decision Making*, Chapter Microeconomic Approaches to Studying Migration Decisions, pp. 90–129. Pergamon Press.
- El-Gamal, M. A. (1994). A dynamic migration model with uncertainty. *Journal of Economic Dynamics and Control* 18, 511–538.
- Ham, J. C., L. Xianghong, and P. B. Reagan (2001, November). Matching and selection estimates of the effect of migration on wages for young men.
- Harbison, S. F. (1981). *Migration Decision Making*, Chapter Family Structure and Family Strategies in Migration Decision Making. Pergamon Press.
- Kennan, J. and J. R. Walker (2005, July). The effect of income on individual migration decisions.
- Long, L. (1988). *Migration and Residential Migration*. Russell Sage.
- Lucas, R. E. B. (1997). *Handbook of Population and Family Economics*, Volume 1B, Chapter Internal Migration in Developing Countries. North Holland.
- Mincer, J. (1978). Family migration decisions. *Journal of Political Economy* 86, 749–773.
- Pessino, C. (1994). Sequential migration theory and evidence from peru. *Journal of Development Economics* 36, 55–87.
- Ravenstein, E. (1885). The laws of migration. *Journal of the Statistical Society of London* 48, 167–235.
- Samuelson, P. (1956). Social indifference curves. *Quarterly Journal of Economics* 70, 1–22.
- Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy* 70, 80–89.
- Stark, O. (1991). *The Migration of Labor*. Basil Blackwell.
- Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *American Economic Review* 59, 138–148.