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ON THE MICROECONOMICS OF
INTERNAL MIGRATION

Jerome Rothenberg

MIGRATION AND DEVELOPMENT STUDY GROUP

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Jagdish M. Bhagwati

Nazli Choucri

Wayne A. Cornelius

John R. Harris

Michael J. Piore

Rosemarie S. Rogers

Myron Weiner

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Jerome Rothenberg

Department of Economics
Massachusetts Institute of Technology

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I. Introduction

This paper is a discussion of the determinants of internal migration by individual decision makers. It comes on the heels of a substantial number of theoretical and econometric treatments over the last 10 or so years, dealing with developed economies like the U.S. as well as less developed countries throughout the world.[1] The paper's justification, given this spate of research, is that it emphasizes an extreme disaggregated micro level. Most treatments have dealt with migration flows on a much more aggregative level. They have been forced by the requirements of aggregation to use explanatory specifications that blur some important issues in the understanding of migration. The present focus on the individual potential migrant decision maker is designed to permit a judgment on the extent to which attention to aggregation problems may have led to misleading formulations, and to provide a renewed source of suggestions for strengthening empirical work in the field.

The paper does not pretend to provide strikingly original insights; nor to be adding a new model to the many already extant. It is attempting rather to draw together and examine critically many of the variables bearing on internal migration decisions in a coherent manner and within an integrated decision framework. It is hoped that this comprehensive but not exhaustive critical compendium will offer a useful perspective and suggestion fund for more specialized theoretical and empirical work. No model can feasibly incorporate all or even most of the types of influence to be discussed here. But the paper will have served its purpose if it can help to clarify some discriminations, help to indicate why some analytical linkages should be

abandoned and others forged in this complex, provocative field.

As noted above, internal migration has been studied in both developed and less developed systems. The explanatory structure has been quite similar for both, and the empirical findings do not strikingly differ for the two. Clearly, there are some institutional differences -- barriers, opportunities, social forms -- that would be expected to have some impact on the character of the migration process; but these have not led to significant differences in the kinds of theories being tested, or the outcome of these tests. Something like a unitary basic approach has seemed warranted, with international differences calling for changes in detail but not in overall form. It is in this spirit that we shall propose a fundamental format for studying internal migration phenomena.

II. The Migrant and the Non-Migrant

A central thesis of the present paper is that the migrant is not a random cross-section of the population. He or she is not the average person in some origin group, responding in an average way to a set of differential advantages connected with moving. In that type of formulation each average individual has a finite probability of becoming a migrant under each set of alternative opportunities, and a stochastic process determines which individuals actually migrate under each such set. In an aggregative treatment, especially where individual and group differences cannot be abstracted and documented, such a characterization may be as much as can be expected. But it may be seriously misleading. The migrant is in fact self-selected. Under any set of opportunities, it is no accident which individuals will choose to migrate and which to stay. The migrant has special features which make him evaluate the grounds for going or staying differently than those who stay.

What this means is that a given set of opportunities will induce a different amount of migration in populations of different compositions. This can be rationalized either by specifying a general set of inducements and constraints, with different evaluational parameter values for different parts of the population; or specifying different sets of inducements and constraints specific to the different individuals and groups in the population. Both of these approaches will be used in this paper when they seem appropriate.

Three types of migration movement have to be explained. First is the move which can be characterized in aggregative average terms as from an origin of inferior opportunities to a destination of superior opportunities. This is the form of migration most congenial to the conventional aggregate economic rationality model. Second is the move from an origin with opportunities on the average greater than those of the destination. Third is the staged migration where, for reasons of expense or staged information gathering, a move is made from origin i to some destination j which is envisaged as only a temporary resting place rather than the true or final destination. Thus an observed move from i to j will not generally be explainable as the most advantageous available (utility maximizing). The second and third types will usually be difficult or impossible to explain in aggregate models dealing with average individuals. They require the agent-specific opportunities and constraints describable in disaggregated models. In such a context the return home of disappointed earlier migrants, or the special advantageous opportunities opened to a favored few in otherwise impoverished areas, can be easily understood and modeled. And the temporary expedient of partial moves, either half-heartedly sampled, or avowedly used as a staging area, on the way to a more seriously anticipated destination, can be rationalized in strategic terms in such micro-approaches. Our treatment of individual migration decisions will attempt to provide a single analytic framework that integrates all three

types of move.

III. A Calculus of Rational Migration Choice

The basic approach to individual migration decisions is to assume that each member of the population performs the following calculation: at each point of time he or she perceives that a choice has to be made between remaining a resident of his (her) current region and moving to another region. Each region, including the current place of residence, is perceived as possessing a set of opportunities and constraints relevant to the calculation; in addition, if the move were made, a set of costs would be incurred. By evaluating each of the regions as an alternative prospect in utility terms, and subtracting the cost of moving to it in utility terms, the subject forms a utility level for each hypothetical course of action. If a move to any new region yields an expected utility level greater than that associated with remaining in the current region, the subject will become a migrant. He or she will migrate to that region that promises the highest expected utility level.

This formulation, certainly a conventional one, requires four basic elements: the benefits characterization of a move to any new region, the costs involved in each such move, the character and extent of the information about these benefits and costs, and the utility significance of each component of benefits and costs -- or, more appropriately, the utility evaluation of each bundle of benefit and cost components by the particular agent making the decision. In sections that follow, we shall consider each of these elements in turn. Now we shall simply list some of the items to be considered.

On the benefits side, we shall treat improvement in job prospects, in style of life, in the variety of private and public commodities available for consumption, in the quality of public services attainable and in housing standards achieved, as well as the adventure of initiating a risky quantum

change in the overall life situation.

On the cost of migration side, we shall treat moving costs, transition costs, loss of friends and relatives, change in style of life, and concern over a risky quantum change in the overall life situation.

Two items are treated both as benefit and cost dimensions. This is to emphasize that each can be one or the other for different individuals. Neither is invariably a benefit or cost for all individuals. Having both a cost and benefit dimension for the two better fits our emphasis on individual differences.

The calculation of benefits and costs for each hypothetical move depends on the relevant information available to the individual. Information is never perfect, and its adequacy differs for different potential moves. The source and adequacy of information about different moves, and how it is integrated into the evaluation process, are examined.

Finally, the individuality of the utility evaluation is treated. The migrant as a self-selected group is stressed by considering individual and group differences in: 1) commodity tastes, 2) present career situation, 3) attitudes toward risk, 4) situational mobility (family constraints, transportable property), 5) significance of differences in prospects (due to age, sex, education, etc.).

IV. <u>Benefits from Migration: New vs. Old Job Prospects: Risk, Search and Job Markets</u>

In all economic treatments of migration, improved income opportunities are accorded the premier influence. This is concurred in here. But the meaning and measurement of such improvement is by no means as simple as the treatment in some aggregative econometric models. A number of important and difficult issues have to be resolved in formulating this benefit dimension properly.

First is the notion that "the income" to be associated with a given region is generated through employment, but that a given region does not represent either one particular job or one particular income. Two issues are involved here: 1) In any period, the particular employment situation enjoyed (or suffered) by an individual is not the only one possible -- he or she may seek a different job of the same or other types in the same region, or seek some job more intensely (if currently unemployed).

2) The income relevant to migration decisions is lifetime income, which results from a sequence of employment experiences -- a career profile -- and each region offers a variety of "career trees" in which each segment leads temporally to a different set of irreversible further opportunities. The individual's present job does not guarantee a single unique temporal path with a determinate income flow. Rather it suggests only a given career tree -- a distribution of possible sequential branches for which probabilities may be more or less solidly assigned.

Both of these considerations suggest that the decision to migrate should be integrated with labor market theory. Job search, job turnover, promotions, changes in occupation, voluntary unemployment, are not independent of decisions to migrate. They are all simultaneous elements in the job change experience: migration may sometimes accompany, sometimes give way to, combinations of these other elements.

If the "income opportunity" associated with a region is a product of a career profile, and this in turn is a stochastic variable, then the "income opportunity" is a risk prospect. Unlike some risk prospect choice situations where the agent simply selects among risk prospects and then is passive while an intrinsically exogenous chance process determines the outcome, the job market choice situation is one in which the individual chooses among families of risk prospects (career trees) and then actively and progressively narrows

down choice within each family. Within each region a presently employed worker can at any time choose to look for the same kind of job in other firms of the same industry, or in firms of a different industry, or can look for a different kind of job (either with or without additional training) in either the same or other industries. This voluntary search behavior is a variable involving amount and kind, where job content, training, firm, industry are dimensions defining the latter. Individuals with the same general skills may in any observed period experience quite different job-income outcomes depending on both their past voluntary strategies with regard to search and chance factors affecting success in search and performance.

The possibilities of migrating to another region form alternative families of risk prospects (career trees). The decision to migrate to a particular destination is the selection of a different family of risk prospects about which the same kinds of decision concerning amount and kind of search will have to be made after -- or in preparation for -- migration.

3. These considerations are relevant to the comparison between income prospects in the present vs. at alternative locations. If the individual has resided at his present location for any length of time he has presumably already narrowed down the family of prospects characteristic of this location. Thus, he is not likely to have a present situation whose prospect he evaluates at the mean value for the entire original family of prospects relevant to a newcomer. Moreover, since the possibility of further search is not exhausted, even the present career tree, let alone the present income earned or the present wage rate, does not necessarily constitute an adequate representation of the income opportunity involved in remaining in the present region.

Newcomers to the region will tend to view its "opportunity" as a mean value and a completely unsampled set of possibilities -- i.e., a total population variance. Older residents will view it as a value adjusted for their

actual achieved income level (relative to the mean) and a variance of possibilities smaller than the total by an adjustment that takes into account the degree to which they have already narrowed down the original set of prospects.

So a given set of individuals, alike in skills and tasks, etc., but differing in length of occupancy and in stochastic fortunes, may well differ in their evaluation of the income prospects for a given region. In predicting how many of the set will migrate elsewhere, it is therefore important to know something about these specific characteristics of the group: one should want to know to where within the forest of risk each member of the group has currently arrived.

4. The foregoing suggests a general principle in the characterization of income prospects. They should be, to whatever extent possible, reflective of the situation of the particular individual or group being observed rather than the average of some larger group of which these are members. This is especially important if the individuals who turn out to be actual migrants are unrepresentative of the larger group; but this is exactly what is likely to be true if special characteristics affect the evaluation of the opportunities and costs reflected by different locational alternatives.

5. In contrasting the income significance of a region to residents of different durations, we described prospects in terms of a mean level and a variance. In portfolio theory, variance has been accorded an explanatory role as an adjunct to mean value. When extending the calculation of income prospects to potential residence locations, there is even more reason to include it, as well as even higher moments, of the probability distribution of income prospects. Unlike the passive holding of a risky prospect, where an exogenous chance process selects outcomes, voluntary variable search affects the expected maximum value function. Search should be prolonged so long as the expected marginal increase in maximum value among the items sampled exceeds

the marginal cost of additional sampling, and stop only when the two are equal. Finite sampling gives an expected value higher than the overall mean value of the unsampled distribution, while at the same time decreasing the remaining variance. Moreover, the expected payoffs to sampling are a positive function of the size of the original variance. The greater the variance the greater the ability to use sampling of jobs to achieve an earnings sequence which exceeds the mean unsampled ("one shot") experience. Other characteristics of the original probability distribution also influence the payoff to sampling.[2]

The money gains to sampling are independent of an individual's attitude toward risk. But of course the utility significance of such gains is dependent on such attitudes. The fact that the set of alternative migration destinations will generally contain a variety of mean-variance tradeoffs means that attitudes toward risk may be an important ground on the basis of which otherwise similar individuals (e.g., skills, length of residence) will evaluate income prospects from the same set of prospects quite differently. These differences in evaluation refer both to the decision to migrate at all, and the relative attractiveness of different possible destinations.

The importance of variance as a migration incentive serves not only to self-select certain types of people as migrants but also to select certain regions as especially popular destinations for migration from whatever origins. If high variance is attractive, then it is the very large urban areas that are likely to provide it, because they have both the scale and variety of jobs to make very different career patterns possible. Even largeness of market alone serves this, because natural job turnover there offers many attractive, if low probability, opportunities. Since large size is also generally associated with large variety, the variance of outcomes is even more pronounced in large metropolitan areas. These, then, come to exercise a migratory pull out of proportion to any advantage they may show in the mean level of their returns.

Even mean incomes lower than that in some smaller destinations will be offset

for many migrants by the more adventurous risks of "the big town."

6. Another personal characteristic enters to influence the evaluation

of a given set of alternative income prospects. This is the investment in

human capital. If an individual has just completed significant investment in

human capital -- say, by a quantum increase in education -- then that part of

the probability distribution of jobs previously most relevant to him or her

is no longer so relevant. A new, higher skilled subset is now more appropriate.

But this subset has not been sampled, and much or most of the individual's

previous job experience is now irrelevant. Thus, he perceives his resident

region's income opportunities almost like a newcomer, with little of the

accumulated fruits of sequential sampling and career ladder climbing. As a

result, his new situation in his resident region lacks the advantage of the

higher-than-average perspective due to longer duration in comparison with a

newcomer's average perspective of gains from the comparable job subset in

other regions. A normal status quo advantage for his resident region is thus

missing, and so he is more likely to migrate -- despite the absence of any

change in the objective opportunities available in different locations. In

sum, significant new investment in human capital increases the probability

of migration, a migration associated with a change in occupation.

V. Benefits from Migration: New vs. Old Job Prospects: Wage Rates,

   Lifetime Earnings and Unemployment

1. The benefit calculation for income should refer to the present value

of lifetime income differences between each potential migration destination and

the present residence location, not just the current period's differentials in

such earnings. There are two important advantages of the lifetime formulation.

First, it discriminates between decision makers of different remaining lifetimes

in the labor force. Assume that the positive first year earnings differential between some destination and the present location would remain unchanged over the remaining productive lifetime of two different individuals, but that individual A had 10 more years to work and individual B 30 more years. If only first year differences were regarded, the migration incentive of the two individuals would be registered as equal. However, it is clear that individual B could count on a larger total lifetime gain from the migration than could individual A, and with any significant but equal cost of migrating for the two the overall gain for A might fall short of its cost while exceeding the same cost for B. So the probability of migration would differ under the lifetime earnings formulation, as it should.

Here is another example where the kind of advantage which migration brings favors certain kinds of individuals over others. Just as individuals with poorer than average chance earning outcomes, with risk preference, with lesser job sampling experience in their current residences, with new educations, have somewhat higher probabilities of migrating for any given objective differences in job opportunities; so too, younger individuals are likely to be self-selected for migration because their migrations have a longer payout period as investments and thus have higher rates of return than is the case for those with fewer remaining work years.

The second advantage of the lifetime earnings formulation is that it discriminates different career profiles over time. Different occupations carry different patterns of skill and promotion ladders over time. Even the same occupation in two different places may bear different time profiles of advancement because of the different industries embedding them, or different patterns of labor competition or firm vicissitudes in the two places. More-over, a career profile that includes sequential changes in occupation as opportunities permit may certainly differ in two places if the scale, variety

and/or health of job opportunities differ markedly in the two places.

Thus, the real nature of income opportunity in two different places depends on the expected time shape of earnings in both. The same first year prospects may be consistent with very different subsequent prospects. Rational migration calculation should certainly take these different time shapes into account.

The self-selection engendered by this consideration is more complex. It depends on the matching of particular kinds of people with particular kinds of job market patterns. Different types of labor skill are likely to have different "natural" time profiles or earning capacity. Different regions are also likely to differ in the skill mix of their distribution of jobs (because of different industry distributions, for example). Thus, certain skill types are likely to fare better over time in some regions than others. A kind of comparative advantage may come to operate, such that skill type A would do better over time in region α than in β, while skill type B would do better over time in β than in α. Individuals with skill A residing in region β would have a higher probability of migration than would region β residents with skill B; and α residents with skill A would have a lower probability of migrating than those with skill B.

One further variable is introduced into the calculation of potential migration benefits that discriminates both among potential migrants and among potential destinations. That is the internal discount rate selected by each individual to convert expected income streams into a present value. The choice of any rate tends to discriminate among destinations insofar as they offer different typical earnings profiles over time. Insofar as different individuals express different time preference in their discounting, these same destination-specific variations in time profiles will tend to favor one set of destinations for one group of migrants, another set for a different

group -- including the decision whether or not to migrate at all.

2. We have spoken so far of the job incentives for migration as "earnings differentials." There is ambiguity in this. Earnings is the product of a wage rate and a number of labor units worked. But the latter is to some extent a voluntary response to the former. Insofar as units (hours) worked change in the course of migration, the amount of leisure changes as well. To register gains in terms of earnings puts zero value on leisure.[3] The true utility value is a function of the price of leisure -- namely, the wage rate -- along with money income and the price of other commodities. It is appropriate to calculate prospective gains in terms of these arguments of the indirect utility function rather than of earnings. But this puts a heavy burden on specifying the appropriate utility function for theoretical analysis, although for econometric study the wage rate can simply be plugged in as the appropriate income prospect variable.

Despite the formal appropriateness of this modification, its practical significance may be much less. It is the endogeneity of the hours decision that is crucial here. Insofar as hours are conventional or employer-prescribed the modification is unnecessary and possibly incorrect. But in a large proportion of jobs exogenous determination of hours worked is the prevailing pattern. So earnings may well be the better variable after all, despite its neglect of the value of leisure.

3. We have not raised the issue of unemployment. In speaking about voluntary job search we have implicitly introduced some voluntary unemployment. Indeed, choice of higher variance job distributions through migration is often associated with a voluntarily larger sampling of the new distribution -- and thus longer voluntary unemployment after migration. But involuntary unemployment is different. Labor markets are certainly subject to cyclical periods of involuntary unemployment. But these are relatively short-term affairs. Some

labor markets, however, experience persistent involuntary unemployment. A major contribution of the Harris-Todaro model[4] is to stress the practical importance of such market situations and how they modify migration incentives. Especially in less developed countries, urban areas may be characterized by dual markets, where the more desirable, regular jobs (in the so-called formal sector) carry significantly higher wage rates than jobs in the casual, informal sector. Yet labor competition between the two is not permitted to break down the sizable two-wage differential and instead a relatively permanent queuing process occurs for the artificially limited jobs in the desirable sector. The queuing represents involuntary unemployment.

Dependably expected involuntary unemployment reduces the attractiveness of a given set of employment opportunities. Harris and Todaro suggest treating this in terms of _expected_ earnings, where each employment experience is multiplied by its probability of occurrence -- an adjustment of our previous probability concept by introducing the unemployment rate: e.g., valuation summarizing the overall risk prospect of a region multiplied by (1 - unemployment rate).

An adjustment of this sort may be appropriate for _beginning_ earnings, but in the institutional queuing model at least it is inappropriate for _later_ period earnings. Use of lifetime earnings markedly reduces the significance of such an adjustment to expected values. Indeed, it raises the question whether unemployment should not be treated differently.

If the expected period of unemployment generally comes just after migration, then it strikes at a time when the migrant is economically especially vulnerable -- since his resources and productivity are likely to be lower than subsequently, and the social contacts which might help to support him over the post-migration transition period are few or non-existent. Expected unemployment at that time strikes at his ability to become viable at the new

destination -- thus strikes at the practicability of migrating to that
destination at all. Unemployment should thus be treated as a cost of migration
rather than as an adjustment to expected gross lifetime advantages of the
migration.

VI. Benefits from Migration: Non-Job Benefits

1. In the last section we spoke of earnings differentials as a chief
incentive for migration. The differentials were expressed in nominal money
terms. Clearly, the differentials that matter are "real income" differentials.
This calls for deflating the nominal amounts by the cost of living. This is
easier said than done, however, in the present case. Since different regions
are involved, we are speaking about using cost of living indices that compare
living costs in different regions. Comparability is always a question for
this kind of problem, but even more so here where the regions may differ
markedly in character. Since so much migration is from backward rural areas
to the largest, most developed urban areas in the nation, the market baskets
characteristic of origins and destinations will differ in extreme ways. The
variety of goods available will be especially divergent, but the relative
importance of different items will also show these differences. Under these
circumstances the use of cost of living (consumer price) indices is highly
suspect. Nonetheless, some procedure is needed to increase the comparability
of the buying power of earnings in different locations.

A mechanical adjustment via cost of living indices will not achieve the
purpose. Rather, these large differences in style and pattern of consumption
should be introduced as explicit variables. They are part of the differential
in opportunities which migration offers just as are job differentials. Thus,
we shall discuss them explicitly as separate components of the destination-
specific bundle of attributes being evaluated by potential migrants. The

overall treatment of non-job benefits, therefore, is to make a cost of living
adjustment for elements in the consumption bundle which are roughly comparable
across locations, and to supplement this by a separate listing of grossly non-
comparable consumption aspects.

2. The variety of private and public goods will vary appreciably from
location to location, and especially between simple rural areas and large,
sophisticated urban areas. The variety increases notably with size. This is
a result of urban scale economies.

Increasing variety in itself should bear an unambiguously positive impact
on an individual's welfare, since he or she can buy (use) everything that was
available in a smaller variety situation, as well as various additional com-
binations. For the prospective migrant there is an element of self-selection
in that the _utility significance_ of the wider selection of commodities depends
on the individual's tastes: those who appreciate complex, sophisticated
consumption will benefit more from such a widening of choice than those with
simple tastes. This interpersonal discrimination is especially important in
the migrations from simplest origins to most sophisticated destinations.

3. The availability of commodities is a perfectly objective attribute
of a situation. Somewhat more elusive is the notion of what people do with
this availability, their style of life. Yet the concept of a style of life
is widely used and, while not capable of being brandished with unanimous
agreement, does appear to be employed with a real convergence of understanding
-- and does not refer to something that is more than simply an assortment of
goods.

The style of life in large, sophisticated urban areas differs appreciably
from that in rural areas or small towns. The pattern of consumption is
different; the tempo of living is different. The high degree of competitive-
ness and impersonality, the interest in change and newness for their own sake,

the desire for elaboration of simple things into complex, the habituation and delight in meeting frequent challenges and risking much to accept them, the willingness to live surrounded by tension and danger -- these and other elements characterize big city living; they represent quantum leaps from comparable elements in rural and small town living. For any one person, they are a function not only of what commodities are available but of the pattern of behavior of other people -- a significant set of externalities.

The degree of differences in style of life depends on the nation being considered and the variety of destinations involved. The utility impact of such differences is potentially greater even than the migration differences in earnings, because these can constitute virtually different ways of life, and involve the most basic values and attitudes of the individual. But this impact is subject to the widest differences among individuals. Individual "tastes" will determine whether the change of style from rural to big city life is a matter of gaining adventure and excitement, even liberation and rebirth, or subjecting oneself to insecurity, anxiety and corruption, degrading and dehumanizing one's life.

So style of life will strongly differentiate people. A given set of origin-destination differences will attract some in widely varying degrees, repel others in just as widely varying degrees. Among the individual differences that underlie these differences in utility impact are probably age, sex, degree of education, attitudes toward risk and personal mobility (in terms of the intensity and complexity of familial relationships). The list is strikingly similar to that which underlies individual differences in the utility tradeoffs between mean and variance in income prospects. It is not accidental. From an observational point of view it may be very difficult to disentangle income variance from style of life as a migration determinant: areas offering high variance are also likely to offer "big city, sophisticated

life styles". But there is probably a deeper psychological link as well.
The behavioral and inter-personal ingredients making for one are also likely
to make for the other. Working and consuming are never as psychologically
distinct as their treatment in conventional economic analysis asserts.

4. Differences in the quality of housing are often listed as a deter-
minant of migration. This may be misleading. Insofar as housing is a
private good, and offered without subsidy in the private market, or needing
to be produced by the migrants themselves, differences in quality and price
among migration locations are already represented in the cost of living
adjustment noted above and does not warrant separate treatment.

Indeed, in some nations, especially among the less developed countries,
housing conditions in popular urban migration destinations are often worse
than in the rural origins. Most of the poor migrants are crowded into
shanty-towns on the edges of the urban area, with poor, temporary shelter and
no public services like water, sewage, electricity, streets, etc. This
represents a negative differential from migration. It should be registered
by a cost of living adjustment which distinguishes the real cost of different
qualities of private commodities, like housing.

In some nations, urban housing is provided with at least partial public
character -- public housing, or public subsidy for housing. In these cases,
the cost of living adjustment would probably miss what are in effect public
service benefits. These should be separately listed. Their utility impact
on migrants -- and thus on the migration decision -- depends on the nature
of the public service provision: size, character and distribution. Here too,
we should not expect the influence to be distributionally neutral, but to
promise differential advantages to different types of migrants.

5. A generalization of the public component of housing that warrants
separate treatment is local public goods generally. While effective tax rates

may be included in cost of living indices, the variety and quantity of public

services rarely are. Welfare services, health care, education and job

training may be notably different in different regions. These surely can

qualify as benefit dimensions of the migration decision alternatives. Even

the negative "public goods" of air and water quality, and congestion -- so-

called environmental quality -- should be included in this context.

Indeed, some of the positive public services qualify for a second role

as well. In discussing unemployment above, we noted the especially vulnerable

transition period of the migrant as embodying a migration cost which is a

potentially important deterrent to migration. Just as expected unemployment

rates might be treated as an element of those transition costs, so the availa-

bility of public services that provide a potential cushion against transition

difficulties can be considered a diminution of expected transition costs.

Different public services will of course differ in playing these twin roles.

Moreover, the two roles will generally have different utility impact for

potential migrants in different circumstances -- since transition difficulties

will loom larger for some than for others. Thus for reasons over and above

normal differences in tastes for collections of public services, a given com-

plement of local public services may be evaluated differently by individuals

in different circumstances; and different collections of public services will

evoke different relative evaluations from different aggregations of individuals.

To summarize this section, regions will differ in providing the commodi-

ties and living patterns that are ingredients of the quality of life. They

are as location-specific as job opportunities and qualify as genuine

dimensions of the location bundles evaluated by potential migrants. Like job

opportunities, they are not neutral among individuals deciding whether and

where to migrate. They exercise incentives that encourage a self-selection

of the migrant from the non-migrant, and a specialized pairing of migrant with

destination. As with employment opportunities, this self-selection requires
that some of the benefits be disaggregated to show their differential incidence
on different types of migrants. A larger part of these benefits, however, in
comparison with job opportunities, can probably be expressed as general, or
average, opportunities potentially open to all migrants but differently
evaluated by different individuals on the basis of their circumstances or
tastes.

VII. <u>Migration Costs</u>

We shall mention five kinds of costs, but two of them have essentially
already been listed as forms of non-job benefits. Their dual inclusion will
be explained below. The five are: 1) moving costs, 2) transition costs,
3) loss of friends and relatives, 4) change in lifestyle, and 5) concern over
uncertain prospects.

1. Moving costs include the removal of personal property and personal
transportation to the migration destination. The size of these costs is
clearly a positive function of the amount of property possessed, the size of
the family proposing to migrate, and the distance to be traveled. For a
given set of potential benefits from migration, the existence of moving costs
clearly has unequal deterring impact on migration. Other things equal, it
favors for migration: 1) younger people with weak familial obligations and
small amount of accumulated property, 2) individuals institutionally or
culturally more mobile -- in many societies, predominantly males, 3) small
families or single persons, 4) close destinations.

Where especially single persons are involved, moving costs are one-time
expenditures which are small relative to expected lifetime earnings differen-
tials. On this score they may not be expected to have a strong negative
influence on migration. But they may represent large absolute amounts at one

time. They may well be larger than accumulated savings of just that group
that is otherwise least deterred. In contexts where capital markets are notably
imperfect, especially with regard to human capital (migration being a form of
locational investment in human capital), this can stifle migration that would
otherwise have been economically rational.

This factor is, of course, especially important for international
migration, where significantly lumpy minimum distances are involved. It is
less so for internal migration where distances can be graduated more continuously.
One adjustment in internal migration is the strategy of staged migration, where
a desired long distance move is broken into shorter-distance stages, the
migrant stopping at each stage primarily to accumulate more capital in order
to finance further stages -- although unexpected good fortune in job search
and experience at each stage can serve to short-circuit original migration
plans.

Another impact of the minimum capital requirement to finance migration
is that individuals (families) with adequate accumulated capital will be less
deterred from migration relative to the favored categories listed above than
sheer relative size of moving costs would suggest. The capital as well as
the net returns flow dimensions of moving costs must be considered to
compare the relative influence on different portions of the potential migrants.
So somewhat older, more successful, larger families may comprise a non-trivial
share of actual migrants on this score.

2. A second set of costs are transition costs. These are the cost of
settling-in to a new, unfamiliar milieu, where housing, shopping and other
contacts require gradual, possibly painful orientation periods. It often
includes an indefinite period of unemployment as the process of job search in
a new location has to begin at the very beginning. These are in effect one-time
set-up costs -- a necessary investment in "locational social capital". In

international migration and even in some forms of internal migration the learning of a new language is required.

While the same repertoire of information is required of everyone, individuals differ in how much they already know, in how difficult attainment of the rest is, and in how important this set of efforts is. The utility significance of the possibility of an initial period of unemployment is especially likely to differ among individuals. Since it occurs before the migrant has had an opportunity to take advantage of the anticipated increment of earnings over his recent origin, his asset position is likely to be unusually weak. His vulnerability to a period of unemployment at that time may be very great. At one extreme, some migrants move with a job already arranged for, or have the kinds of skill that practically guarantee a short initial unemployment period, or they come with adequate assets; at the other extreme, some have no specific job prospects, and have skills not easy to fit quickly into the job market, and have nearly zero accumulated assets; other migrants fit between these in varying degrees. So the utility impact can range from trivial to very considerable among potential migrants.

As we noted above, availability of certain local public services at the migration destination decreases the expected intensity of these costs. Thus, we can expect a double form of self selection: by individuals and destinations. If no destination has cost-moderating public services, the possible severity of settling-in costs may absolutely discourage any migration by those who would be especially hard hit. Insofar as such services are available in different measure at different destinations, this group of individuals will be less deterred from migrating at all, and will tend to select destinations possessing the highest levels of such services, all other things equal. Since prospective transition costs may exert an absolute veto on migration, this basis for their selecting a migration destination may be extremely compelling.

3. A third form of cost is the "loss" of friends and relatives. Since satisfactory close and intimate social relationships may be the dominant determinant of an individual's full welfare in the range of circumstances where basic biological needs are met at least at minimal levels, this "loss" may have large impact effects. On the other hand, new substitute social relations can often be created after a time in a new surrounding, so the utility loss is generally only temporary and with this in prospect, its temporary deprivation probably does not have the absolute veto status that unattainability of travel costs, or even more, prospectively severe transition costs may have.

Once again, this factor will vary considerably among individuals and destinations. The range and importance of close social contacts at the origin differ widely among individuals, as does their perceived ability to create substitute relationships in new surroundings. While both have important idiosyncratic components, the latter consideration probably is closely related to age as well. Older people may have more deeply formed associations in their current location (a life time accumulation of this form of "social capital"); even more decisively, they probably feel less ability to re-create such relationships in a new location than do young people.

A discrimination by destination is important too. The "loss" of friends and relatives is not absolute simply because of moving away from them. Continued contacts with them are possible -- although less frequent or protracted than previously. The expected degree of continued contact is probably strongly inversely related to distance in a non-linear relationship: degree falls away rapidly at first with distance, but progressively more slowly, until a nearly zero marginal impact of distance on degree is reached.

4. Change in style of life is listed here as a kind of cost. The same variable was earlier included as a form of benefit. The reason for duplicating

it here is to separate the instances where it represents a positive incentive
toward migration (benefit) from those where it is looked on with aversion.
For a given set of living patterns in different locations the difference between
these two seems entirely idiosyncratic: it depends on personality. This is
an extreme aspect of the self-selection I have been emphasizing: where the
very same prospects can be regarded as a gain by some, as a loss by others.

While the source of individual differences is personal, it has an external
dimension as well. Different destinations will offer different patterns of
living, varying in degree of negative difference from the current living
standard of individuals for whom this is a problem. The availability of
graduated alternatives on this dimension will, as with other cost dimensions,
decrease its net deterrent effect against all migration and convert its influ-
ence more toward that of informing a choice among potential destinations.

5. A final category of costs is the concern over what may be considered
a quantum increase in the uncertainty of one's life, a dramatic loss of
security. This is the mirror image of the perceived benefit from the adventure
of significant change. Here too it is being included as a cost to distinguish
between situations in which significant change itself is prized or found
repellent. It differs from the previous pattern of living category in that it
is not so much the specific aesthetic-moral characteristics of the prospective
new way of life but simply the _extent_ of the change from the present that is
decried.

Individual differences are very important here. Strong risk averters
will be especially deterred. Another personal characteristic may be involved
too. Up to now we have treated the strength of incentives to migrate as
functions simply of the size of _differentials_ between present and prospective
locations, without having to ask as well about the _absolute_ level of well-being
achieved by a potential migrant to his present situation. This procedure is

dictated by our conventional notion of rational choice. But an individual's attitude toward newness of overall prospects -- of substantial change in itself -- may depend partly on whether he or she feels satisfied or unsatisfied in his (her) present situation in an absolute sense, and in what degree. An individual feeling miserably unhappy in his present circumstances -- not with respect to concrete alternative but with his own sense of self, his hopes (or fantasies) -- may be desperate enough to overcome whatever fears he may otherwise have about radical change in his life. An individual very happy currently in an absolute sense may hesitate, and in giving vent to whatever risk conservatism he may have about his overall life prospects leave well enough alone.

VIII. Migration Choice: Information

Up to now we have spoken of the positive and negative influences bearing on the individual migration decision. Every one of them involves a factual content which has so far simply been assumed to be known with certainty. This assumption must now be called into question.

There is a critical assymetry in the degree of certainty with which the different facts are known: the individual's actual present circumstances are presumably known with more certainty -- less uncertainty -- than any hypothetical or prospective circumstances. Moreover, there are likely to be important differences within the second category. Alternative opportunities within the same location -- obtainable by search behavior -- are likely to be known better than opportunities at other locations.

The key variable underlying these degrees of uncertainty is information. Information is imperfect with respect to the several alternatives of choice. Information about the present location is imperfect in terms of future consequences resulting from a sheer continuance of present commitments, since

these have stochastic elements that are intrinsically unknowable. This is of
course shared for all alternative destinations as well. Moreover, opportuni-
ties inherent in the present location extend by additional search to situations
that have not yet been sampled. Nor are the probabilities associated with
these known with certainty. For alternative locations, information is likely
to be less satisfactory about: (1) the mean and other moments of the distri-
bution of outcome characteristics, (2) how well to trust the information
that is available (i.e., the variance of the estimates in (1)).

The familiar self selection of migrants applies here too: individuals
will differ with respect to the kind and amount of information they have about
different destinations, and with respect to their preference tradeoffs among
prospects having different degrees of uncertainty.

Relevant information is available from general information media -- TV,
newspapers, books, magazines, etc. -- and from more personal sources like
word of mouth, letters, etc. from friends, relatives and neighbors who have
migrated and are either returned or remain in some form of direct or indirect
correspondence. Empirical studies have established that the second channel
is a very important one in influencing migration desisions. The amount and
quality of information available from this source is probably a negative
function of the distance between origin and each destination, and a positive
function of the number of friends, relatives and others from the same area
who migrated to the destination earlier, and the number and recency of
returnees.[5]

Information from general media is roughly equally available to all, but
is in fact used very differently by different individuals. The amount of
voluntary exposure to this source, and the degree of efficiency in processing
the information contained therein, are probably strongly positively associated
with education level. As with the personal information channel, amount and

possibly also accuracy of information about destination j in origin i are

likely to be negatively related to distance between i and j . Here too,

both individual and destination differences will interact to form double

discriminations in the evaluational components that determine migration

decisions.

Discrimination patterns concerning adequacy of information do not have

quite the same significance in influencing migration as discrimination patterns

with respect to benefit and cost dimensions, however. In the latter they are

unambiguous in direction of thrust. Here they are mediated by another idio-

syncratic characteristic of the decision makers. Just because information

at i is better (more trustworthy) concerning destination j than concerning

destination k does not mean that j will exert greater attraction. Infor-

mation about k may be less accurate -- but more optimistic. If correctly

compared with regard to trustworthiness by an individual in i , it will have

an effect like increasing the variance of expected outcomes in k relative

to j . But as we noted above, this higher variance may be an _attractive_

characteristic for many people instead of a repellent one.

Most theoretical and empirical treatments of information have assumed

that amount of information is unambiguously a positive attraction. To be

consistent with the plunging propensities of some risk-takers (and the

foregoing analysis suggests that the group of actual migrants may well be

less adversely affected by risk than the population as a whole), this can be

interpreted as defining amount of information as the number of specific positive

opportunities noted. But this is surely a very special meaning of the term.

Since part of the transmittal of person to person information must consist of

general descriptions and promises as well as specific instances, these general

propositions may be based on inadequate information by the destination sources.

A greater amount of information flow would help to correct (decrease the

variance of) these general assertions by increasing size of the sample of such assertions. But this does not prevent a very small sample of very optimistic prognostications about a certain destination from becoming more attractive to certain potential migrants than more restrained and better sampled claims about a different destination.

Thus it is not obvious that the amount of information can be trusted as an unambiguous benefit dimension. Its role in migration is more complicated.

IX. <u>Migration Choice: Choice Among Alternatives</u>

1. From any origin, a given individual will choose, among all potential destinations (including the status quo), the one promising the greatest expected utility increase: a combination of the net effects of the various benefit and cost dimensions discussed, and of the qualifications imposed by relative degrees of information. This means that for this individual the probabilities of him or her moving from i to each of the alternative destinations are all interdependent, since all alternatives are simultaneously competing against one another in the choice. This interdependence has significance for the econometric procedures that can be used to study migration choice empirically.[6]

2. For a given individual, the probability of moving from a given origin to a particular destination depends on the net attractiveness of that particular move relative to that of all other possible moves or of remaining at the origin. If benefits from alternative moves are not positively associated with distance from origin to destination then, since total costs <u>are</u> probably a monotonically increasing function of distance, the probability of a move from i to some j is partly a measure of the size of the set of intervening net opportunities -- i.e., the attractiveness of all destinations closer than j .

With this role played by distance, the distance variable can now be seen

as a composite of at least four distinct, but probably mutually consistent, roles influencing migration:

    a. It has a positive impact on moving costs;

    b. It has a positive impact on the utility significance of the "loss" of friends and relatives;

    c. It is inversely related to the adequacy of information about the destination;

    d. It is positively related to the maximum size of the net attractiveness of intervening destinations between i and j .

Thus, the overall negative impact carried by distance on the probability of choosing a particular destination is probably far in excess of the importance of sheer moving costs over that distance.

FOOTNOTES

[1] For example, see the 251 item bibliography relating primarily to U.S. internal migration in Michael J. Greenwood (1975), and the 89 item bibliography referring primarily to less developed countries in Lorene Y.L. Yap (1975).

[2] This whole section has benefited heavily from Paul A. David (1974), and Vernon Renshaw (1970). The second source developed a framework which integrated migration with other forms of labor market adjustment. The first stressed the two-stage decision package including migration and variable job search, and also developed the dependence of the gains from search on the variance of the original probability distribution of income prospects.

[3] See E.B. Lucas (April 1975).

[4] See John Harris and Michael Todaro (1970).

[5] As a determinant of migration from i to j , this stock of previous migrants from i to j proxies an additional consideration. It reflects the strength of previous incentives to migrate from i to j . Insofar as conditions have changed little, it therefore duplicates all of the aforementioned specific determinants. In empirical studies it must therefore be used with care.

[6] It has been suggested that this makes modeling the determinants of migration from alternative origins to a single destination preferable to the determinants of migration from a single origin to alternative destinations. See for example Robert E.B. Lucas (April 1975).

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