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# Migration in LDCs: Risk, Remittances, and the Family

Portfolio investment theory might offer an explanation of migrant behavior; results of recent research and their policy implications*

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Labor votes with its feet -- individuals migrate from areas of low wages to areas of higher wages. That has been the traditional view, one that has spawned much policy advice to control migration and to affect the location decisions of migrant laborers. But recent research indicates that portfolio investment theory might hold the key to understanding why people migrate in developing economies and how and why they remit their earnings. Under this theory, migration decisions are ordered by family needs for stable income levels, provided by a diversified portfolio of laborers, both male and female, and the need to jointly insure the family's well-being. In brief, group decisionmaking and objectives rather than the wishes of individual migrants determine migration patterns and remittance flows.

This article, based on recent and earlier research by the author and his colleagues, attempts to explain migrant behavior in light of portfolio investment theory applied to field studies conducted in different parts of the world.[1] The results of the studies suggest a re-evaluation of policy approaches to migration and remittance issues.

**Family risks**

Viewed in light of portfolio investment theory, families allocate their labor assets over geographically dispersed and structurally different markets to reduce risk. Research indicates that after migration, family members pool and share their incomes.

This pooling, or co-insurance, covers risks of losing income in individual markets and allows the family to smooth its consumption. Seen in this light, the flow of remittances is not a random by-product of migration by an individual but an integral part of the family's strategy behind migration.

Placing the family, rather than the individual, at the center of the migration decision must not be interpreted to suggest that the behavior of individuals should be ignored, but rather that it should be studied in the context of the family. Migration outcomes are partly due to interactions within the family on how to share common income obtained through specialization (migration by some, nonmigration by others) and cooperation (for example, exchange of risks). The basic reason why individuals commit themselves to act together is that this makes it possible to obtain more together than separately.

The theory behind this approach is captured by the following illustration. Consider a family that consists of father and son who work together on the family farm. In a good crop year each member's output is 150 currency units; in a bad year, 50. Assume that half the years are good and half are bad, and that the sequence of good or bad years is completely random. Also assume that there are no capital markets, that transfer of output or consumption over time by the family is not feasible, that is, everything produced must be consumed, nothing can be saved, and that the family members are risk averse. Thus, in half the years (the good years) the family's total income is 300, in the other

half (the bad years) 100. Suppose that a consumption level of 50 per member is very inadequate, but 100 is adequate. Remember that several bad crop years could come in a row.

Suppose now that an employment opportunity opens up in a nearby city that provides income of 150 in a good year and 50 in a bad year; and suppose that a bad year in agriculture coincides with a good year in urban industry, and vice versa. The son and father agree that the son will migrate to the city and that regardless of which state of nature prevails they will fully pool together and equally share their incomes. It is easy to see that the two-member family will be better off as the family's income variance is completely eliminated. The family's pooled income will always be 200, ensuring a per member consumption of 100 each and every year.

Had the son and the father migrated, nothing would have changed. They would still make 100 per year during half the years, and 300 per year during the remaining half. Moreover, note that the expected income of the son in the city is exactly equal to his expected income on the farm (that is, migration takes place in spite of the absence of an expected income difference), and that the variance of the son's urban earnings is exactly the same as the variance of his farm earnings. Also, there are no net transfers between the city-based son and the village-based father. Yet the agreement between son and father to pool together and share their incomes suffices to induce the family to support the migration of the son to the city. Failure to account for intrafamily transfers would have resulted in an incorrect prediction -- no migration in

the absence of income differences between the urban and rural sectors -- and even an incorrect policy prescription -- elimination of intersectoral income differences -- had rural-to-urban migration been considered undesirable. In addition, note that there would be an advantage to spreading the family's labor over the two markets even if the father's income and the son's income are not perfectly negatively correlated, as the example above assumes. As long as there is less than perfect positive correlation between these incomes, the variance of the family's income is reduced. Finally, note that even if the son's income variance in the city is larger than what it was in the village, migration by the son can substantially lower familial risk and therefore, the family would still be better off with such migration. For example, if the son's earnings in the city are 30 and 170 in the bad and good years respectively, entailing variance which is about twice as large as his village income variance, the <u>family's</u> income variance would still be a mere 4 percent of its premigration income variance.

The migration by family members in the preceding example underlines the importance of the family as the critical decisionmaking entity in migration. Through migration of a family member (or members), the family transcends its limited capacity of co-insurance or sharing of risks in the rural sector. It does so by simultaneously sampling from a number of separate markets (that is, investing in one without completely liquidating and shifting holdings from another), and sharing both costs (e.g., financing the move) and rewards (e.g., through remittances), and so forth.

Such migration also implies that the intrafamily exchanges and transfers must be governed by explicit or implicit contractual arrangements. The illustration demonstrates that it is mutually beneficial to both the migrant (the son or daughter) and his or her family (represented by the father) to enter into a co-insurance contract. Claims, in the form of remittances, then flow to the family at times of crop failure and to the migrant during spells of unemployment. What determines the terms of the contractual arrangements, its existence, and enforceability? Since arrangements between a migrant and his or her family are voluntary, they must be self-enforcing. Mutual altruism among close relations could be a force in avoiding delinquency and presumably helps explain why the family is at the heart of most such arrangements. But considerations such as an aspiration to inherit, maintenance of rural investments, and the intent to return mean that the migrant retains a vested interest in his original home beyond altruism.

This interest reassures the family that the migrant will not default and hence encourages cooperative contracts. Indeed, the distribution of benefits arising from migration, in general, and the pattern of remittances, in particular, could be affected by the command of the family over the migrant member. For example, high and stable urban wages could lure a migrant to plan to reside permanently away from home and weaken his incentive to remit to the family. Greater family wealth increases the family's relative bargaining strength vis-à-vis the migrant family member. Thus, a bargaining approach predicts higher remittances to higher income

families whereas a pure altruism model implies higher remittances to lower income families.

Analysis of the family-migrant contract thus generates interesting hypotheses that could be tested in the field to yield results that would have strong relevance to policymaking. If a government, for example, favors urban-to-rural remittances, lowering rural risks (making the family a better insurer) will result in larger remittances if those remittances arise from an explicit or implicit co-insurance contract but in smaller remittances if the motive for remitting is pure altruism. What then do we learn from empirical investigations?

## Evidence

We tested the hypotheses to measure motivations to remit migrant's earnings and patterns of family behavior in a number of countries, including Botswana, India, and the Philippines.

A detailed household survey of migration was conducted in Botswana in 1978-79 (National Migration Study of Botswana). In the survey four interviews were conducted at each dwelling, one every three months, and each person reported absent on any occasion was included in the analysis as a potential remitter. Remittance equations were estimated for urban absentees and for absentees in town and elsewhere in the rural sector.

The year of the survey happened to be one of serious drought. Our first regression equation estimated the drought to be significantly positively associated with the amount remitted. The

worse the drought, the more money was remitted by the urban migrant to the family. Such a result would be consistent with the pure altruism theory: drought lowers the family's income and the ensuing remittance may simply reflect the desire of the remitting migrant to alleviate special hardships imposed on the family. But additional regressions produced results that ran counter to the pure altruism interpretation. In a second regression, we added the number of cattle owned by the family as a variable and the interaction of that factor with the drought index. We added two more variables in a third regression: the number of crop acres "possessed" and their interaction with drought. Throughout our dependent variable was the monthly remittance.

We found that the existence of drought conditions and the possession of more crop land have nothing to do with stimulating greater remittance per se. The interactions of drought with these drought-sensitive assets do. Families that are at risk of losing cattle unless feed and water rights can be purchased and those who are at risk because they customarily rely on crops for more of their sustenance receive more remittances during drought. This is precisely the response one would expect if households allocate members to urban migration to insure against adopting risky asset portfolios at home. This is not to deny a role for altruism. Our regressions reveal that given the degree of drought and assets at risk, more is received from close kin (defined as the immediate family -- head, spouse, and own children). Because such closer

members care, they are more responsible and more reliable co-insurers.

Our Indian study uses data collected by the International Crops Research Institute for the Semi-arid Tropics for three villages in southern India. Information on family membership, incomes, expenditures, agricultural profits, wages, production resources, and daily rainfall was collected continuously over a ten-year period, supplemented by additional information obtained in 1984 and 1985 on family background, marriages, inheritances, kinship relationship between marital partners, and distances associated with marital migration. Our study shows that households in rural India marry their daughters to distant, dispersed (yet kinship-related) households. This choice can be interpreted as an implicit contractual arrangement aimed at mitigating income risks and facilitating consumption-smoothing in an environment characterized by risks that vary together spatially and by information (monitoring and enforcement) costs. Our empirical analysis indicates that both the number of married women and the distance between the original households of the marital partners contribute significantly to reducing the variability in household food consumption. Moreover, farm households facing riskier incomes are more likely to invest in spatial risk diversification by marrying their daughters to persons in different areas with a different economic environment: among farm households with equal endowments of wealth those afflicted with more variable profits from cultivation are more likely to initiate such arrangements.

Two national surveys constitute the data sources for our study of migration by young women in the Philippines. We used a sub-file of the 1973 National Demographic Survey and the Status of Women Survey conducted in 1976 to trace migration and employment histories of women, their educational attainment, occupational, and other personal and family characteristics, and family background variables. It appears that households in the Philippines choose as migrants those members who are likely to be trusty remitters, typically daughters. The labor market performance of female migrants and the choice of a specific urban destination can largely be accounted for not just ( as in standard human capital theory) by the migrants' skill levels and endowments but also by the preference of the family for less uncertain income rather than for more income. The evidence suggests that migration from poor households constitutes a group's optimizing strategy rather than an individual's act of desperation.

**Policy Implications**

When migration is pursued to reduce familial risks and smooth consumption, policy intervention to affect migration, if any, would have to render income at the origin less uncertain rather than bring average original income closer to income at the migrant's destination. An important conclusion, therefore, might be that low rural incomes may not halt migration if rural incomes continue to fluctuate widely.

The value to parents of a girl rather than a boy in risky local environments characterized by underdeveloped insurance markets may be substantially understated in terms of expected labor market returns. In other words, parents may, in fact, value girls more highly than is commonly assumed. Attention to the returns arising from the specialized role of daughters accruing from their dispersion and their commitment to share or remit suggests caution in pursuing policies that lower income risk, as this may result in reducing the value to the family of girls and consequently in an inferior allocation of resources to them.

Moreover, since a rural-based family with a better diversified earnings portfolio should be more likely to adopt higher-yielding, though riskier, new crop varieties, migration from agriculture could entail outcomes that feed back into and modify the very market environment that stimulated migration. With insurance arising from a member's migration, farming families would be willing to experiment with new procedures and technologies which could raise their income and lower its variance to an extent that self-insurance substitutes for migration-supplied insurance.

In social science research, in general, and in migration research, in particular, we need not necessarily search for the explanation where we observe the phenomenon. (As an old Russian proverb has it, it is not the horse that draws the cart, but the oats.) Migration by individuals could largely be attributed to the set of opportunities and constraints that their families face. Even though labor migration is a labor market phenomenon, migration

may be due to constraints in capital, commodity, or financial markets. Put differently, migration may not occur if the set of markets and financial institutions were perfect and complete.

If family considerations impinge on the attributes and labor market performance of individual migrants, then the arena for affecting these attributes and performance may be the location of the nonmigrants. Migration policy need address nonmigrants (family members who stay put) and duly recognize the possibility that policy measures directed at migrants may be attenuated or amplified through familial reactions and responses.

## NOTES

1. This article is based on the author's recent book The Migration of Labor, Basil Blackwell, Oxford and Cambridge, MA, USA, 1991, and on earlier research results, obtained by the author and his colleagues, pertaining to Botswana, India, and the Philippines, published in the Journal of Political Economy, Economic Development and Cultural Change, and Population Studies.