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Discussion Paper Series

ON FERTILITY, MIGRATION AND
REMITTANCES IN LDCs

by

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ABSTRACT

In this paper we examine the effect of migratory opportunities for children on fertility when the decision by the child whether and how much to remit is endogenous to the analysis. We differentiate between two classes of motivations to remit and four changes that are likely to increase the return to migration. We demonstrate that the effect of each of these changes on remittances depends on the motive for remittances. Given that the demand for children as assets depends on the returns to them of which remittances constitute a part we identify links between motivations to remit and the demand for children.

On Fertility, Migration and Remittances in LDCs

One view of the demand for children is that children constitute family assets. Using this approach in an earlier paper (Katz and Stark (1985)), we examined the effect of changes in migration opportunities open to children on the demand for children, using the assumption that children fulfill their part of the implicit contract with families and make their income available for sharing even when they are living away from home.¹

It is our purpose here to relax this assumption and examine the effect of migratory opportunities for children on fertility when the decision by the child whether and how much to remit is endogenous to the analysis. As will be seen, this endogenization of remittances yields some new and interesting predictions.

To the extent that children who are migrants are less likely to offer their income for sharing than those siblings staying at home, increased migration opportunities may reduce the return and increase the risk associated with children as assets. The effect of this on fertility depends crucially on whether the family has available to it other instruments of saving. Clearly, to the extent that other such instruments are available a reduction in the attractiveness of children as assets is likely to induce a reduction in fertility as other assets are substituted for children. If, however, there exist no realistic alternatives to children as a means of savings, the outcome is less clearcut. There will be a substitution effect

towards increased current consumption and hence reduced fertility. However, there will also be an income effect towards lower current consumption and hence increased fertility.

Thus even if we knew the way in which migration opportunities affect income sharing we would still be faced with opposing income and substitution effects -- especially in LDC's, with their undeveloped capital markets and where children may be the main means of savings.

Nonetheless it seems a necessary first step to examine the way in which migration opportunities affect income sharing and transfers. Only once we know that, can we meaningfully examine the impact of migration opportunities on fertility.

Once having left home, children may wish to share their income with those who stay behind for a variety of reasons. To enable us to present a compact analysis, we shall however consider two motivations to remit, each of which may be viewed as being typical of a class of motivations. It will thus be assumed that children remit either as an altruistic act or that children remit so as to partake in the family's implicit mutual insurance scheme. As we shall see, the motivation to remit will greatly affect our predictions about the effects of changes of migratory opportunities on fertility.

Following our earlier paper we shall consider four changes that are likely to increase the return to migration:

- (a) An increase in the expected income of a child as a migrant.
- (b) A reduction in the spread in the income of a child as a migrant.²
- (c) A reduction in the degree of correlation between (two or more) children's incomes as migrants.
- (d) A reduction in the degree of correlation between incomes of family members staying in the rural area and incomes of children as migrants.

We proceed by considering the effect of these changes on the child's willingness to remit.

Let us begin with (a), an increase in the expected income of a child as a migrant. Clearly, if the child's motivation in remitting is altruistic then, to the extent that altruism is a normal good, he will remit more. If, however, his main motivation in remitting is the purchase of insurance, he may remit less, since he will have become less risk-averse with his higher income.

An increase in children's income as migrants will thus make children more attractive as assets if the motivation to remit is altruism, but less attractive as assets if the motivation to remit is insurance.

We now turn to (b), a reduction in the spread in the income of the child as a migrant. Clearly, such a reduction in personal risk makes the migrant better off. Hence, if remitting is altruistic and altruism is a normal good, this will raise remittances. If,

however, the motivation to remit is the insurance motive, then there will be an income effect and a substitution effect both acting to reduce remittances. First, the migrant is now better off and hence less risk-averse. Second, the migrant is less likely to need to make a claim on the family, and hence he may substitute some consumption for insurance purchases (remittances).

Once again it is clear from the above that the motivation to remit is a necessary building block in determining the effect of changes in migratory opportunities on fertility.

Let us turn now to (c), a reduction in the degree of correlation between children's incomes as migrants. Clearly, if remitting is purely altruistic, this leaves migrants as they were since they are not participating in the family insurance. If, however, remitting is done for insurance purposes then there are two opposing effects: an income effect to reduce remittances and a substitution effect to increase remittances. Being better off--the diversification is more effective as the correlation of children's income with each others' declines--there will be fewer remittances. However, since insurance is now more effective, there will be substitution toward more insurance, raising remittances.

Finally, let us turn to (d), a reduction in the degree of correlation between rural and migrants' incomes. Once again, this change has no effect on remittances if these are altruistic, but, using a line of reasoning similar to the above, this change has an ambiguous effect on remittances if the motivation to remit is insurance.

The above discussion is summarized in Table 1.

TABLE 1

	<u>Motivations to Remit</u>	<u>Income Effect</u>	<u>Subst. Effect</u>	<u>Overall Effect on Remittances</u>
(a)	Altruistic Insurance	+ -	0 0	+ -
(b)	Altruistic Insurance	+ -	0 -	+ -
(c)	Altruistic Insurance	0 -	0 +	0 ?
(d)	Altruistic Insurance	0 -	0 +	0 ?

Now, in order to determine the effects of changes (a) - (d) on fertility, we must combine the direct effects of these changes on the demand for children which, as mentioned above, depends inter alia on the availability of other instruments of saving, as well as the indirect effects via remittances. As was pointed out in our earlier paper, the changes will affect fertility in different ways given different motives for having children. Our present paper illustrates, though, the key role played by the motive for remittances. The connection between the motivation to remit and the demand for children has not as yet been alluded to in the existing literature on fertility or migration in LDCs. In a related paper employing Botswanian data (Lucas and Stark (1985)), the altruistic

motive for remittances has been tested and rejected. If the results of that paper were to be carried over to the current context, we would be able to sign two out of the four cases summarized in Table 1. With an increase in the expected income of a child as a migrant, or with a decrease in the spread of his/her income as a migrant, the fertility effect will be negative providing that the substitution effect alluded to in our introductory paragraphs is dominant. However, even if altruism is ruled out as the motive underlying remittances, improvements (c) and (d) do not lead to an unambiguous prediction. Thus the anticipated behaviour of migrants and the consequent fertility implications remain fertile ground for empirical investigation.

NOTES

¹The underlying idea is that migration and remittances are elements in an intertemporal contractual arrangement between the migrant and the family. A theory developed and tested elsewhere offers reasons for the migrant and the family to enter voluntarily into a mutually beneficial contractual arrangement with each other, rather than with a third party, and identifies conditions under which the contract is self-enforcing. (See Lucas and Stark (1985) and Stark (1984).)

²An increase in the spread is recognized as an increase in the riskiness associated with a variable (in our case income). This may but need not be equivalent to an increase in the variance. (See Rothschild and Stiglitz (1970)).

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