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# Discussion

## On the Role of Urban-to-Rural Remittances in Rural Development

by Oded Stark\*

### I. INTRODUCTION

In a paper by Henry Rempel and Richard Lobdell 'The Role of Urban-to-Rural Remittances in Rural Development' published recently in the *Journal of Development Studies*, Rempel and Lobdell [1978:324-341]—henceforth R & L—set out to examine the 'recent argument by several authors' that urban-to-rural remittances 'represent a significant means for removing supply constraints to improved agriculture'. R & L 'examine critically the available evidence on the rural impact of remittances' and put forward some analysis of their own. Utilizing both, they conclude their contribution by rejecting the 'several authors' recent arguments', assessing pessimistically 'the role remittances have played and are likely to play in the realization of rural development in low income countries'.

R & L refer explicitly only to two authors—Griffin and Stark. Since Griffin's argument, quoted by R & L, is due to Stark [Griffin, 1976: note 28] (and since, in any case, Griffin refers to emigration and international remittances and not to migration and urban-to-rural remittances—the subject matter of R & L's paper) it remains to be checked whether R & L's contribution draws on a reasonable comprehension of what they have termed 'Stark's contention'. My basic propositions are briefly outlined in Section II. In Section III, it is consequently shown that R & L did not fully come to grips with my argument and that, in particular, much of the evidence they have harnessed to refute, as they put it, 'Stark's claim' has been entrusted with more than it can deliver. Hence, R & L's bleak view of the developmental usefulness of remittances appears to constitute more an impression than an informed judgement based on hard facts. A useful correlate of the analysis is the generation of some critical features of optimal evidence bearing on the roles of rural-to-urban migration and urban-to-rural remittances in rural development which, to a large extent, will have to differ from the currently accessible evidence. These features should be transformed into compelling guidelines when future surveys and data collection endeavours are planned and designed.

### II. A NEW APPROACH TO RURAL-TO-URBAN MIGRATION—AN OUTLINE

My postulations concerning the role of urban-to-rural remittances in agricultural development stem from a new theoretical approach to rural-to-urban migration.<sup>1</sup> At the core of this approach lies the utility maximizing family in its specific agricultural context.

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Consider a family enterprise which is an agricultural producer on its small holding. During the specific time span of its life cycle relating to the earlier phases of its existence, the family observes a continuous reduction in its welfare as measured in 'net utility' terms. The reduction is due to two 'compositional changes': first, given the family size, there is a change in its age structure resulting in greater food requirements; secondly, family size itself changes over time as additional children are brought into the world. These changes can be translated into utility-disutility terms, leading to the result indicated above and generating an incentive to alter production technology, the intensity of which continuously increases.

However, the alteration of technology is hindered (a) by the characteristic features of the new technology itself, and (b) by the characteristics of the institutional and non-institutional 'surplus-risk state' confronting the small farmer's family.

Of the factors characterizing the new technology, the more crucial ones are its surplus requirement and its (subjective) risk-increasing nature. (Both factors are usefully illustrated by the transition from traditional varieties to High Yielding Varieties.) As to the features of the 'surplus-risk state': the absence of smoothly-functioning market structures and appropriate institutional (as well as non-institutional) facilities—notably credit and insurance arrangements—implies that the internal constraints arising from the prevalence of production risks and aversion to them, and low level of (absolute and relative) surplus, cannot be alleviated through the (highly fragmented) markets. On the other hand, the small farmer's family possesses no surplus (or in insufficient volume) and no capacity for engagement in sufficient self-insurance; with the family initially endowed with the 'cruel parameter' of only a small holding, with average capacity to generate surplus being directly proportional to on-the-farm production but inversely proportional to the (standardized) number of consuming family members, the prevailing surplus and the expected surplus are likely to be low.

It is worth noting that with surplus insufficiency and risk-averseness prevailing simultaneously, their joint impact is greater than the 'sum' of each impact when exerted separately. This results from, and implies, the prevalence of a positive interaction between surplus insufficiency and averseness to risk. On the one hand, the degree of risk aversion is related directly to the degree of surplus insufficiency: a larger surplus diminishes the degree of risk aversion paired with a given risky prospect. On the other hand, a higher degree of risk aversion paired with a given risky prospect (i.e., a prospect which requires a given surplus) magnifies the overall surplus requirements since—given the assumed absence of insurance markets—part of the surplus has to be destined as an insurance fund.

The easing of the surplus and risk constraints becomes a crucial condition for carrying out the desired technological change. It is rural-to-urban migration of a family member (i.e., a son or daughter<sup>2</sup>) that, by bypassing the credit and insurance markets (with their bias against small farmers) facilitates the change. This, migration succeeds in accomplishing: via its dual role in the accumulation of surplus (acting as an intermediate investment<sup>3</sup>) and, through diversification of income sources, in the control over the level of risk.

### III. THE ROLE OF REMITTANCES—INTERPRETATION OF THEORY AND UTILIZATION OF EVIDENCE

From the point of view of the question at hand, the implication of the new theoretical approach is manifold. Firstly, it is evidently clear that urban-to-rural remittances cannot capture the total effect that rural-to-urban migration bears on rural development. R & L might have appropriately interpreted my argument to imply that *rural-to-urban migration* represents 'a significant means for removing supply constraints to improved productivity in agriculture'. However, to interpret the approach to imply that my contention is that '*urban-to-rural remittances* represent a significant means for removing supply constraints to improved productivity in agriculture' is logically false.

Secondly, urban-to-rural remittances cannot be assumed to account for the total accumulation of surplus consequent upon migration. Designating the migrant's urban real income—net of non-optional urban incurred costs—by  $F_U$ , his pre-migration farm output by  $F_R$ , and his consumption level assumed constant over sectors, by  $F_C$  and considering the family inclusive of its urban member, surplus is accumulated *on the family farm* when  $F_U > F_R$  and  $F_U, F_R < F_C$ ; some farm generated income which would have had to be spent feeding the migrant family member had he stayed on the farm is now 'freed.' Likewise if  $F_U = F > F_R$ .

Hence, in principle, a 'farm produced' surplus *and* an 'urban produced' surplus, account in different situations with differing weights, for the total accumulation of surplus consequent upon migration. The urban component, largely<sup>4</sup> revealed through urban-to-rural remittances, may thus assume weights ranging from zero to one, with a zero weight *not* necessarily implying a zero total.<sup>5</sup>

Although urban-to-rural remittances cannot account for the impact of rural-to-urban migration on agricultural development (the first point above) or for its total surplus accumulation effect (the second point), it is important to attempt to quantify these remittances. If, for example, remittances constitute a large share of total familial resources, their potential (though, as yet, unproven) impact on technological change in agricultural production will be greater than if they are proportionately small.

However, two serious problems are inherent in the usage and interpretation of existing evidence. The first problem stems from the intertemporal changes in the magnitude of the urban-to-rural remittances flow. The second arises from the prevalence of a counter flow. Referring first to the latter, it is often found that even though the family lacks sufficient surplus to facilitate technological change in agricultural production, it does possess some surplus.<sup>6</sup> This surplus is earmarked to support the migrant member during the initial period of his stay in the urban sector and is evidenced in the prevalence of rural-to-urban remittances. Such remittances may constitute a once-and-for-all-transfer but may also assume the nature of a flow. A study based on a sample drawn from a distribution of migrants by duration of stay which is skewed to the left is likely to find a low *average* net transfer per the reference period of time—say a given month, even though the transfer per an 'established migrant' of urban-to-rural remittances may, for the same period, be quite high.

The first problem mentioned above stems from the non-uniform pattern of the (gross) urban-to-rural flow. The magnitude of a transfer in a given point in time is a function of a number of variables such as duration of stay in the urban sector, employment status and job seniority, the intensity and nature of kinship ties, cohesion and social control, age (both of the migrant and of the head of the family)—all being, in turn, functions of time themselves. Thus, since time is of crucial importance in estimating any flow magnitude, the estimated remittances, for a given population of migrants, will vary widely depending on the vintage distribution of the migrants which happen to constitute the sample. Likewise, similar populations of migrants will produce differing estimates solely because of their differing vintage composition.<sup>7</sup> Even though it is clear, from a statistical point of view, how this flaw may be avoided (i.e. through proper stratification), the main task is to secure an appropriate cross section data set which can be transformed into a 'time series flow'; the only way to gauge the total effect of urban-to-rural remittances on the 'resource constraint' is to calculate the difference between two integrals, one under the declining rural-to-urban remittances curve, the other under the rising—and subsequently falling—urban-to-rural curve.

Unfortunately, with the exception of only a handful of cases, existing migration surveys were not undertaken with the purpose in mind of estimating remittances. Consequently, in view of the aforementioned points, prevailing evidence is usually biased and must therefore be handled with great caution.

A further caveat which must be kept in mind concerns the issue of the usage to which

remittances are being put. Almost invariably, the questionnaire survey is the tool that has been employed to examine this issue. As it happens, this is a dubious device even if the relevant questions are put not to the migrant family member (which, nonetheless, is frequently the case) who is ill-positioned to inform a researcher that, say, a technological change has taken place at rural-end production but, to the migrant's family who stays behind in the rural sector.

The general deficiency of the questionnaire tool stems from the difficulty in interpreting the replies obtained. The specific deficiency of virtually all past questionnaires—the source of the findings of the surveys quoted by R & L—is that none of the more appropriate questions was asked.

The former deficiency is due to asymmetry. That remittances were used, say, to purchase inputs embodying the new technology does prove that remittances are utilized to facilitate technological change. However, because of fungibility, observing that remittances were not directly used to facilitate such an end does not entail they cannot be credited with responsibility for such a result. If there is evidence that technological change in agricultural production followed—with a lag—the event of rural-to-urban migration by a family member and that urban-to-rural remittances were transferred, the consequent release of other sources from the necessity of meeting pressing uses, facilitated by the remittances flow, may have generated the transformation; although remittances are not a direct input in the process, they are a catalyst without which it could not have come about.

Moreover, remittances may have been responsible for this very same transformation in a manner which is even more indirect. Section II has referred to the risk and credit constraints impinging on technological change in agricultural production on the family farm. Considering, for example, the latter of these two constraints it has been argued that the probable structure of the credit markets is such that the small farmer has no effective access to institutional or to non-institutional credit supply—a state of affairs which he can hardly expect to see changed. However, the situation concerning access to education for his children is totally different. Access to (some) universal education, which to a large extent is financed by governmental subsidies and not directly by those small farmers whose children are enrolled, is significantly easier and definitely more equal. Thus, the small farmer's entrance into the market in which he is less discriminated against can be viewed as a surrogate to participation in the market into which entrance is effectively barred. Building on the expectation of a high cross-rate of return to the joint decisions to educate (say) the maturing son and then 'expel' him to the urban sector, migration and the education preceding it thus substitute for the credit deficiency, the alleviation of which is mandatory in facilitating the technological change on the family farm.

Some familial surplus (which falls short of the 'sufficient surplus') may be earmarked towards the minimal finance of this education. In those cases where some education is incurred in the urban sector, such support may even assume the form of rural-to-urban transfer of remittances—precisely in the same way that, as mentioned earlier, 'partial surplus' is utilized to enhance the migrant member's success in the urban labour market. The implication of this situation is that only a long-term view of objectives and means of furthering them can ensure against committing the fallacy of accusing migration and education of sucking surplus out of the rural sector or, as R & L put it, of 'diverting funds which would normally have been used for farm improvement'.

The second, specific deficiency of the questionnaire tool relates to the point made in the last but two paragraph. If a rupee of remittances frees a locally earned rupee, it is useless to ask only 'what did you do with the money sent by your son?' If the mere fact that a rupee has been remitted signals to the risk averse diversification conscious farmer prevalence of an independent source of income, he may consequently adopt the (subjectively) riskier technology. If an elaborate, carefully prepared questionnaire, cannot

fully detect these and similar scenarios, the conclusion must be that an alternative methodology is required. Scrutinizing intensely two groups of small farmers similar in all respects but differing in their resource constraint and/or demographic composition and in that families belonging to one of them have expelled migrants to the urban sector whereas families belonging to the other did not, could serve as such an alternative. This alternative, control-group methodology could best be exercised longitudinally. Given a usual budgetary constraint, this may necessitate a smaller-scale study—a price which is well worth paying.

The concluding comments of this paper concern firstly, the meaning of development and lastly, the power of extrapolation.

Not only did R & L interpret too restrictively the role of urban-to-rural remittances in 'rural development', they also appear to have assigned too narrow an interpretation to rural development and development at large. This may account for a total disregard of other roles of urban-to-rural remittances.

Should an economy achieving income growth of its lowest income groups—even if the overall growth of its income is negligible—be classified as an economy which has failed to develop? If rural-to-urban migration results merely in a more equal distribution of income by size, should it not be regarded as conducive to 'development'?

Consider an economy in which two-thirds to three-fourths of the poorest families, the bulk of which are small self-employed farmers, are located in the rural sector; the intra-rural income distribution is relatively more equal than the intra-urban income distribution; rural-to-urban migration is dominated by members of small farmer families who, income-wise, are concentrated in the middle rather than in either of the extremes of the rural distribution of income by size. In such an economy, a transfer of income from a less equal segment of the income distribution (urban), to a lower, more equal segment of the distribution (rural), directed not to the upper group in the latter but to the small farmers is most probably, overall, equality increasing.

The informed reader may have sensed that the first part of the last paragraph depicts a typical rural-to-urban migration in a LDC scenario. The second part accounts for the hypothesized impact of a typical urban-to-rural transfer of remittances. Theoretical reasoning provides support for this hypothesis. [*Stark, 1978: Chapter IV*]. Evidence is, to say the least, sketchy. Yet, a recent study [*Knowles and Anker, 1977*] based on a comprehensive data set drawn from Kenya, the very country on which R & L base much of their argument, conclusively shows that as a result of an urban-to-rural transfer of remittances, both the inter-sectoral and the overall degree of income inequality, as measured by the Gini coefficient, declined.<sup>8</sup>

The ease by which R & L seem to have extrapolated into a likely future poor role, what to them, is a so far, evidently unfavourable role of remittances must also be sanctioned.

There is no reason on earth why remittances (and migration at large) should not be manipulated to become a vehicle of rural prosperity even if they were not conducive to agricultural development in the past. This may require some—yet minimal—institutional intervention. It is not difficult to envisage a system of incentives that will induce migrants to remit more and their rural families to utilize what they receive more productively. (Special remittances bank accounts and matching grants or loans to be extended on the disbursement of receipts of remittances towards introduction of new technologies may constitute elements in such a system).

By now there is sufficient evidence to suggest that rural-to-urban migration and urban-to-rural remittances can and have actually been used to transform agricultural modes of production. [*Stark, 1978: Chapter III*]. What a constructive approach should do is to attempt to analyze why in other cases urban-to-rural remittances have been—if indeed they were—less instrumental to agricultural development. Utilizing the moral of this analysis and drawing upon the encouraging experience, the challenge is to devise a system of the type just proposed.

## NOTES

1. For a detailed exposition see [Stark, 1978], Chapter II.
2. For a discussion concerning the selection of the family migrant member see [Stark, 1978], Chapter II.
3. In-between technological investment, which has a certain lumpiness, and investment in financial assets which has a low (or even negative) return.
4. 'Largely' — since it is well documented that some proportion of the migrant's urban income, though saved and placed at the rural family's disposal, is *not* remitted but transferred via other means and in various, also other than money, forms.
5. In line with just one basic postulation of the approach presented in section II viz. the objective being maximization of total familial utility — the migrant member included, the urban weight is bound to be positive provided some additional, fairly general, postulations are specified. Assume, further, that all marginal utilities are positive and diminishing and that the pre-migration, intra-family distribution of incomes is optimal. Then, if the post-migration income of the migrant is greater than his pre-migration income (with other members' incomes not increasing) urban-to-rural transfer of income must follow.
6. A great many and possibly most of the 'relevant technological transformations' of recent times, particularly of the last two decades or so, depend on new factors and inputs — elements in which the technological change is 'embodied'. This in itself, independent of the factor of complementarity, creates strong discrete needs for 'sufficient surplus' and produces a new pattern of technological change which differs from a 'traditional technological change'—a continuous technological change involving gradual increments to the quantities of existing factors which is facilitated, in turn, by a continuous, if sporadic accumulation of surplus.
7. This trait is bound to generate apparently contradictory results as given explanatory variables, utilized in different regression equations, appear with statistically significant, yet opposite signed, coefficients.
8. In the study explicit reference is made to the inter-sectoral degree of inequality. Since following the urban-to-rural transfer of remittances the intra-urban Gini coefficient increases, and since the intra-rural coefficient declines by less than the overall coefficient declines, it follows — from a simple decomposition of the Gini coefficient — that following the urban-to-rural transfer, the inter-sectoral coefficient must also decline.

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