

Impact of Remittance on Rural Poverty in India: Some Recent Evidence From A National Survey

Abstract: Remittances in India's case represent some 3% of GDP and as a result have significant economic and social impacts. IISS Dataworks proprietary data show that receipt by households of remittances has only a marginal impact on income inequality in rural India, as measured by Gini Coefficient, but significant impacts in terms of both the poverty gap and squared poverty indices. It establishes that that domestic remittances reduce the depth of poverty as well as the severity of poverty in rural India to a greater extent than international remittances because in the Indian context international migration is undertaken mainly by economically better off individuals where the incidence of poverty at the migrant household source is anyway lower.

Overview

This paper seeks to offer an explanation for the diversity of impacts of remittances on inequality and poverty in rural India. It supports the view that domestic and international remittances received by households in rural India reduce the level, depth and severity of poverty. However, the effect of remittances on poverty depends very much on the type of remittances, whether domestic or international, and the poverty measure used. While the impact on the poverty headcount is modest, the severity of poverty as measured falls by 7.9 percent in households receiving domestic remittances and by 1.3 percent in households receiving international remittances.

Domestic remittances reduce the depth of poverty as well as the severity of poverty in rural India to a greater extent than international remittances because in the Indian context international migration is undertaken mainly by economically better off individuals where the incidence of poverty in the migrant's household is anyway lower.

Ranking all households into decile groups on the basis of per capita income shows that households in the bottom decile groups receive a higher proportion of their household income in the form of remittances, both domestic and international. As a result, the poverty gap and squared poverty indices change considerably with the receipt of both domestic and international remittances.

Finally, this paper shows that the receipt of domestic and international remittances in household income has only a marginal impact on income inequality, as measured by

Gini coefficient. With the receipt of domestic remittances the Gini coefficient decreases by 1.46 percent and with the international remittances it decreases by only 0.21 percent.

Introduction

The effect of migration, and by extension remittances, on poverty is among the least researched and understood topics in economics. In particular, there has been little attempt to understand differences in the impacts of internal and international migrant remittances on inequality and poverty across regions. This is surprising, because the majority of the world's labour migration originates in rural areas, where most of the world's poverty is also concentrated.

The possible impacts of migration on poverty are generally explained in terms of two extremes. The optimistic scenario is that migration reduces poverty in source areas by shifting population from the low-income rural sector to the relatively higher-income urban (or foreign) economy. Income from remittances also contributes to the incomes of households in migrant source areas. If remittances to poor households are significant they may also reduce rural poverty. The pessimistic view is that poor households face liquidity risks and other constraints that limit their access to migrant labor markets. This is particularly likely to be the case for international migration, which usually entails high transportation and entry costs. Hence, it can be safely assumed that international migration takes place more in the middle and upper income households and thus is only of marginal interest in terms of poverty alleviation.

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Remittance in India

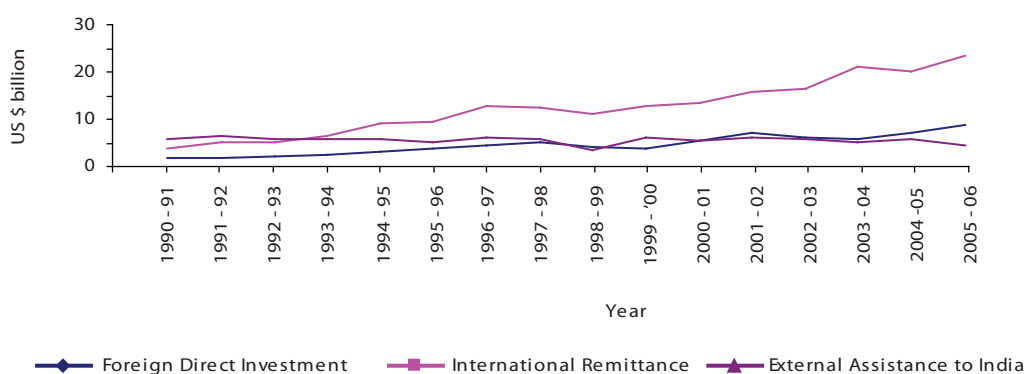
International remittances traditionally have been an important source of foreign exchange for the Indian economy, and in recent years remittances have become a growing source of external funds. The amount of remittances flowing into India has experienced a manifold increase since 1990, from US \$ 2.1 billion in 1990-91 to US \$ 24.1 billion in 2005-06 and they are now more than thrice the inflows from foreign direct investment and nearly ten times higher than external assistance to India.

Figure 2 shows that remittances in India are now close to 3 percent of GDP and that they have become particularly important since 2000. Moreover, India is already the country that receives the highest amount of remittances from external sources.

comprehensive and collected a wide range of information at household and individual level pertaining to household demographics, income, savings and investment behaviours. In the context of income, the survey collected information for individual household members above 18 years of age from both earned and unearned income sources in the 12 months prior to the Survey. Information on income from remittances, both domestic and international, was collected also. The survey considered only cash income and not amounts received in kind and/or the consumption of self-produced products as part of income calculations.

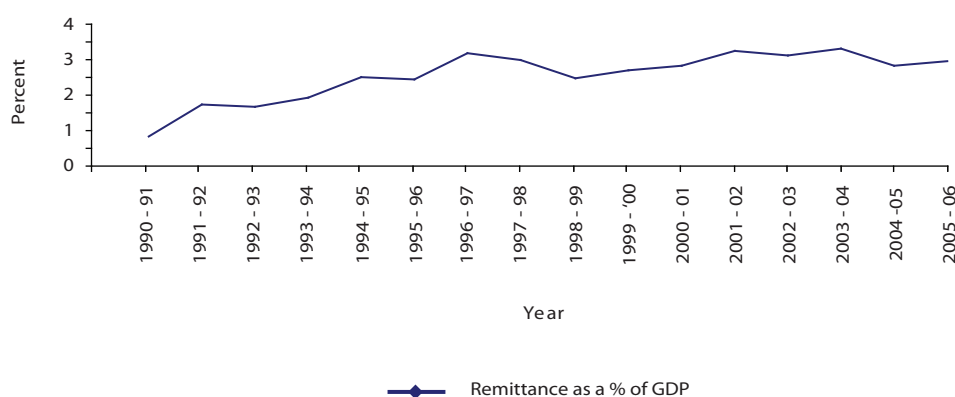
The IISS 2007 data has been applied to ascertain the impact of remittances from domestic and international sources on poverty and inequality in rural India. Specifically, to ascertain the following;

Figure 1 : India: Annual Inflows, 1991-2006



Source : Reserve Bank of India Database, Economic Survey 2006-07

Figure 2 : India: Remittances as % of GDP 1991-2006



Source : Reserve Bank of India Database, Economic Survey 2006-07

The findings in this paper are based on the findings of the IIMS Dataworks Income and Savings Survey 2007 which was concluded in June 2007. The survey had coverage of approximately 100,000 urban and rural households and is projectible to 215 million households in India. The survey is

- (i) socio-economic differentials, including gender perspectives, between households in different remittance receiving situations (no remittance, domestic remittance and international remittance);
- (ii) the impact of different sources of remittances on poverty using income per capita (as a proxy to expenditure) as an outcome indicator; and
- (iii) the level of inequality between remittance receiving and non-receiving households.

In most of the studies on poverty in India, expenditure models are applied to derive poverty lines. IIMS 2007 collected expenditure data only in respect of individual respondents with annual incomes under Rupees 20,000 and not household expenditure. However, it did collect household income data that can be used as proxy for expenditure for poverty measurement purposes.

As a poverty measurement benchmark in this paper we have employed the international concept of a dollar a day per capita income, or Rs. 840 per capita monthly expenditure¹ in place of the Government of India determined poverty line for rural areas of Rs. 365 per capita monthly expenditures.

¹ In this paper the poverty line is determined as per the calculation made in "Redefining Poverty – A new poverty line for a New India"; Mohan Guruswamy & Ronald Joseph Abraham, Centre for Policy Alternative.

In order to assess the impact of remittance on the rural poor, the impact was assessed in three different situations:

- a) situations when there is no remittance received;
- b) situations when only domestic remittance is received; and
- c) situations when only international remittance is received.

Income from remittances for those households receiving both domestic and international remittances was considered under both the categories b) & c).

We have not attempted to use the predicted income equations to measure the situation excluding remittances for those households where there has been no migration in the first instance (or otherwise those who have migrated would have a job at the origin if they had not migrated) under the assumption that migration, especially domestic migration, takes place in rural India since employment is not available at migrant source locations and if these persons had not migrated they either would have remained unemployed or at the very best significantly underemployed.

Characteristics of the three different household types have been compared in terms of age and gender of the household head, average household size, highest level of education in the household, average number of persons under 18 years of age in the household, average number of children below 7 years of age in the household, average number of earners in the household and average income of the household. These variables actually determine the potential for migration and the receipt of remittances and also are important in achieved household income levels. According to the basic human capital model, human capital variables are likely to affect migration because more educated and skilled people enjoy greater employment and earning opportunities in destination areas. Household characteristics such as age of the head of the household and number of male members and children are also argued to affect the probability of migration. For example, in the Indian rural context, migration among poor and landless households is determined by the number of adult male members.

Poverty head count was used to compare the proportion of households below the poverty line in the three conditions of receiving and not receiving remittances, the poverty gap index was calculated to ascertain the depth of poverty and the squared poverty index was used to ascertain the severity of poverty among these households. While the first of the

indexes mentioned is not able to determine the effect of remittances on poverty (proved by various studies) the remaining two can. To measure the impact of remittances on income inequality, the Gini Coefficient was calculated for the population without remittance and for those with domestic and international remittances.

Households were distributed into income/expenditure deciles groups (excluding remittance income receipts)

Table 1.1 : Remittance receiving status Across Urban/ Rural Households

In percent

	All Households	Urban HH	Rural HH
Received remittances	3.7	1.6	4.6
Did not receive remittances	96.3	98.4	95.4

Table 1.2 : Distribution of households by remittance receiving status

In percent

	All Households	Urban HH	Rural HH
Received remittances	100	13.6	86.4
Did not receive remittances	100	32.0	68.0
All Households	100	31.4	68.6

Source : Invest India Incomes and Savings Survey 2007, IIMS Dataworks.

and the percentage shares of domestic and international remittance of total income were generated separately to ascertain whether the poor benefit more than other remittance recipients.

Effects of Remittances on rural poverty

Who receives remittances?

IISS 2007 data indicate that 3.7 percent of Indian households received remittances in 2006-07. For urban households the corresponding percentage was 1.6 percent and for rural households 4.6 percent. This differential is broadly in line with the urban and rural population distribution in India, and consistent with the fact that labour migration is overwhelmingly from rural to urban areas.

In terms of regional distributions, remittance receiving households in India are not uniformly distributed across the country. The regional pattern for both the domestic and international remittances differs, with international remittance receiving households being concentrated in the states of Kerala, Andhra Pradesh and Tamil Nadu in the South, Gujarat in West and Punjab and Uttar Pradesh in North, whereas in the case of domestic remittances the concentration is in the States of Bihar, Orissa, West Bengal and Uttar Pradesh.

Household Characteristics and Remittances

Household characteristics, such as the age of the head of the household, educational attainment of the members and the availability of adult male members are important determinants of whether the household can actually sustain one or more of its members migrating. For example, the age of the head of the household, as hypothesised can have positive impact on the propensity to migrate and by virtue of that to generate remittance income, but will have a negative propensity in terms of locally generated household income at the migrant's source location.

are landless and marginal farmers who migrate to the urban areas and other agriculturally prosperous rural areas in search of labour activities. Whereas international migration by virtue of being more costly renders the poor in rural areas less able to afford international migration.

It is interesting to note that households receiving domestic remittances tend to have fewer male members, have lower earnings (even after taking into consideration income from remittances), higher numbers of children, lower educational attainment, fewer earners in the household, older household heads and a higher number

Table 2 : Household characteristics and remittance receiving status

Variables	Not receiving remittance	Receiving domestic remittance	Receiving intl. remittance
Average HH size	5.2	5.7	5
Average number of men in HH	2.7	2.6	2.3
Average number of women in HH	2.5	3	2.8
Average monthly income of HH (in Rs.)	5,728	4,316	10,984
Average monthly income excluding remittance (in Rs.)	5,728	2,534	5,261
Average number of HH members below age 7	0.7	1	0.5
Average number of HH members below age 15	1.7	2.1	1.4
Average number of HH members below age 18	2.1	2.6	1.9
Average number of member above age 15 in HH	3.5	3.6	3.6
Average number of members above age 18 in HH	3.1	3.1	3.2
Average number of members above age 18 years without primary education in HH	1.6	1.8	0.9
Average members above age 18 years in HH who have completed primary education	0.7	0.6	0.8
Average number of members above age 18 years who have completed secondary education in HH	0.5	0.4	1.0
Average. number of members in HH above age 18 years who have completed graduation	0.2	0.2	0.3
Average number of earners in HH	1.5	1.4	1.5
Average years of schooling for the person having highest education level in the HH	8.3	7.2	11.5
Average age of head of the household	44.2	46.3	49.7
% of female headed households	5.6	37.6	38.7

These observations indicate that households receiving domestic remittances appear to be socio-economically weaker in comparison to households not receiving remittances and those receiving international remittance. This is consistent with prevailing socio-economic norms in rural India. In the present context most domestic migrants

of households headed by females. In terms of household income, households receiving domestic remittances have an income which is only 75% of that of non-receiving households when income from remittances is included and only 44% when remittances are excluded.

In contrast the situation for households receiving international remittances is brighter than both households not receiving remittances and those receiving only domestic remittances. For these households, average family size is lower, they have higher earnings (even without considering income from remittances), a lower number of children, a higher educational level, older household heads and a higher number of households headed by females. In term of household income, households receiving international remittances have incomes nearly twice than that of non-receiving households when remittances are included and slightly less when remittances are excluded from income.

Effect on poverty

Table 3 is based on a poverty line of Rs. 840 monthly expenditure per household member. Using

this poverty line, Table 3 reports three different poverty measures. The first measure- poverty headcount - shows the percent of the population living below the poverty line (as defined) in rural India. However, the headcount index does not reveal the "depth of poverty" i.e. the amount by which the average income of the poor fall short of the poverty line. The analysis therefore also

used a second measure, the poverty gap index. This index measures in percentage terms the degree to which the average incomes of the poor fall short of the rural poverty line. The third poverty measure- the squared poverty gap index - shows the "severity of poverty". The squared poverty gap index possesses useful analytical properties, because it is sensitive to changes in distribution among the poor. In other words, while transfer of income from a poor person to a poorer person will not change the headcount index or the poverty gap index, it will definitely decrease the squared poverty gap index.

poverty gap index shows that including domestic remittances reduces poverty by 8 percent, while including international remittances in household income reduces the severity of poverty by only 1.3 percent. This shows that domestic remittances reduce the severity of poverty to a significantly greater extent than international remittances.

Table 3 also reveals that inclusion of domestic and international remittances in the household income results in only a slight decrease in income inequality, as measured by the Gini Coefficient. In the case of domestic remittances, the Gini Coefficient decreases by 1.46 percent but with international remittances the decrease is only marginal at 0.2 percent.

As mentioned above domestic remittances have a greater impact on reducing the depth and severity of poverty in rural India than international remittance. The reasons for this can be further explored by ascertaining the characteristics of income groups receiving domestic or international remittances. For example, if higher numbers

Table 3 : Effect of remittances on poverty for non-remittance and remittance-receiving households

Effects	Receiving no remittance (1)	Receiving domestic remittance (2)	Receiving international remittance (3)	% change (Domestic vs. no remittance) (4)	% change (International vs. no remittance) (5)
Poverty headcount (%)	52.2	51.6	52	(- 1.15)	(- 0.4)
Poverty Gap (%)	23.68	22.66	23.5	(- 4.31)	(- 0.8)
Squared Poverty Gap (%)	13.59	12.51	13.42	(- 7.9)	(- 1.3)
Gini coefficient	0.481	0.474	0.48	(-1.46)	(-0.21)
Per capita HH income p.a.	14,703	14,882	14,807	1.22	0.71

Source : Invest India Incomes and Savings Survey 2007, IIMS Dataworks.

Note : Column (1) uses per capita income excluding remittances for all households.

Column (2) measures the situation for all households when only domestic remittances are included in per capita income.

Column (3) measures the situation for all households when only international remittances are included in per capita income.

As can be seen from the Table 3, for all three poverty measures inclusion of remittances, either domestic or international, in household income reduces the incidence of poverty in rural India. However, the degree of impact varies according to remittance type. Since most of the households receiving international remittances, as mentioned in Table 2, are better off, inclusion of international remittances in household income has a marginal effect only on poverty compared to domestic remittances. According to the poverty headcount measure, inclusion of domestic remittances reduces poverty by 1.15 percent whereas inclusion of international remittances reduces the same by only 0.4 percent. However, poverty is reduced much more when measured by the more sensitive poverty gap and squared poverty gap indices. The squared

Table 4 : Distribution of remittance-receiving households by decile groups

Rank	HHs receiving Domestic remittance	Domestic remittance as a percent of total per capita HH income (including remittance)	HHs receiving international remittance	International remittance as a percent of total per capita HH income (including remittance)
Lowest 10	12.5	56.6	2.7	65.2
Second 10	13.5	63.8	0.0	0.0
Third 10	16.1	55.4	1.6	92.1
Fourth 10	9.9	59.0	4.4	75.2
Fifth 10	11.4	50.2	7.2	56.4
Sixth 10	8.8	53.7	0.0	0.0
Seventh 10	8.3	49.9	5.0	34.4
Eighth 10	4.3	48.2	10.2	82.5
Ninth 10	7.9	56.0	7.8	78.6
Top 10	7.3	26.8	61.2	53.8
Total	100	44.9	100	56.3

Source : Invest India Incomes and Savings Survey 2007, IIMS Dataworks.

Note: Households ranked into decile groups on the basis of per capita household income excluding remittances.

of households at the bottom of the income distribution are receiving domestic remittances than international remittances, or if these households are receiving a greater proportion of their income from domestic remittances, then domestic remittance will have a greater impact on poverty than international remittances. As can be seen from Table 4, while households from the lowest three income deciles account for 42 percent of all domestic remittance receiving households, in the case of international remittance nearly 70 percent of the households belong to the top two income deciles. As regards the proportion of per capita income earned through domestic and international remittance, the proportion is very high in case of lower income deciles. The fact that the households in the lowest income decile groups are receiving a larger share of their total income from both international and domestic remittances both these types of remittances have an positive impact on the depth and severity of poverty in rural India.

Policy implications

Understanding why domestic remittances have a greater impact on rural poverty than international remittances lies in the causal factors underpinning migration from rural areas and the characteristics of the migrants themselves. In broad terms, the migratory rural poor are landless or marginal farmers who migrate internally and the remittances they send home significantly impact the economic well being at the micro level in recipient households as well as at the macro rural level. Because of the relatively high cost involved in international migration, the rural poor would rarely be in a position to finance such migrations, and this explains the low impact of international remittances on poverty status at the macro rural level.

The main reason for rural to urban migration is an increasing shortage of paid employment opportunities; a situation that continues to prevail despite the otherwise brisk pace of economic growth. In the post-liberalisation period, unemployment by Usual Principal Status rose from 2.62 percent in 1993-94 to 3.06 percent in 2004-05 resulting in an additional 13.1 million unemployed job seekers. In addition, employment elasticity has continued to decline significantly in the agriculture sector. As a result the eastern Indian states of Orissa, Bihar, Jharkhand, West Bengal, Assam and Uttar Pradesh, which are predominantly agriculture based, and which mainly practice rainfed agriculture are the States from which most internal migration is sourced. In these States unemployment/underemployment is also very high, exacerbated by population pressure on land, inequality of infrastructure, industrial development, and a slow pace in the modernisation of agriculture. The IIMS Dataworks survey results also show that the proportion of domestic remittance receiving households is higher in these States. On the other hand, states such as Punjab, Haryana, and Uttar Pradesh have experienced an increase in seasonal labour demand

for labour in agricultural sowing and harvesting periods. As this demand often supersedes the availability of local labour, these locations offer a higher wage rate and/or a greater number of days of employment. The demand for labour also exists in seasonally based agro-industries e.g. rice mills, sugar factories, canal construction, and road construction.

The rural poor are disproportionately represented among economic migrants, as the average monthly income of the households receiving domestic remittances is generally lower than those not receiving remittances. The proportion of households below the poverty line as we have defined it that are receiving domestic remittances is very high at 77.6 percent in comparison to those not receiving any remittances (51 percent) and those receiving international remittances (33 percent). The unemployment rate for these migrant households is also substantially higher at 2.41 percent in comparison to the households not migrating or not receiving remittances at 1.99 percent and 0.98 for those receiving international remittances. A reasonable hypothesis therefore appears to be that but for outward migration, the unemployment rate in these households would be higher and household income lower. In the event therefore, outward migration has impacted positively on both unemployment levels and the poverty incidence in migrant source locations.

If we accept the neo-classical model showing migration as a product of rational economic decision-making as the migrant makes a rational free choice to improve his economic condition by seeking more favourable employment conditions, albeit under duress, the implications for public policy are clear. Namely, to improve the positive impact on both unemployment and poverty, greater public investment in reducing the cost of migration and investment in better assuring successful job outcomes for migrants is indicated. Some possible measures for achieving this would be to facilitate improvements in the wage bargaining power of economic migrants, skills training and improved conditions of work. In addition, to reduce the problem at source, government need to focus more closely on more effective programs to reduce regional development imbalances, minimum wage regulation and right to work through, for example, government sponsored employment assurance schemes.