
Original Paper

Economics of Activity Status, Migrant Remittances and Inequality

Dr. Mahendra P. Agasty

Additional Professor, Silicon University, Bhubaneswar, Odisha, India

Abstract

This paper investigates the economic impact of migrant remittances stemming from rural to urban migration in Odisha, India. Based on primary data collected through a four-stage random sampling procedure, the study examines 139 male migrants from 100 households, 50 returned migrant households, and 150 non-migrant households across six villages in Kendrapada district. Findings reveal that while remittances are driven by altruistic, contractual, and self-interest motives, they also have a strong economic foundation. Young, unmarried migrants with small families, lower educational attainment, engaged in plumbing or business activities in urban areas, and earning in specific income brackets tend to remit more frequently. Income at the destination emerges as the primary determinant of remittance amounts, which significantly contribute to household income in the source areas. Remittances are utilized for various purposes including agricultural investment, business ventures, education, healthcare, and debt repayment. Informal channels are preferred, particularly for small and in-kind transfers. Moreover, remittances play a crucial role in mitigating income inequalities within sending households. This study underscores the systematic linkage between migrants and their source households facilitated by remittance flows.

Keywords: Migration, remittances, inequality

1. Introduction

Up to the late 1980s, migration was viewed largely as negative for the migrants, sending households and source areas. The focus was mainly on departure of the prime age and educated workers indicating a kind of brain drain from the rural areas. But since the early 1990s there has been a change in perception with migration increasingly considered as an essential element of industrialisation, urbanisation, modernisation and economic growth and seen as positive for the areas of origin, sending families and migrants themselves. The change in focus has been from brain drain to flexibility and diversification in livelihood options and remittances. Change in activity status of the out-migrants and the remittances sent by them to the source households are widely recognised as vital dimensions of migration and are considered important to the households of origin and migrants. For migrants choose to migrate in order to improve their living conditions (Rafique et al., 2006) and the prospect of remitting is a key component of the motivation for migration in the first place (Carling, 2008). In this paper the attempt has been made to analyse the link between migration, activity status of the migrant, remittances and income of the migrant households on the basis of empirical data.

2. Review of Literature

The flow of remittances in both money and kind from the migrants to their households of origin can have impacts on the level and distribution of household income and welfare (Barham & Boucher, 1995). If most of the migrants belong to the poor families, remittances help in increasing income, savings, and investments; reducing poverty and moderating inequality in the distribution of income both among the migrant households and across all households in the rural areas of origin. But migrant remittances are multidimensional and are relative to the type of migration, the kind of jobs which the migrants pursue and the living costs at the destination, the strength of the migrants' attachment or bond with their family members left behind and the need of the family at the origin. The effects of migration also depend on the duration of migration, the local context and the amount of remittances (IFAD, 2008). In such view

of the matter, the study of impact of migration, and migrant remittances in particular, involves complex analysis. It is probably for this reason that thorough research is lacking on this aspect of migration and especially the impact of internal rural-urban migration at the household level has still remained a relatively less researched area (Adger & Locke, 2002). A brief review of available literature on migrant remittances is presented below.

Determinants of Remittances

Lucas and Stark (1985) outline three motivations for remitting such as altruism, tempered altruism and self-interest. Altruism implies that the migrant derives utility from his own consumption and the consumption of household of origin and is concerned about the needs of family left behind; say care for the parents and other family members. The second arises from the migrant's obligation on account of the family's investment in him as human capital and financial support received in the initial stage of migration i.e. coinsurance. Remittances motivated by altruism and tempered altruism vary directly with the migrant's own income but inversely with the non-remittance income of the family at the origin. Remittances are sent because of the social contract between the migrant and his household and in his self-interest (Ellis, 1998) and are a reflection of migrants' loyalty to their families in rural areas and their wish to return after sometime (Murphy, 2002). Combined elements of altruism and self interest in the migrants' decision to invest have been noted by Atamanov and Berg (2010). They also point to the role of the strength of the relationship of the migrant and the left behind family members in the decision. To them, remittance increases with proximity. The main motives behind remittances can be exchange, inheritance, self-interest and debt repayment (Rapoport & Docquier, 2005). Many prefer to live under very difficult conditions to minimize cost of living and maximize savings and send remittances for supporting the family at the Origin. Majority of the migrants (93.7 percent) send money every month which point to the high monetary requirements at the place of origin (Mishra, 2008).

Migrants remit to shield their parents from income loss due to drought conditions and to save their drought sensitive assets (Lucas & Stark, 1985; Stark & Lucas, 1988). Remittances are an instrument of inter-temporal insurance with the family providing insurance to the remitter would-be and the remitter's remittances functioning as the insurance premium (Stark, 1991; The social security motive proxied by parent's age is a dominant force behind remittances (Cox; 1990; Cox & Jimnez, 1992; Cox et al., 1988). Remittances are also sent to reimburse the household for past expenditure (Stark & Lucas, 1988; Brown, 1997; Poirine, 1997) and to invest for the future as a way of maintaining status and returning home with social capital (Lucas & Stark, 1985; Ravelo & del Rosario, 1986; Hodinot, 1992(a)(b), 1994; Guranizo, 1993). If the migrant comes from a low status family and if status at the origin matters to the migrant and his family, remittances can be utilized as a status elevating instrument (Stark, 2009). There are some demographic and social characteristics of migrants and their families which determine the remittances.

Purpose and End- use of Remittances

The economic impact of remittances depends upon how the remittances are used by the migrant household. The remittances can be used either for the consumption purpose or for investment purpose. Literatures on this issue are quite varied and lack consensus. Many researchers are of the view that remitted funds are spent on consumption (Obrei & Singh, 1980; Durand et al., 1996; de Brauw et al., 2003; Huang & Pieke, 2004; Huang & Zhan, 2005). The study by Gilani et al. (1981) on migration in Pakistan indicates that remittances were spent on consumption, followed by residential investment. Adams' (1991) study on Egyptian migrant households reveals that the remittances increase the marginal propensity to save and invest of the households and the investments are mostly in land and residences. A study by Brown (1998) on remittances in Western Samoa and Tonga shows housing expenditure as the single largest component of total expenditure out of remittance income. Sometimes the investment in housing, land and in jewellery is not productive in nature

Remittances and Household Income

The most important motivation for migration is the prospect of receiving remittances and the receipt of remittances is by far the most direct impact of migration on household resources (Stark et al., 1988). Migration does have positive effects on household income (Hare & Zhao, 2000) Obrei and Singh

(1980), from their study concerning India, found that remittances raise the average income of the out migrant households by 30.7 per cent and the effects of remittances are greater in poorer households. Shi (1999) finds from his study that rural-urban migration makes a contribution to the growth of rural income, not only by raising labour productivity of migrant workers but also by permitting more efficient allocation of the remaining non-migrating workers.

Remittances and Income Distribution

The literature relating to distributive effects of migration is unique and varied. There is a lack of general consensus on the impact of migration on income distribution probably because the studies are context dependent. Some show equalizing effects while others indicate the opposed effect and there are some empirical works which present evidence in favour of both.

Migrants are not the 'poorest of the poor' (Lipton, 1980; Ellerman, 2005), those who benefit the most from migration are not necessarily the poorest households (Hare & Zhao, 2000) and only some households/individuals are able to send migrants (Lipton, 1980). In the opinion of Zhu and Luo (2008), the 'opportunities to participate in migration' are better availed by the relatively wealthy who can easily harness social networks, obtain information and arrange money for the travel and initial costs of movement and relocation. Lipton (1980) also questions the equalizing effects of migration on urban-rural differences. Above all remittances may lead to inequality among the migrant households because of the differences in remittance flow and their uses across the migrant groups.

Murphy (2002), on the contrary, argues that when households with surplus labour send migrants they are able to utilize their workforce more efficiently and generate higher returns on labour than agriculture which can contribute to reducing rural inequality. Hare and Zhao (2000) who have pointed to increasing inequalities due to migration also argue in the same study that migration induced by differential access to local wage work is more equalizing than local wage labour. In the same study Zhu and Luo (2008) find evidence of the equalizing impact of migration. They argue that migration benefits the poorest households disproportionately and hence moderates rural inequality. A further argument to this effect is that non-agricultural income has an equalizing effect on income distribution (Zhu & Luo, 2006).

Remittances reduce income inequality when the effects are measured looking at remittances as an exogenous income source (Stark et al., 1986; Stark, 1988; Taylor, 1992). According to Barham and Boucher (1998) when the observed income distribution is compared with two no-migration counterfactuals where migration and remittances are treated as a substitute for home earnings, income inequality was found to be in the no-migration counterfactuals.

Shi (1999), while studying the labour migration in China, finds that faster growth of rural household's income resulting from more rural workers moving into urban areas could narrow the urban-rural income gap. He also concludes that rural migration at least does not cause deterioration in income distribution and might improve it. Remittances from out migrant workers have definitely played a role in reducing income differentials among rural households.

Migration in general and migrant remittances in particular may benefit the rich and poor at the origin differently. They benefit the rich more than the poor as in Kenya (Knowles & Anker, 1981) while they are a more important part of income of the poor sending households than that of the better-off migrant households as in India (De Haan, 2002).

In contrast, Obrei and Singh (1980) found from their study that remittances improve not only the distribution of income among non-migrant households but also the overall distribution of income in rural areas. Barham and Boucher (1998) have studied changes in inequality vis-à-vis internal rural-urban migration on the basis of cross-section data collected from a survey of households in a Nicaraguan town with a long history of migration by comparing income inequality by means of Gini index. The results indicate that remittances from internal migration reduce inequality at the origin area. According to Barham and Stephen (1998) remittances can, in effect, be treated as an exogenous transfer by migrants and they help in reducing income inequality.

The review of studies on migrant remittances presented above indicates that existing research in this

area are time, region and context specific. Their results cannot be generalized too. Surprisingly, there has been no study relating to Odisha. This paper is a humble attempt to fill this research gap.

3. Objectives, Database and Methodology of the Study

In this paper we explore the economic impact of migrant remittances through rural to urban migration in Odisha. The broad objectives of the paper are:

1. To identify the determinants of remittances through the link between socio-economic characteristics of migrants and the decision to send remittances.
2. To assess the size and highlight the methods of sending remittances.
3. To bring out the purpose and end-use of remittances.
4. To examine the impact of remittances on the level and distribution of income at the household level.

The study is based on primary data collected by using a four stage random sampling procedures from 139 male migrants of 100 households, 50 returned migrants households and 150 non-migrant households in six villages, two each from three blocks of Kendrapada district of Odisha, India. Information have been collected by canvassing a structured and pre-tested schedule in person among the 300 sample respondent for the year 2022. Utmost care has been taken to obtain reasonably accurate data by adopting cross-questioning and focus group discussion procedures. Logit, probit and OLS regression models have been applied to estimate the determinants of remittance decision. Gini coefficient and Lorenz Curve techniques have been used to find out the impact of migrant remittances on distribution of household income in the study area. Simple percentage methods have been used to ascertain the results and analyze them to draw conclusions for the study.

4. Results and Discussions

4.1 Migration and Improvement in Activity Status

Migration is a household strategy to diversify the employment portfolio of working age population. It has been observed in our study that employment related reasons were the primary determinants of out-migration of majority of the sample migrants. In such view of the facts, it was considered appropriate to examine the changes in the activity status of the migrants consequent upon their migration. For this purpose we asked the migrants about their activity status in the pre-migration situation and present position. The term 'activity status' is defined in terms of the economic activities performed by the people. For obvious reasons, we have concentrated on the principal activity status of the sample which relate to the activity on which a person spent a relatively longer time i.e., major time criterion during the 365 days preceding the day of migration and the 365 days preceding the date of survey. The details of information obtained by canvassing the structured schedule among the respondents are given in Table 1.

Table 1. Distribution of Migrants by Usual Principal Status and Number of Days Engaged

Pre-Migration		Post-Migration								
		Plumbing		Business		Other Activities		All Activities		
Activity Status	No. of Persons	No. of Days	No. of Persons	No. of Days	No. of Persons	No. of Days	No. of Persons	No. of Days	No. of Persons	No. of Days
1	2	3	4	5	6	7	8	9	10	11
Cultivators	39	172	31	326	2	298	6	287	39	319
	(28.06)									
Agricultural	64	209	50	309	1	301	13	291	64	305

and Casual Labour	(46.04)									
Self Employed	8	273	2	315	4	296	2	277	8	296
	(5.76)									
Unemployed	28	0	22	289	3	278	3	296	28	289
	(20.14)									
Total	139	160	105	310	10	292	24	290	139	305
	(100.00)		(75.54)		(7.19)		(17.27)		(100.00)	

Source: Primary Survey

Note. Figures in parentheses indicate percentages

It can be read off the table that the sample migrants were pursuing three principal activities in the pre-migration year. Some of them worked as cultivators on their own farms and their number was 39 with a 28.06 per cent share. A large number (64 or 46.04 per cent) of them was casually engaged in others' farms or non-farm enterprises. They received wages according to the terms of daily or periodic work contract but did not enjoy security and regularity of work. A very small number of them (8 or 5.76 per cent) were self employed i.e., engaged in own-account professions or trade. A sizeable number (28 or 20.14 per cent) were without work either because work was not available to them or they did not like to take the work as was available. In the rural areas, agriculture is the most important activity and therefore, round the year work was not available to the people in the pre-migration situation. The average number of days for which work was available in a year was very low at 172 days for the cultivators, 209 days for the agricultural and casual labour and 273 days for the self employed. In the aggregate, an average individual worked for 160 days in a year in the pre-migration year.

In the post-migration situation, tangible and significant improvements were noticed in the work status of the migrants. Of the total sample of 139 migrant workers, 105 or 75.54 per cent were working as plumbers or assistants to plumbers and were engaged for 310 days on an average in the year preceding the survey date. Those who pursued small business activities or worked in others' business concerns number 10 or 7.19 per cent of the sample having an annual average engagement for 292 days per person. Migrant workers doing other works number 24 or 17.27 per cent of the sample and they were engaged for about 290 days in a year on an average. Considering the sample migrants as a whole, the average number of days for which a migrant worked in the year is estimated at 305 days.

Across the categories, all the sample migrants have experienced increase in engagement for a greater number of days as compared to the pre-migration scenario. Migration is thus an effective strategy to achieve more number of days of gainful employment.

4.2 Remittances

During the course of personal interviews with the respondents it was revealed that cash remittances are only a part of the flow from the migrants to the source households, another part being in the form of goods. In most of the cases, reverse flows have also been revealed i.e., flow of food grains and allied goods from the rural households to the out-migrants. But they are quite negligible in amount and ignored in our survey. Remittances are sent because (i) migration is more a household rather than an individual decision, (ii) the migrants, in most cases, leave their spouses and children at the source under the care and protection of the elders, (iii) they consider improvement in the household economy as an obligation, (iv) they cherish the hope of returning home after some time in future and inheriting parental wealth and property and holding claim over all major household decisions, and (v) they want to maintain social contact at the source. For simplicity we have limited our analysis only to cash remittances by the migrants to the sending households.

4.3 Size of Remittances

Both the migrant and the family left behind are concerned not only with the decision to send remittances but also with the amount of remittances, the regularity of transfers and special remittance provisions for specific occasions/purposes. The amount of remittances matters because it has a strong bearing on their end uses. Data relating to the amount of remittances sent by migrants according to their occupation and the family status are given in Table 2.

Table 2. Size of Remittances

(Amount in Rupees)

Occupation at Destination	Single Migrants			Family Migrants			All Migrants		
	Number	Average Income Earned	Average Amount of Remittances	Number	Average Income Earned	Average Amount of Remittances	Number	Average Income Earned	Average Amount of Remittances
1	2	3	4	5	6	7	8	9	10
Plumbing	81	150835	44200 (29.30)	24	147182	14463 (9.83)	105	150000	37403 (24.94)
Business	07	144270	30100 (20.86)	3	140570	9976 (7.10)	10	143160	24063 (16.81)
Others	21	131500	20300 (15.43)	3	135500	10540 (7.78)	24	132000	19080 (14.45)
Total	109	146688	38690 (26.37)	30	145352	13622 (9.37)	139	146400	33277 (22.73)

Source: Primary Survey

Note. Figures in parentheses indicate percentages to income earned

In the year 2022, an average sample migrant earned Rs.1,46,400. The highest income is recorded in the case of plumbers (Rs.1,50,000) followed by businessmen (Rs.1,43,160) and other workers (Rs.1,32,000). The average amount of remittance per migrant has been Rs. 33,277 or 22.73 per cent of income earned. Plumbers have been the best remitters remitting Rs. 37,403 or 24.94 per cent of income earned, businessmen come next with Rs 24,063 or 16.81 per cent and migrants pursuing other activities are at the lowest end having remitted Rs 19,080 or 14.45 per cent of their income.

Among the migrants, 109 lived as singles and 30 lived with family at the destination. Expectedly remittances were higher for the migrants who are living as singles than those with family. The overall amount of remittance per remittee migrant comes to Rs. 38,690 or 26.37 per cent of income earned for the single migrants as against Rs. 13,622 or 9.37 per cent of income for the family migrants. The average amount of remittances have been Rs. 44,200 or 29.30 per cent of income, Rs 30,100 or 20.86 per cent of income and Rs. 20,300 or 15.43 per cent of income for the single migrants pursuing plumbing, business and other activities respectively at the destination. The respective figures for the family migrants are lower i.e. Rs 14,463 or 9.83 per cent of income for the plumbers, Rs. 9,976 or 7.10 per cent of income for businessmen and Rs. 10540 or 7.78 per cent for other categories of workers. Broadly speaking, migrants pursuing plumbing activities were the best remitters. This is because their earnings were higher.

Determinants of Size of Remittances

There are various factors that determine the amount of remittances. Some of the factors we have taken in our analysis are income of the migrants, amount of land holdings at the destination, marital status of the migrants, family size at the destination, age of the migrants and number of dependents in the source household. To study the impact of various factors on the amount of remittances we have used the Ordinary Least Squares method.

The regression equation is as follows.

$$Y = \alpha + \beta_1 INC + \beta_2 LH + \beta_3 MS + \beta_4 FS + \beta_5 AGE + \beta_6 DEP + \epsilon$$

Estimated statistics for the determinants of decision to remit is presented in Table-6.3.

Regression Results

Table 3. Estimated Statistics

Variable	Coefficients	T-Value	SE	P -Value
1	2	3	4	5
Dependent				
Amount of Remittance (Y)				
Independent				
INC	0.071*	5.985	0.012	0.000
LH	-0.005	-0.353	0.022	0.725
FS	-0.058*	-3.146	0.018	0.002
DEP	0.546*	19.564	0.028	0.000
Constant	- 1.850*	-11.006	0.168	0.000
R ²	0.94			
F	609.03			
N	139			

Source: Primary Survey

Note. * P≤0.01, ** P≤0.05, *** P≤0.1

Note. Y= Amount of Remittance, INC= Income of the Migrants, LH= landholding at the Origin, MS = Marital Status, FS= Family Size at the destination, AGE=Age of the migrants, DEP= Number of dependents at the origin, €= error term

Estimated statistics indicating the relationship between the amount of remittances and other variables have interesting revelations. The table shows that the amount of remittance sent by a migrant is positively correlated with income of the migrant i.e., the migrants having more income remit more than those having lower income. The estimated value suggests a strong and statistically significant relationship between income and the amount of remittance. Higher income tends to generate more surplus and hence greater ability to remit. Landholding status has a negative relationship with the amount of remittance. Migrant whose source households having more amount of land remit less in comparison to those who have less land probably because land is an important livelihood support, but the result is not very significant statistically.

The variable (FS) has a negative and significant influence on the amount of remittance sent. Migrants having big family size at the destination remit less than the migrants having small family size. The result is significant at 1 per cent level. This is obvious because family migrants need to spend more on maintaining family at the destination and hence cannot afford to send more remittances. The variable DEP has a positive coefficient indicating that migrants having more number of dependents at the source remit more than those who are having less number of dependents at the source. This seems logical because having more dependents exerts greater pressure for sending remittances.

Remittances Transfer Mechanism

The migrants follow different channels to send remittances to their households at the origin. The information is given in Table 4.

Table 4. Medium of Sending Remittances

Medium of sending Remittances	No of Responses	Percentages
1	2	2
Post Office	33	21.15
With Relatives	38	24.36
Banks	15	9.62
Other Migrants	70	44.87
Total	156	100.00

Source: Primary Survey

Note. Responses do not add up to 139 i.e., the numbers of migrants as there are multiple responses.

It can be seen from the table that most of the time the migrants send remittances through other migrants. 70 out of 156 responses or 44.87 per cent come in this group. Next to this channel comes the role of migrants' relatives working at the destination. This channel accounts for 33 out of 156 responses or 21.15 per cent. Among the formal channels, post offices are a preferred channel with 33 out of 156 responses or 21.15 per cent share and the last one is banks having only 15 of 156 responses or a share of 9.62 per cent.

It follows from the above that migrants use informal channels in sending remittances. Other migrants and relatives together account for 69.23 per cent of the average number of remittances and formal channels have the balance 30.77 per cent share. While canvassing the interview schedule among the remitting migrants we found them coming in the open in favour of the informal channels because they are most trustworthy, convenient, bond strengthening, suitable for small amount of remittances and easy for transfers in kind. Many of the migrants' level of education being low, they have difficulties in understanding the procedures involved in remitting through banks and 37 per cent of the migrants do not have any bank account either at the destination or of their households at the source. The absence of banking facilities and similar financial services connecting the source and destination areas, relatively high cost of transfers through formal channels, especially for small amounts, and the comparatively difficult procedural formalities involved in using the formal channels dissuade the migrants from using these channels. Besides, the formal modes of sending remittances are slow in delivery in some cases. However, when it comes to sending large amounts, the migrants either carry them to the source themselves or send through bank drafts.

Purpose and End-use of Remittances

We have noted earlier that altruistic, contractual and self-interest motives have strong influences on the migrants' remittance decision. Since remittances are a kind of intra-household transaction, the purpose for which they are sent and their end-use by the receiving households are usually the same. Most often

migrants send remittances without specifying any purpose with the expectation that they would be justifiably used at the receiving end. Barring few stray cases of alleged misuse of funds by the receiving households and the consequential conflicts and tensions between the remitters and their households which were amicably settled through open discussions between them, the overall utilisation pattern of remittances has been to the satisfaction of all concerned. But both the remitters and their households are generally not in the habit of keeping detailed records of their budgets for which it is very difficult to examine the amount and end-use of remittances. However, we have obtained some data in this regard on the basis of interviews with remitters and their families left behind and field observations.

Receiving households are observed to have used the remittances in a number of ways .We have grouped them under four broad heads viz., (a) productive investment in activities which enable the household to earn more than before, (b) consumptive investment which not only improves household well-being immediately but also enhances its capacity to earn in future, (c) household expenditure that more immediately improves the standard of living and well-being of the family left behind and (d) repayment of debt. Relevant data are presented in Table-6.5.

Table 5. End –use of Remittances by Receiving Households

Sl. No.	Purpose and End Use	Amount in Rupees	Percentages
1	2	3	4
1.	Productive Investment of which	1629000	35.36
	(i)Agriculture	585550	12.71
	(ii) Purchase of Farm land	708100	15.37
	(iii) Business Creation	335350	7.28
2.	Consumptive Investment of which	1545200	33.54
	(i)Construction and Repair of House	865200	18.78
	(ii) Education of Children	364400	7.91
	(iii) Health Expenses	107340	2.33
	(iv) Durable Consumer goods	208260	4.52
3.	Household Expenditure	1146240	24.88
4.	Repayment of Debt	286600	6.22
Total		4607040	100.00

Source: Primary Survey

It can be seen from Table 4 that remittances are used for a variety of purposes ranging from basic needs and family maintenance to investment in agriculture and business, construction and remodeling of houses, health and education, and repayment of debt. Migration has a negative effect on agriculture in terms of lost labour effect which gets compensated, though inadequately, by remittances and their use in buying additional inputs, hiring firm machinery, alleviating capital constraints for financing non-farm activities and purchasing modest labour saving equipments. Households have used 12.71 per cent of remittances for these agricultural purposes. Agricultural land is a subsistence safety net in rural areas and hence all households endeavor to buy land. From our investigation we have found farm land as an important investment for remittances with a share of 15.37 per cent. Migrants from the villages studied by us cherish the intention of returning to their households at some future date. They intend to create business with the help of managerial and entrepreneurial skills they have acquired and exploring urban connections and instruct their households to start operations for setting business units. 7.28 per

cent of remittances have been used for this purpose. These three uses come under productive investment and together they account for 35.36 per cent of total remittances.

Improved accommodation is a pre-condition for meeting the basic shelter requirements, needs of self-esteem and social recognition and for enhancing family well-being. Migrants send remittances to build and remodel houses for which they provide new styles and standards too. They do so to enable their family members to enjoy the benefits of walls that do not fall and roofs that do not leak. House construction and repair has a substantial share of 18.78 per cent in total remittances. Expenditure on education and health are common uses of remittances in rural areas and more so because people have become increasingly conscious of education and health and are unable to meet these expenses from agricultural incomes in a situation when education and health provisioning are widely privatised. In fact, the need to pay for the education of the siblings and to buy medicines may be one of the motivating forces for migration. Education and health account for 7.91 per cent and 2.33 per cent of total remittances respectively. Now-a-days consumption of manufactured consumer durables like television sets and motor cycles have increased even in the remote areas. Remittance receiving households have spent 4.52 per cent of remittances under this head. These four items which constitute consumptive investment together have a share of 33.54 per cent in the remittances by migrants.

Household expenditure has a lion's share of 24.88 per cent in total migrant remittances which help to pay for everyday items and consumption of basic goods from morning tea to soaps and clothes. Gifts at lifecycle celebrations, marriages in particular, also figure here in the form of dowry in cash and kind offered by the bride's family to the groom on such occasion. A portion of remittances i.e., 6.22 per cent is used for repayment of debt.

It is clear that most of the uses of remittances are consumption oriented (58.42 per cent) but they cannot be considered unproductive and wasteful. On the contrary, they can be viewed as productive in so far as the uses of remittances on them are a way of releasing funds for some other productive purpose. Besides, some of the consumptive uses like expenditure on education and health are a kind of investment in human capital which contributes to future growth of household income in a greater way.

Remittances and the Economic Impact of Migration

Income is widely accepted as an approximate index of the economic impact of migration and the magnitude of income impact following migration can be treated as a function of '2Ps' i.e., participation and productivity of labour. The nature and regularity of work which the out-migrants pursue at the destination as compared to their previous occupation may be taken as a crude measure of participation and their earnings as a summary indicator of productivity. It is perceived that migrants are engaged in better economic activities, working more number of days and earning more at the destination as against the drudge-filled seasonal agricultural works they were doing at palpably low wages at the origin in the pre-migration situation. In addition, the remittance they send and their investment in income-yielding activities, can add to household income at the source. The skills, knowledge and technology which they learn at the destination and their exposure to a better world can broaden their outlook which can also contribute to household income. Additionally, migrant remittances may influence income distribution across the households in the sending area. It follows that the economic impact of migration operates through various channels which may be summarised in the following chart (Figure 1).

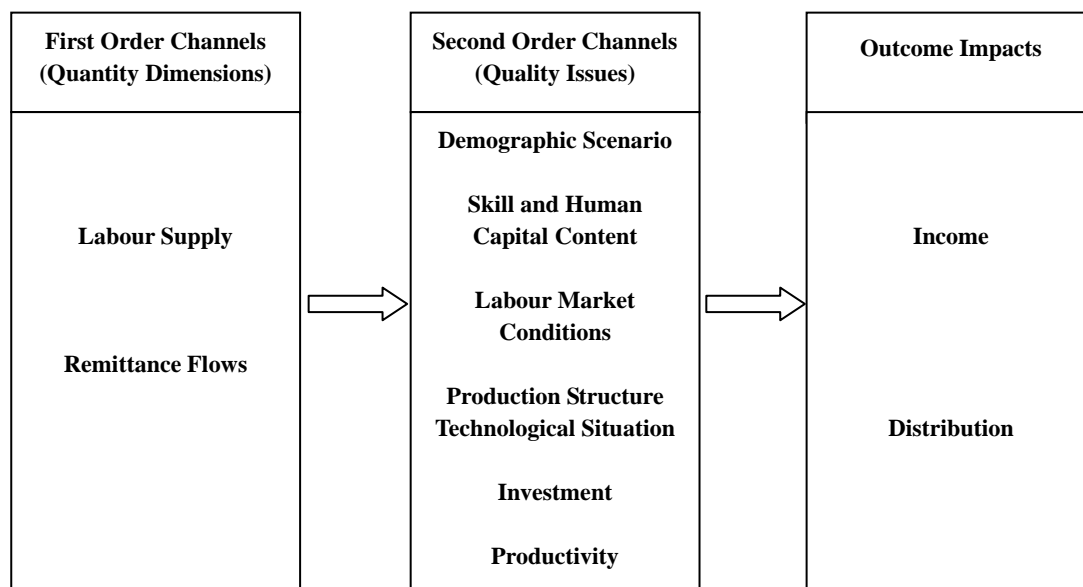


Figure 1. Economic Impact of Migration

As can be seen from the figure, migration related effects are linked to labour supply changes, and remittance flows. These work through demographic shocks (e.g. movement of prime working age people), human capital formation (e.g. access to education and training, learning outcomes), labour market shocks (e.g., demand-supply mis-match, wage hike, production restructuring (e.g., sectoral shifts, land use changes favouring high value and less labour intensive crops, technological changes (e.g., use of up-to-date technology in production, application of capital-intensive methods of production), and enhancing productive investment all of which together bring about improvements in productivity. All these have significant effects on the size and composition of income and agricultural productivity at the household level, and distribution of income across households. Needless to say, these may interact with each other to generate a multipliers effect on the economic condition of the households. Thus viewed, migrants can be perceived as potential investors and active agents for augmenting household income and moderating inequality in income distribution as well.

The Impact of Remittances on Household Income

Migration provides households with a source of income uncorrelated with agricultural income and is considered as a pathway out of poverty and to reduce consumption pressures for the households at the origin (World Bank, 2007). Nurse (2004) treats migrant remittances as ‘free lunch’ in financial terms because they do not carry any cost for the receiver(s). Remittances also facilitate investment in new activities, promote expansion in existing activities (such as agriculture through investment in land and technology) and provide liquidity to the source households which help in increasing household income. Besides, migrant remittances create income-employment multipliers in migrant sending villages. They may broaden the activity status and outlook of migrant households enabling them to recognise new and economically more rewarding activities and reorganise investment and production accordingly. All these tend to increase the level of income of the sending households at the source area.

We have made a simple exercise to show the impact of remittances on the level of household income. Since the indirect impact of remittances on the level of household income through investment and reorganisation of production activities are difficult to estimate in view of the mixed character of investment, production decisions and sources of income at the household level in the rural areas, we have considered only the direct impact. For this, we have computed the household income with and without remittances for the decile groups of migrant households. Relevant information is presented in Table 6.

Table 6. Remittances and level of Income (Amount in Rupees)

Deciles Group	Annual Mean Household Income without Remittances	Amount of Remittances	Annual Mean Household Income with Remittances	Percentage increase in Income	Remittances in percent of Total Household Income
1	2	3	4	5	6 (3 as % of 4)
1	9500	23485	32985	247.21	71.2
2	10400	30385	40785	292.16	74.5
3	11500	39985	51485	347.69	77.66
4	12300	48330	60630	390.24	79.71
5	14100	57447	71547	407.42	80.29
6	24000	55913	79913	232.97	69.97
7	30100	57000	87100	189.70	65.44
8	40500	49500	90000	122.22	55.00
9	50300	51000	101300	101.39	50.34
10	60500	52485	112985	86.75	46.45
All groups	26320	46553	72873	176.87	63.88

Source: Primary survey

We have recorded the mean income of migrant-sending households at the source area without remittances at Rs. 26320 in the table. With remittances, the mean household income comes to Rs.72873 indicating an increase by 176.87 per cent and remittances constituting 63.88 per cent of mean household income.

The average amount of remittances (Col.3), the percentage share of remittances in mean household income (Col.6) and the percentage increase in mean household income due to remittances (Col.5) have been observed to be very high and showing an increasing trend when we look at the first or lower five decile classes of households.

If we consider the top five or upper decile classes the percentage increase in household income due to remittances have been found to be much lower showing a decreasing trend. The average amount of remittances received per household and the percentage share of remittances in household income have broadly fallen for the upper decile classes suggesting a more or less similar decreasing trend.

The impact of remittances on income of migrant households can be further ascertained by running a liner regression on our data. The regression equation used for the purpose can be written as

$$Y = a + b (X)$$

$$Y = 0.925 + (1.330) X$$

Where Y = Income, the dependent variable

X = Amount of remittances, independent variable

The descriptive statistics are presented in the Table below.

Table 7. Descriptive Statistics

Variable	Mean	SD	Coefficient	T-Value	Level of Significance
1	2	3	4	5	6
Y=Income (Dependent)	6.07	4.5			
X= Remittance (Independent)	3.87	3.3	1.330	45.471	00.00
Constant = 0.447					

F Ratio= 2067

Number of households=100

Adjusted R square =0.95

Source: Primary survey

The correlation is strong positive (1.330) and the relationship is highly significant. We have estimated the effects of labor migration on household income by including the amount of land and number of migrant and non-migrant workers of the households in the income function. The descriptive statistics are given in Tables 6 and 8.

Table 8. Results of Income Function of Migrant Households

Independent	Dependent Variable: Household Income				
	Mean	SD	Coefficient	T-Value	P value
1	2	3	4	5	6
Income from Migrant Workers	3.84	0.80	1.12*	30.96	0.00
Income from Non-Migrant Workers	1.43	0.55	0.85*	15.01	0.00
Income from Land	1.90	1.29	0.95*	12.99	0.00
Constant	-0.98			-0.88	0.381
R Square	0.98				
F ratio	2490.46				

Source: Primary Survey

Note. * P≤0.01, ** P≤0.05, *** P≤0.1

The results show that the estimated coefficients of migrant labour, non-migrant labour and land are positive and statistically significant. The marginal contribution of out-migrant workers to household income is higher by about 32 per cent than that of non-migrant workers and about 18 per cent higher than that by land. This suggests that the contribution of migration and migrant remittances in particular, to household income is robust.

Migrant Remittances and Income distribution

The studies on distributive effects of economic activities and policies have attracted increasing

attention of researchers in view of the emphasis on inclusive growth worldwide. But the relationship between migrant remittances and income distribution at the household level in the area of origin is complex and inconclusive. While some argue that remittances reduce income inequality and help in raising the standard of living of the lower income households at the source area, others point to the evidence of inequality accentuating and immiserising impact of migration. Accordingly, we have made an attempt to examine the impact of migrant remittances on income inequality in the six villages covered under the study. We have applied the Gini coefficient technique to measure the equalising /inequality accentuating impact looking at the household income of the 100 migrant households and all the 200 sample households separately.

Remittances and Inequality across Migrant Households

In the first instance, we focus on income distribution across the 100 migrant households having sent 139 workers to various urban locations. For simplicity of analysis we divided the households into decile classes and computed their income with and without remittances to estimate the Gini coefficients. Relevant information is given in Table-6.9.

Table 9. Remittances and Inequality

Deciles Group	Income excluding remittances			Income including Remittances		
	Mean (Rs)	% of Total Income	Cumulative (%)	Mean (Rs)	% of Total Income	Cumulative (%)
1	2	3	4	5	6	7
1	9500	3.60	3.60	32985	4.52	4.52
2	10400	3.95	7.55	40785	5.60	10.12
3	11500	4.37	11.92	51485	7.07	17.19
4	12300	4.67	16.59	60630	8.32	25.51
5	14100	5.36	21.95	71547	9.82	35.33
6	24000	9.12	31.07	79913	10.97	46.30
7	30100	11.44	42.51	87100	11.95	58.25
8	40500	15.39	57.90	90000	12.35	70.60
9	50300	19.11	77.01	101300	13.90	84.50
10	60500	22.99	100	112985	15.50	100.00
All groups	26320			72873		
Gini Coefficient	0.35			0.23		

Source: Primary Survey

The table reveals that, excluding remittances, the top three decile classes have a 57.49 per cent share in income and the rest i.e., bottom seven have only 42.51 per cent share. If we take the top five classes, they account for 78.05 per cent of total income with the bottom five having a share of only 21.95 per cent. The Gini coefficient of income distribution is estimated to be 0.35. This indicates the existence of large inequalities in income distribution among the households. When we add remittances to income of the migrant households, we find the top three decile classes accounting for 41.75 per cent share with the bottom seven decile classes having a share of 58.25 per cent. Similarly, the top five decile classes have 64.67 per cent share and the bottom five decile classes account for a share of 35.33 per cent. The

Gini coefficient now has a lower value of 0.23 suggesting a reduction in inequality by about 34.29 per cent. It can, therefore, be surmised that migrant remittances have an equalising effect on income distribution at the source area in terms of a moderation of existing income inequalities. The impact is found to be relatively robust in the case of the lower decile classes. Migration and remittances sent by migrants have also helped to increase the mean household income of the migrant families at the area of origin from Rs.26320 to Rs. 72873 i.e., by 177 per cent. This shows that growth can be an antidote to inequality. A second conclusion is that migrant remittances have an income equalising effect. If we assume that workers have not migrated, a significant proportion of their household income would have accrued from agriculture and since the ownership distribution of agriculture land is grossly unequal income from agriculture would be largely unequally distributed.

Inequality across Non-migrant Households

We have also made an effort to show the income distribution among the non-migrant households to know the disparities of income and distribution among the households. The data are given in Table 10.

Table 10. Inequality Across Non-Migrant Households

Deciles Group	Income of Non-Migrant Households		
	Mean Annual Income (Rs)	% of Total Income	Cumulative (%)
1	2	3	4
1	20560	2.50	2.50
2	25700	3.13	5.65
3	33800	4.11	9.74
4	45200	5.50	15.24
5	58600	7.13	22.37
6	83100	10.11	32.48
7	1,00,000	12.17	44.65
8	125000	15.21	59.86
9	150000	18.24	78.1
10	180000	21.90	100
All groups	82196	-	-
Gini Coefficient	0.36		

Source: Primary Survey

The table shows that the top three decile classes have a 55.35 per cent share in income and the rest have 44.65 per cent share. The top five classes among the sample in non-migrant households have 77.63 per cent share and the rest 5 classes have a share of only 22.37 per cent. The Gini coefficient of income distribution is estimated to be 0.36. This indicates the existence of large inequalities in income distribution among the non-migrant households as compared to the migrant households. A large part of household income for the non-migrant household is derived from agriculture. Since agricultural income is a direct function of the amount of land cultivated by a household and since ownership distribution of agricultural land is highly skewed income from agriculture is largely unequal. This means that agricultural income is unequalising.

Results of Decomposition Analysis

As noted above, the effect of migration on equity is an important issue. The foregoing analysis has made it clear that rural-urban migration is inequality reducing in its effect. To examine the issue further we have decomposed household income into three main constituents i.e., income derived from agriculture, non-farm activities and remittances sent by migrants. The results of decomposition analysis are presented in Table-11.

Table 11. Income Inequality Across Sample Households

Decile Classes	Migrant Households				Non-Migrant Households		
	Agricultural Income	Non-Agricultural Income	Remittances	Total Income	Agricultural Income	Non-Agricultural Income	Total Income
1	2	3	4	5	6	7	8
1	3800	5700	23485	32985	9869	10691	20560
2	4368	6032	30385	40785	12593	13107	25700
3	5060	6440	39985	51485	17238	16562	33800
4	5658	6642	48330	60630	24408	20792	45200
5	6768	7332	57447	71547	35160	23440	58600
6	12240	11760	55913	79913	54015	29085	83100
7	15652	14448	57000	87100	55000	45000	1,00,000
8	21465	19035	49500	90000	68750	56250	125000
9	27162	23138	51000	101300	84000	66000	150000
10	32670	27830	52485	112985	100800	79200	180000
All	13484	12835	46553	72873	46183	36512	82196
Gini Coefficient	0.40	0.31	0.12	0.23	0.37	0.35	0.36

Source: Primary Survey

Note. Figures indicate mean household income

It can be seen from the Gini Coefficients given in the table that inequality is the highest in the case of income from agriculture, higher for non-farm income and the lowest when we look at the contribution of migrant remittances to household income. This result holds good for both migrant and non-migrant household categories. The Gini-Coefficients for agricultural and non-agricultural incomes are estimated to be 0.40 and 0.31 for migrant households as against 0.37 and 0.35 for non-migrant households. The coefficient for remittances income is very low at 0.12 for the migrant households. It appears self-attesting that income from agriculture is strongly related to land-use. Hence it is natural that households which own and use more farm land derive more income from agriculture and vice versa. Since ownership distribution of agricultural land is highly skewed in the rural areas, agricultural income is highly inequitably distributed among households. When it comes to non-farm income, human capital content in labour has a strong influence and because rural labour is by and large less

heterogeneous in human capital content and skill, the income distribution appears little less unequal. Remittances are sent by migrants and our sample migrant workers are engaged in more or less segmented labour markets with very insignificant earning differentials among them. The value of Gini Coefficient in this case is very low at just 0.12.

Two conclusions can be drawn from the above analysis. First, the effects of rural out-migration and hence migrants' remittances on income distribution at the source are strong positive. Second, agricultural income is more inequitably distributed among households than non-agricultural income and income from remittance in particular.

Remittances and Inequality across All Sample Households

In order to have a broader view of the impact of remittances on income distribution, we have considered all the 200 sample households covered in our study. The same technique of decile classes of households and Gini coefficients have been applied in this case too and the estimates are presented in Table 12.

Table 12. Remittances and Inequality

Deciles Group	Income excluding Remittances			Income including Remittances		
	Mean (Rs)	% of Total Income	Cumulative (%)	Mean (Rs)	% of Total Income	Cumulative (%)
1	2	3	4	5	6	7
1	30060	2.77	2.77	53545	3.45	3.45
2	36100	3.33	6.1	66485	4.29	7.74
3	45300	4.17	10.27	85285	5.50	13.24
4	57500	5.30	15.57	105830	6.82	20.06
5	72700	6.70	22.27	130147	8.39	28.45
6	107100	9.87	32.14	163013	10.51	38.96
7	130100	11.99	44.13	187100	12.07	51.03
8	165500	15.25	59.38	215000	13.86	64.89
9	200300	18.46	77.84	251300	16.21	81.10
10	240500	22.16	100	292985	18.90	100
All groups	108516			155069		
Gini coefficient	0.36			0.28		

Source: Primary Survey

It can be read off the table that without remittances the top three decile classes are having 55.87 per cent of total income and the bottom seven decile classes account for the balance 44.13 per cent. When we consider the top five and the bottom five decile classes their shares stand at 77.73 per cent and 22.27 per cent respectively. The Gini coefficient of income distribution is estimated at 0.36 indicating a highly unequal income distribution. Adding remittances to household income we find the top three decile classes having a share of 48.97 per cent against the bottom seven accounting for a 51.03 per cent share. On the other hand the top five and the bottom five decile classes have 71.55 per cent and 28.45 per cent shares in total income respectively. The Gini coefficient with remittances has a lower value of 0.28 than before indicating a reduction in inequality by 22.23 per cent. Migration and remittances sent by migrants have also contributed significantly to increase in mean income of the households from Rs.

1, 08,516 to Rs 1, 55,069 or by 42.90 per cent.

It is pertinent to note that the extent of moderation of inequality and of increase in income in the aftermath of remittances are comparatively greater when we look at the migrant households alone than when we consider both the household categories. The reason is obvious i.e. remittances are received by migrant households alone.

Our observations above at 6.4.2.1, 6.4.2.3 and 6.4.2.4 can be shown graphically in terms of the Lorenz Curves. Figure 2 portrays the impact of remittances on inequality in the case of migrant households, while Figure 3 does it for the non-migrant and migrant households and Figure 4 portrays the picture for all the 200 households as a whole.

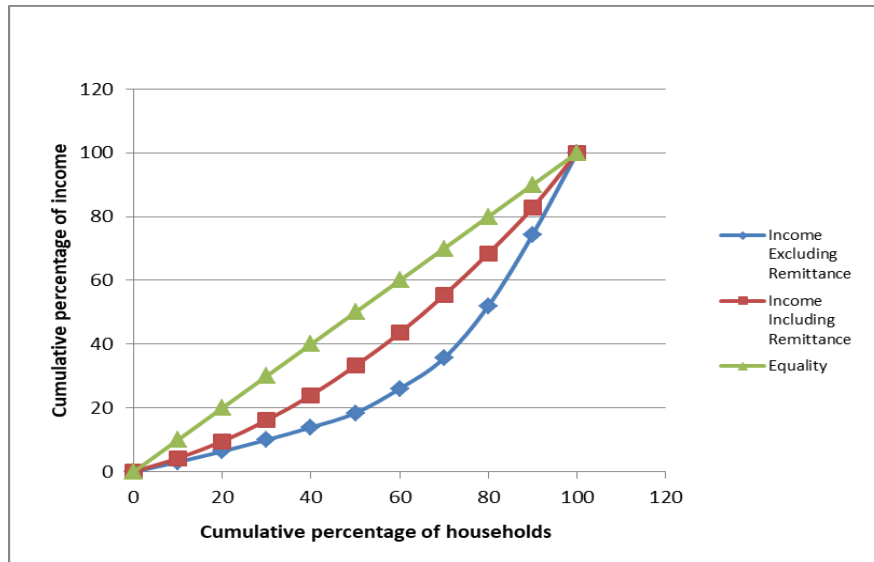


Figure 2. Income Distribution Lorenz Curve (Migrant Households)

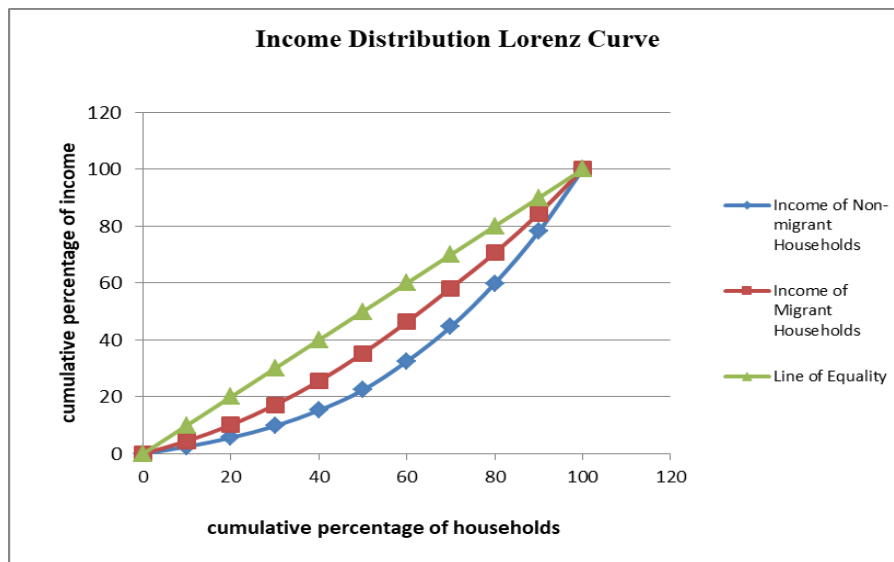


Figure 3. Income distribution Lorenz Curve (Non-Migrant and Migrant Households)

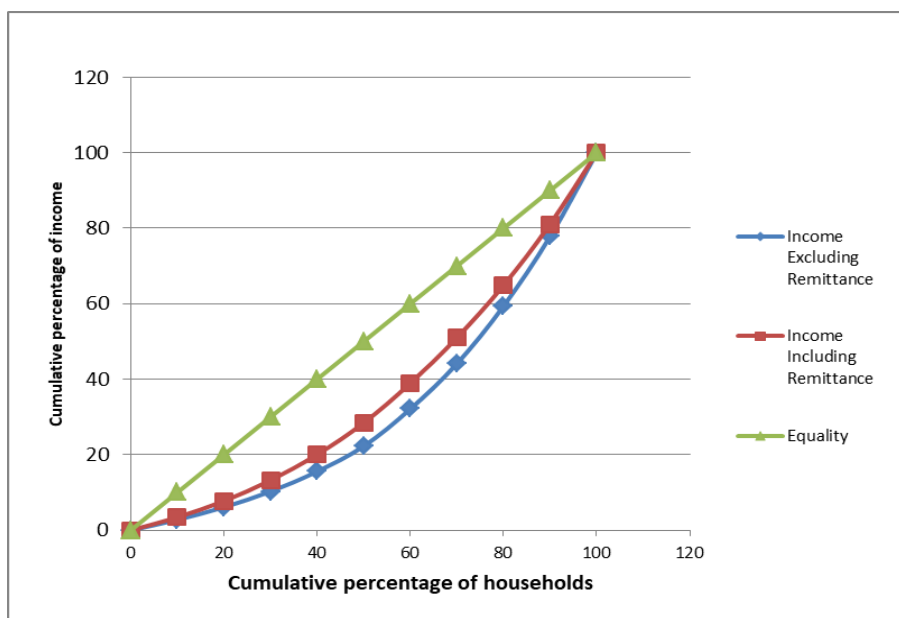


Figure 4. Income distribution Lorenz Curve (All Households)

As usual the diagonals in all the three figures show the line of equality. In Figures 2 and 4 the purple color curves show inequality with remittances and the blue ones indicate inequality without remittances. Since purple curves lie closer to the respective diagonals and the blue curves lie farther away from their diagonals we conclude that the distribution of income tends to be less unequal with remittances than without them. In Figure 3 the purple colour curve shows inequality in income distribution among the migrant households and the blue colour curve indicates distribution among non-migrant households. Between the two curves, the purple colour curve lies relatively closer to the diagonal and the blue colour curve lies comparatively farther from it indicating that income distribution among migrant households is less unequal than among non-migrant households. This suggests that migrant remittances exert an equalising effect on the distribution of income. Together, all three figures indicate that agricultural income is more unequalising than non-agricultural income.

Migration, Housing status and Durable Consumer Goods

Migration widens outlook of people, broadens their choice of goods, creates desire for consumerism in them and brings about improvements in standard of living in the household at the origin. To probe this point we extracted opinion of migrants and their family members on three important points viz. housing status, amenities available to them within household premises and their possession of consumer durables. Their response is recorded in Table 13.

Table 13. Migration and Possession of Material Goods

Material Possession	No. of Household and Percentages	
	Pre-Migration	Post -Migration
1	2	3
Housing status	Kuchha	74
	Semi Pucca	36
	Pucca	0
Amenities Available within	Tube well	6
		57

Premises	Toilet	0	73
	Electricity	15	76
Consumer Durables	TV	0	91
	Cell Phone	5	93
	Motor Bike	0	29
	Refrigerator	0	17
	Steel Almirah	0	21

Source: Primary Survey

The table shows possession of durable consumer goods and availability of various amenities within the premises of migrant households before and after migration. As large as 74 per cent of migrant households had kuchha houses, 36 per cent had semi-pucca houses and none had a pucca house before any one migrated from the household. After migrations only 19 per cent have kuchha houses, 44 per cent have semi-pucca houses and 37 per cent have pucca houses. None of the households had a toilet, only 6 per cent had tube wells of their own and 15 per cent had independent power connections in the pre-migration situation. Presently, 73 per cent have toilet facility, 57 per cent have own tube wells and 76 per cent have electricity connection in their houses. Similarly, only 5 per cent of households had cell phones and none had a steel almirah, motor bike or television or refrigerator before migration. In the post-migration situation 91 per cent of houses have colour televisions, 93 per cent have cell phones, 29 per cent have motor bikes, 17 per cent have refrigerators and 21 per cent have steel almirahs in their houses. This shows that migration and remittances which followed the movement of labour out of the rural areas have brought about a significant improvement in the living conditions of people in the households of origin.

5. Conclusion

In this chapter we have examined the evidence on migrant remittances, the motivations therefor, the mechanisms for funds transfer and the impact of remittances on household income and inequality at the household level in the source area. The results of our survey relating to these aspects of remittances are revealing. Sending remittances are no doubt guided by altruistic, contractual and self-interest motives, but they have a strong economic basis as well. Migrants who are young and unmarried, living as singles or having very small families at the destination, have education below graduation level, are pursuing plumbing and business activities in the urban location; have more dependents in the household of their origin and have earnings in the bottom three and middle four decile classes; and who belong to families with relatively less amounts of agricultural land send more remittances than others. Their income at the destination is the single largest determinant of amount of remittances and the latter is a very important source of household income at the source area. In fact, many households depend on remittances for maintenance. Remittances are used for a variety of purposes such as financing agricultural operations including purchase of additional inputs partly to compensate lost labour, buying farm land, business creation, house construction and repair, buying books and stationery and paying tuition fees of the siblings, meeting health expenses of the family, meeting daily requirements and consumer durables, and paying back old debts. By and large, migrants choose to send remittances through informal channels and more so for small amounts and in-kind transfers. Remittances not only contribute significantly to household income, they have also proved beneficial for moderating income inequalities at the household level in the sending areas and improving housing status, possession of consumer durables and quality of living in the migrant households. The study thus points to the existence of a systematic link between migrants and their households at the source through remittances.

References

- Adger, W. N., Kelly, P. M., & Locke, C. (2002). Migration, remittances, livelihood trajectories and Social resilience. *Ambio*, 31, 358-66.
- Agarwal, R., & Horowitz, A. W. (2002). Are International remittances altruism or insurance ? Evidence from Guyana using multiple-migrant households. *World Development*, 30(11), 2033-2044.
- Atmanov, A., & Vande Berg, M. (2010). *Rural non-farm activities in Central Asia: a regional analysis of magnitude, structure, evolution and drivers in the Kyrgyz republic*.
- Barham, B., & Boucher, S. (1998). Migration, remittances and inequality: estimating the net effect of migration on income distribution. *Journal of Development Economics*, 55, 307-31.
- Carling, J. (2008). The determinants of Migrant remittances. *Oxford Review of Economic Policy*, 24(3), 582.
- Cox, D. (1990). International transfers and Liquidity Constraint. *Quarterly Journal of Economics*, 105(1), 187-217.
- Elis, F. (1998). Survey Article: Household Strategies and Rural Livelihood Diversification. *Journal of Development Studies*, 35(1), 1-38.
- Gurenizo, L. E. (1993). *Going home: Class, gender and household transformation among Dominican return migrants* (p. 55). Report prepared for the commission for hemispheric migration and refugee Policy, Georgetown University, Mimeo.
- IFAD. (2008). *International Migration, remittances and rural Development*.
- Lucas, R. (1987). Emigration to South Africa's Mines. *The American Economic Review*, 77, 313-330.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- Lucas, R., & Stark, O. (1985). Motivations to remit: Evidence from Botswana. *Journal of Political Economy*, 93, 901-18.
- Murphy, R. (2002). *How migrant labour is Changing Rural China*. Cambridge University Press.
- Obrei, A.S and H.K Manmohan Singh (1980). Migration, remittances and rural development: Findings of a case study in the Indian Punjab. *International Labour Review*, 119, 229-41.
- Rapport, H., & Docquier, F. (2003). *The Economics of Migrants remittances. Hand Books on Economics of Reciprocity Giving and Altruism*. Amsterdam: North Holland.
- Stark, O., Taylor, E., & Yitzhaki, S. (1988). Migration, remittances and inequality. *Journal of Development Economics*, 28, 309-22.
- Tumbe Chinmaya. (2011). *Remittances in India: Facts and issues*. Working Paper no 331, IIM, Bangalore.
- Wang, M. (2007). *Overall earnings inequalities in Urban China and earning differentials between Migrant workers and urban local workers*. Mimeo.
- Zohry. (2009). *Rural-to-Urban Labor Migration: A Study of Upper Egyptian Laborers in Cairo*. Phd Thesis, University of Sussex.