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International Migration and Remittances: A Nexus Between Migrants' and Non Migrants' Households

Samita Behl



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Samita Behl



Global Research Forum on Diaspora and Transnationalism

K-1/114, First Floor, C R Park, New Delhi-110019,

Email: contact@grfdt.org, Contact: +91-9818602718

Website- www.grfdt.org,

Facebook- www.facebook.com/diaspora.transnationalism

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Abstract

Punjab state occupies rank two in terms of outmigration and remittances in India. Punjab remains the pioneer state for outmigration to other developed and developing economies. Remittances, the direct outcome of the international migration and the local development are positively correlated. This work is a modest attempt to identify and examine the positive impact of the international remittances, if exists, on the rural household behaviour. We have also compared the similar behaviour between the remittances receiving and non remittances receiving households. With this aim of the research, primary survey has been conducted across 385 rural households of Majha, Malwa and Doaba regions of the state. The results of binary logistic regression supports that these international remittances contribute to the development of the state in general and that of the rural households in particular. There is improved nutritional value of food intake, change in the investment pattern for the residential dwellings, increased enrolment ratios of children in educational institutions and investment in other occupation opportunities. The empirical evidences also support the higher level of educational attainment, health status, female empowerment and gender equality across rural households of Punjab state. Hence, these remittances act as a development strategy for the rural households of the state.

Keywords: Rural Punjab, Migration, Consumption and Investment Expenditure Behaviour, Households.

Author

Samita Behl is currently based in Chandigarh. She has completed her doctoral degree from the Department of Economics, Punjabi University, Patiala, Punjab. She has M.Phil degree from Alagappa University, Karaikudi and Masters degree from Panjab University, Chandigarh. Her research interests includes the factors responsible for migration, the consequences of migration both at micro and macro level, the socio economic status and trend of labour force and their household members towards the domestic and outer job markets, allocation of resources and the relationship between migration and development prospects of economies of origin. She has published research papers in journal of repute. Email: samita.2408@gmail.com

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Samita Behl

1. Introduction:

Human beings move from one place to another due to the lack of suitable employment opportunities at home and better economic incentives in destination countries (Khadria, 2009). The Global Commission on Migration (GCIM, 2005) has described the driving force in international migration in 3 Ds: Development, Demography and Democracy. The New Economics of Labour Migration (NELM) supports that a person who is relatively more deprived is expected to have a comparatively strong incentive to migrate than a person who is relatively less deprived. The income inequalities measure the level of deprivation and propensities to migrate. The direct returns from the migration of a family member are the remittances that gives comparative advantage to the family (Stark and Bloom, 1985). *The Human Development Report (HDR) 2009* has noted that 'financial remittances are vital in improving the livelihoods of millions of people in developing countries. Empirical studies have confirmed the positive contribution of international remittances to household welfare, nutrition, food, health and living conditions in place of origin' (p-72). Various international migration corridors have offered bright opportunities for significant number of poor and low skilled workers to migrate that results in significant poverty reduction at home from the remittances sent back home (Lucas, 2008). Remittances, no doubt, are an important supplement to household income that

can maintain multiplier effect in the economy. Studies are sceptical about the productive uses of remittances but it certainly impacts consumption and improves the well-being of left behind members and also the local economy (Deshingkar and Grimm, 2005). Families with migrants appear more likely to send their children to school, using cash from remittances to pay fees and other costs. This reduces child labour and improves the skill formation. It is more likely that the children of migrants are expected to complete school education and that will generate better prospects associated with migration (Yang, 2008). Remittances positively and significantly affect the likelihood of school enrolments and negatively and significantly affect the likelihood of labour force participation, as well as, postpone the age of the first participation in labour force (Koska et al, 2013; Zieseimer, 2012). The remittances recipient households exhibit greater entrepreneurship and higher propensity to invest than households with non migrants (Yang, 2009). Remittances are worth to create a store of capital to fund further migration, years after the first family member has left (HDR, 2009). With the rising trends in migration across the globe, it has become worthwhile to focus on dynamics of household decision-making in order to assess the ultimate impact on sending families, child welfare and gender disparities (Chen, 2006). Remittances may then be seen as a device for redistribution of gains, with relative shares determined in an implicit arrangement struck

between the migrant and the remaining family (Lucas and Stark, 1985). Spending patterns out of remittances are found to differ not only across households of different income levels and socio economic status, but also according to the gender of the de facto household head. Intra-household allocation decisions have become increasingly important, as outcomes often differ when mothers and fathers make spending decisions (Malone, 2007). The impact of remittances can be seen on consumption, education and health and broader cultural and social process. Mostly these immediate benefits of remittances are favourable but are complex, context specific and subject to change over time (HDR, 2009). These benefits are felt by the households from where one member is working in other country for regular employment and higher income. However, the rural economy and nation as a whole may also be affected.

The literature here supports that it is logical to state that remittances have a significant, immediate and long term developmental impacts on the migrants and their left behind family members. International remittances are capable enough to reduce poverty both at household and general level though inequalities may exist across households. This outcome is highly acknowledged and welcome.

Due to increased attention on international migration and remittances across globe, definitely there is a need and urge for a research on the phenomenon and impact of international remittances in terms of resource allocation in the Indian context in general and to the rural Punjab in particular. Since this area of study for Kerala state has been significantly under researched (Zachariah, 1998-2011; Rajan 2012-14), therefore present work aims for understanding and exploring impact of international remittances on intra-household allocation, while focusing on the rural Punjab and also comparing the resource allocation pattern with the non migrants' households.

There is no single blueprint for affecting agrarian transition. The options available to a region/ country are constrained by rural institutional economic structures, culture and a wider economic environment. The household behaviour also plays a significant role in strategy for transition. Rural households have always adopted livelihood strategies- which may include diversification of activities locally and outmigration- in response to the changing environment. The adoption of different strategies depends on agrarian conditions, access to quality of assets, non-farm job opportunities and the structure of households (Dhesi and Singh, 2008). Therefore, migration, no doubt, is transforming strategy for rural economy of Punjab. International remittances are the means of rural development and require complete attention.

Most of the studies meant for developing economies have examined the pattern and impact of resource allocation on gender, household expenditure and bargaining and decision making power of the de facto heads and their spouses. The work done by Singh (2008) is unique in several ways as it examines the extent and the impact of inter and intra household resource allocation in rural Punjab. In a similar way, the study made by Thandi (2008) is also unique as it explores that remittances have the potentials to improve the livelihood of migrants' households. These two works have strongly encouraged us to explore the impact of international remittances on household resource allocation pattern directly and on poverty reduction in rural Punjab indirectly. After Kerala, Gujarat and Goa states, Punjab state has also remained an important source of migration from India to other developed and developing countries. As the human resources are going abroad, the state in lieu of that receive remittances. Remittances have the capacity to raise investment both in the state as well as among the households. Since the son preference is the dominant form of discrimination

within the households, yet there is a paucity of studies that examines the impact of remittances on intra-household allocation of resources. This study traces the impact of changing pattern of consumption and investment expenditure across and within households in rural Punjab. The overall objective of this paper is to explore the impact of international migration, and remittances on gender, household expenditure and the decision making power of the left behind females especially focusing on human capital and to compare the similar behaviour among non migrants' households.

This paper is arranged as follows. The first section of the paper describes the introduction and brief review of literature. Section two explains the data base and methodology used in the paper. The brief profile of the migrants is described in section three. Section four discusses the differences in the size of the remittances in rural Punjab and frames the relationship and effect of various socio economic households' and migrants' variables on the size of remittances. Section five focuses on the variations in the expenditure behaviour as per pre, post and non migrants' status of the households. Section six describes the impact of the international migration and remittances on resource allocation. The last section presents main conclusion that emerged from the research paper.

2. Data Base and Methodology:

In the absence of concrete secondary sources of information, this study is based on Migration Tables of Census of India 1991. Hence, primary survey has been conducted to collect data from 201 migrants' and 184 non migrants' households spread over to three districts namely Gurdaspur, Ferozepur and Jalandhar of Punjab state, for the years 2010-11 with the help of a well structured questionnaire. Multistage stratified random sampling technique has been used to select the sample of total 385 households spread over to three

selected districts chosen on the basis of the ranking of the districts respectively from Majha, Malwa and Doaba regions of Punjab state. From each district, three blocks have been chosen, one developed, one medium and less developed on the basis of socio economic indicators (rural) published by the Economic and Statistical Organization, Government of Punjab. Total 27 villages (three from each block) have been selected on the basis of socio economic indicators collected from the village directory of Punjab. A multiple regression model has been estimated to examine the impact of intra-household allocation of remittances on rural households in Punjab. The binary logit model has been estimated to arrive at the differences between migrant and non-migrant households.

3. Brief Profile of Emigrants' :¹

Based on the National Family Health Survey (NFHS) conducted in 1992-93 for international migration from the most emigrating states of India; Kerala and Punjab, Nangia and Saha (n.d.) explored that by the mid 1980s India was the second largest supplier of manpower to the countries of Middle East as more than 90 percent of the migrants goes to the Middle East. Though unemployment is the prime reason for emigration from these states yet other factors, to name a few, say demographic expansion, agricultural stagnation, educational expansion and less growth of secondary and tertiary sectors are also there to boost international migration.

The data has been collected on the basis of pre, post and non migration status of the households. The

- 1 For Tables, Behl, Samita (2015), "International Migration, Remittances and Resource Allocation in Rural Households of Punjab", Unpublished Thesis, Department of Economics, Punjabi University, Patiala.

pre migration status of the households explains the household structure before the international migration of their family member. The post migration status of the household means the household structure and standard of living after the migration of the family member (labour force). To compare the pre and post migration status of the households and that of the migrants themselves, the duration of stay at destination country is set to be minimum one year. The non migrants' households mean none of the family member had migrated at the time of survey.

The data here explores that out of 201 migrant workers 192 are the males and only 9 female workers have been recorded to be migrants workers at the time of survey. The field survey of Punjab reveals that at the time of migration approximately 78 percent of the migrants were generally of the age up to 30 years or below. This early migration of youth somehow signifies that preferences to work for longer durations in the international job markets. Thus international migration is supported by easy job opportunity in the international unskilled job market and this employment security somehow helps the young migrants to get easy and certain matrimonial alliances. The data reveals that in the pre migration status of the households only 84.08 percent individuals were employed. The empirical results state that 52.66 percent were the wage workers or the salary workers and the 46.15 percent were the own account workers in their pre migration status. The landownership distribution (as defined in Statistical Abstract of Punjab) explores that among the landless workers, 76.19 percent workers were wage/salary workers followed by small (61.54 percent) and marginal (58.33 percent) land holding type households. In contrast to it, among the large land holding type households 85.71 percent workers were own account workers, followed by semi medium (73.08 percent) and medium (60.71 percent) land holding type households. Only 23.81 percent landless workers were

the employers in their pre migration status.

In the post migration status, out of 201 migrant workers, 94.53 percent workers are the wage/salary workers. But still the ratio of salary workers among large land holding type households is low (80.95 percent). The maximum proportion for the wage/salary workers falls in marginal (100 percent) land holding type households, landless (97.26 percent) and then followed by small (96.15 percent), semi medium (96.15 percent) and medium (93.18 percent) land holding type households. Interestingly, all female migrant workers are the wage/salary workers. Only 5.47 percent of the total migrant workers are the own account workers. The highest proportion for this category belongs to the large (19.05 percent) land holding type households and the least among the landless (2.74 percent) households.

Agriculture being a seasonal industry, in their pre migration status, 14.20 percent migrant workers were the seasonal workers. The empirical analysis explores that 43.20 percent workers were the permanent/regular workers and large (71.43 percent) land holding type households had the maximum ratio of permanent workers. Up to 50 percent permanent workers were from marginal (33.33 percent), small (34.61 percent) and semi medium land type households and approximately one third of the landless workers were the permanent/regular workers as per their pre migration status. Among large land holding type households there was no temporary/contractual worker but among the marginal (50 percent) land holding type households and landless (58.73 percent) workers there was a good proportion of the temporary workers. In every type of land holding households, 10 percent to 30 percent seasonal workers have been found. 3.17 percent landless workers has also been reported as seasonal workers as they used to be employed either on other farmers' land or they prefer to be contract farmers.

According to post migration status, the ratio of casual

labour is less than 1 percent. 56.72 percent emigrant workers are the permanent/regular workers and 42.78 percent are the temporary/contractual workers in the international job market. Among females 66.67 percent are the permanent/regular workers and only 33.33 percent are the temporary/contractual workers. Medium (70.45 percent) and large (61.90 percent) land holding emigrant workers are the permanent/regular workers whereas the emigrant workers from small (50 percent), semi medium (50 percent), landless (46.58 percent) households are the strugglers as they have been reported as temporary/contractual workers in the international unskilled job market.

The landless households and the marginal land holders across rural Punjab are somehow unable to meet the higher cost of international migration of their bread earners to the big and developed countries like USA, Australia and New Zealand. The reason being, these households remain unable to borrow the big amount against any fixed asset. Failing to fulfil this requirement, these households can finance only the international migration to the Middle-East countries. The transportation cost is very less for Middle East countries as compared to the transportation cost of the big countries. Also, the earning in these Middle-East countries is not always in terms of dollars. Due to low exchange rate of their international earnings (Dinar), here at local native areas, the returns are comparatively less but regular whereas, the households with medium and large land holdings are able to borrow the big amounts against their (fixed assets) land possession and definitely these households are able to meet the cost of migration to the developed countries. The developed countries provide higher returns in high amounts but on demand and on irregular intervals. Destination country also influences the extent of remittances to rural Punjab. The empirical evidence shows that 46.27 per cent of the total households reported the present destination

countries of their emigrant worker are middle-east countries and these middle-east countries are sending 34.73 per cent of total remittances to rural Punjab. 14.43 and 12.44 per cent households respectively reported Australia and Southern Europe, and 10.45 per cent households reside in North American countries and these countries are sending 14.99 per cent, 12.67 per cent and 15.65 per cent of the total remittances respectively. Only 5.47 per cent households reported Northern-Europe countries as destination countries and a reasonably good proportion of 12.4 per cent of the total remittances are being received by these households.

4. (a) Differences in the size of remittances in rural Punjab

Our sample survey of three districts of Punjab allows us to estimate the extent of remittances received by the rural households. The descriptive overview of the distribution of the size of remittances is presented in Table 1. Means values, standard deviation, standard errors, skewness and kurtosis known as descriptive statistics obtained from the field survey are reported in the table which shows that the hypothesis of differences in means is supported by the basic sample statistics.

Table 1 Mean differences in size of remittances in rupees in rural Punjab

Category	N	Total Remittances (in Rupees)	Mean Remittances	Standard Deviation	Standard Error of Mean	Skewness statistics	Kurtosis statistics
Name_District Ferozepur	74	1398250.00	18895.27	16882.65	1962.57	2.778 (0.279)	9.636 (0.552)
Gurdaspur	63	870200.00	13812.70	10258.62	1292.46	1.078 (0.302)	1.819 (0.595)
Jalandhar	64	1143000.00	17859.38	33132.55	4141.57	6.976 (0.299)	52.715 (0.590)
Total	201	3411450.00	16972.39	22073.03	1556.91		

Source: Field Survey

Figures in parentheses are Standard Errors.

The scientific testing of data required to remove the outliers from the entire sample size (201), so that quality results should be brought out. Hence, the outliers, i. e., the extreme possibilities are taken out and the total

sample size is reduced to 184 households for further application of analysis of variance and the OLS model. The result of analysis of variance shows that there is significant difference (at 5% level) in the means of the average monthly size of remittances received in rural Punjab. The Scheffe's Post hoc (multiple comparisons) test reveals that the significant difference in means of the average monthly remittances is found between Ferozepur and Jalandhar districts at 5% level of significance.

4(b). Relationship and effect of various socio- economic household and migrants' variables on the size of remittances

Further, there is need to assess the socio economic variables that influence the size of remittances and the socio economic well-being of the migrants' households due to the remittances. As the existing literature on remittances explains that there is an improvement of the socio-economic status of the households due to remittances. The OLS model is applied to find out how average monthly remittances are related to the independent variables including household characteristics such as age and gender of the head of the household, landholding size, years of migration, post migration employment status of the emigrant and nature of employment, push and pull factors, sources of finance to support migration, sources of borrowings, total monthly household income (remittances not included), family type, destination countries including Middle East, North America, Australia and South Asian Countries, gender and marital status of emigrant and households having female children. The log of the size of the average monthly remittances has been taken up as dependent variable in order to estimate the effect of various socio economic variables on it using OLS technique. Since the respondents are either the head of the household or any other family member of the migrants' household, there is no concrete information

regarding the exact and accurate income of the emigrant worker at their destination countries. Hence, the above mentioned independent characteristics related to the pre and post migration status have been included in the model.

The model is outlined as follows:

$$Y = \alpha + \beta'x + u$$

Y= Log_e(Average monthly remittances in rupees)

β'= vector of all the explanatory variables related to household and migrant' socio economic variables

u= error term

The complete model is like as follows:

$$\text{Log}_e(\text{Average Monthly Remittances}) = \alpha + \beta_1 \text{ Gender of the head} + \beta_2 \text{ Age of head} + \beta_3 \text{ Total family members} + \beta_4 \text{ Land size ownership} + \beta_5 \text{ Total monthly income} + \beta_6 \text{ Gender of migrant} + \beta_7 \text{ Age of migrant_Post} + \beta_8 \text{ Marital status} + \beta_9 \text{ Female children} + \beta_{10} \text{ education of migrant} + \beta_{11} \text{ Push Factor} + \beta_{12} \text{ Pull Factors} + \beta_{13} \text{ Years of migration} + \beta_{14} \text{ MiddleEast} + \beta_{15} \text{ NorthAmerica} + \beta_{16} \text{ Australia} + \beta_{17} \text{ SouthEast Asia} + \beta_{18} \text{ Employment status of migrant_Post} + \beta_{19} \text{ Nature of employment of Migrant_Post} + \beta_{20} \text{ hhsunderdebt} + \beta_{21} \text{ Sources of finance} + \beta_{22} \text{ Amount of Borrowings} + u$$

In order to determine the effect and relationship of various socio-economic variables of migrants' and remittances receiving households, a multiple regression was carried out using OLS technique and estimates are presented in Table 2.

Table: 2 OLS Estimates of relationship of size of remittances with various socio-economic variables

Independent Variables	Gurdaspur	Ferozepur	Jalandhar	Total Sample
(Constant)	10.395 (1.050)	12.499 (1.013)	9.208 (.871)	10.874 (.481)
Gender of head of the households	.097 (.181)	-.044 (.201)	-.092 (.163)	-.039 (.094)

Age of head of the households	-.100 (.089)	-.307** (.116)	-.051 (.091)	-.142** (.050)
Total family members	.091* (.052)	-.063 (.048)	-.041 (.046)	-.007 (.026)
Size of land holding	.005 (.064)	-.007 (.054)	.227** (.075)	.050* (.029)
Total monthly income	.042 (.052)	.119** (.056)	-.069 (.074)	.049* (.028)
Gender of emigrant	-.017 (.370)	.045 (.404)	-.259 (.375)	-.065 (.187)
Age of emigrant	-.245 (.171)	-.247 (.150)	-.430** (.194)	-.192** (.084)
Marital status of emigrant	.128 (.195)	-.134 (.190)	.141 (.207)	.040 (.102)
Number of children	.174 (.220)	.239 (.216)	-.159 (.191)	.010 (.100)
Educational status of emigrant	-.100 (.098)	-.147** (.072)	.080 (.061)	-.056 (.035)
Push factors	-.015 (.015)	-.006 (.020)	.020 (.016)	-.004 (.009)
Pull factors	-.023 (.020)	-.020 (.022)	-.056** (.025)	-.016 (.011)
Duration of migration	-.037 (.080)	.150 (.104)	.291*** (.066)	.106*** (.042)
Middle East countries	-.552** (.209)	-.317 (.236)	-.199 (.183)	-.212** (.105)
North American countries	-.124 (.358)	-.135 (.263)	.010 (.279)	.002 (.138)
Australian countries	.194 (.299)	.153 (.281)	-.158 (.237)	.177 (.139)
South East Asian countries	-1.006** (.483)	-.258 (.253)	.123 (.309)	-.200 (.155)
Employment status of emigrant	.307 (.375)	-.698** (.338)	.538* (.283)	-.196 (.164)
Nature of employment of emigrant	-.209* (.118)	-.213 (.180)	-.045 (.147)	-.110 (.073)
Debt status of household	-.332** (.151)	-.074 (.218)	-.186 (.190)	-.247** (.094)
Sources to finance	-.041 (.040)	-.041 (.030)	-.051* (.028)	-.051** (.016)
Sources of borrowings	.010 (.159)	.260 (.236)	-.017 (.211)	.106 (.100)
R ²	0.713	0.570	0.744	0.498
N	54	70	60	184
S.E.	0.37942	0.50141	0.40088	0.45884

*Significant at 10% level. **Significant at 5% level.

***Significant at 1% level.

Figures in Parentheses are Standard Errors.

Source: Field Survey

The empirical evidences explore that the age of the de facto head of the household does not affects intention and trend of the international migration. The disguised unemployment in the agrarian sector promotes the international migration of at least one of the labourers from the large households of Gurdaspur district. In particular, from Jalandhar district the landownership

status is also responsible for international migration. The landless labour of rural Punjab prefers and opt the Middle East countries as their destination job markets as the cost of finance to these countries is comparatively less and they demand and absorb the unskilled and semiskilled labours of rural Punjab very easily and quickly. The lower income levels at home and disguised nature of employment; both these factors support the migration of labour force from rural Punjab.

The education level of the migrants rather than their age is much more powerful variable that supports and encourages the migration and regular mode of employment (time bound) and the internal powerful demonstration effect among non migrants is also responsible to encourage migration from rural Punjab. Thus, this is the duration of work permit at the destination country that boosts the migration of rural Punjabi folk to outer world. Among the landless and small and marginal land holders, the most favoured destination countries are found to be Middle East countries followed by South Asian countries as these countries provide job opportunities to the unskilled and semiskilled workers. The nature of job at the destination job market does not matter but it is the quick and regular inflow of income/ remittances that affects the migrants and the left behind family members and of course the Punjab economy.

The sources of finance are an integral part that supports the migration from rural Punjab as the landless and small and marginal landholders are not able to finance the international migration at their own. All the sources to finance international migration are important and not to be ignored but the borrowings from all the sources are found to be of utmost importance. These borrowings are making the migration possible from rural Punjab. Large landholders borrow against the fixed asset i.e. land from both formal and informal channels, whereas the landless, small and medium landholders are able

to borrow from informal channels of the economy. Hence, it affects the debt status of the households and a significant proportion of the remittances have been used to repay the debts by the de facto head of the migrants' households and the migrants' themselves.

5 (a) Variations in expenditure behaviour as per pre, post and non-migrants' households

Table 3: Mean Differences in annual household expenditure in rupees as per pre migration and post migration Status and by remittances receiving and non-remittances receiving status of sampled households in rural Punjab

Household_ Status	N	Mean	Std. Deviation	Std. Error of Mean
Pre_Mig_status (base 2010 11)	201	28463.00	26281.83118	1853.77744
Post_mig_status	201	839250.00	987233.00	69634.04257
No_ Remittances_ Receiving_hhs	184	595070.00	460327.00	33935.72962
Yes_ Remittances_ Receiving_hhs	201	839250.00	987233.00	69634.04257

Source: Field Survey

T-test is applied to find out the significant differences in the annual mean expenditure by the households as per their pre migration and post migration status and according to the remittances receiving and non-remittances receiving households' status. Table 3, narrates the annual mean expenditure in rupees by the households as their migration and remittances status with their respective standard deviations and standard errors of means. The annual household expenditure in pre migration status as responded by the respondent is deflated according to the unweighted index number of wholesale price commodities (Agriculture and Industry) in Punjab; hence General Index used is 2010-11=1173.2.

The results of the t-test explain that there is statistically significant difference, at 1 percent level between the annual mean expenditure in rupees by the households as per their pre migration status and post migration

status. There is also statistically significant difference in the annual mean household expenditure by the households according to the remittances receiving and non-remittances receiving households but at 5% level of significance.

5 (b) Resource allocations (expenditure behaviour) of households according to the pre, post and non migration status

Table 4 shows the annual mean differences in expenditure in rupees by the households as per their pre, post and non migration status and by the district wise categorization of the households to focus on the differences in annual mean expenditures. The results of analysis of variance (Table 4) shows that in the pre migration status of households, there exists statistically significant differences at 1% level, differences in the annual mean expenditure in rupees among Gurdaspur, Ferozpur and Jalandhar districts, The Scheff's test under multiple comparisons helps to locate the significant differences in the annual mean expenditure by the households of three districts taken in groups and narrates that the mean differences in the annual expenditure behaviour between Gurdaspur and Ferozpur districts and between Jalandhar and Ferozpur districts is highly significant at 1% level. When it comes to the mean differences of annual expenditure behaviour between Gurdaspur and Jalandhar district, this difference of mean expenditure is insignificant.

In the post migration status of the households, the analysis of variance is applied on these households to find out the differences in the annual mean expenditure behaviour according to the various types of categorization as per post migration status of the households. The results of analysis of variance narrates that there is insignificant differences in the annual mean expenditure behaviour of the households concerned, hence, the null hypothesis is accepted.

Among non-remittances receiving households, the results of analysis of variance explain that the mean differences of annual household expenditure are statistically significant at 5% level. More precisely, the multiple comparisons Scheffe's test explains that there are insignificant differences in the annual mean household expenditure of Jalandhar and Gurdaspur districts and that of between Jalandhar and Ferozepur districts. The mean differences for the annual household expenditure among the non-remittances receiving households of Gurdaspur and Ferozepur districts are statistically significant at 5% level only.

Table 4: Mean differences in annual household expenditure in rupees (General Index=2010-11) as per pre, post and non migration status the sampled households of rural Punjab

Districts	N	Mean	Std. Deviation	Std. Error
Pre Migration Status				
GURDASPUR	63	21958.00	19127.79412	2.40988E3
FEROZEPUR	74	39875.00	33346.54805	3.87646E3
JALANDHAR	64	21673.00	17381.78409	2.17272E3
Total	201	28463.00	26281.83118	1.85378E3
Post Migration Status				
GURDASPUR	63	667480.00	4.75979E5	5.99678E4
FEROZEPUR	74	998590.00	7.48248E5	8.69820E4
JALANDHAR	64	824110.00	1.47064E6	1.83830E5
Total	201	839250.00	9.87233E5	6.96340E4
Non Migration Status				
GURDASPUR	61	489930.00	2.99225E5	3.83118E4
FEROZEPUR	62	708590.00	5.64648E5	7.17103E4
JALANDHAR	61	584850.00	4.56026E5	5.83881E4
Total	184	595070.00	4.60327E5	3.39357E4

Source: Field Survey

6. Impact of international migration and remittances on resource allocation pattern among households of rural Punjab

It is important to analyze the relationship between international migration, remittances and their allocation

on various expenditures heads, among the households of rural Punjab. An attempt is made to capture the changing pattern of consumption and investment and resources to be allocated on consumption and investment according to the pre migration and post migrant status and between migrants' (remittances receiving households) and non-migrants' (non-remittances receiving households). Accordingly, the responses are collected and a binary logistic regression technique is used to determine the association and effect of certain independent variables on the household status (Migration Status and Remittances Receiving Status). The model specification for logistic regression is as follow.

$$L_i = \ln \left(\frac{P_i}{1-P_i} \right) = Z_i = \beta_0 + \beta_1' x_i$$

Where, L is the log of the odd ratios,

P_i is the probability of post migration status of household,

$1-P_i$ is the probability of the pre migration status of households,

β_1' is the vector of all the explanatory variables related to the average annual allocation of resources on various expenditure heads to the households.

$$\text{Hence, } \frac{P_i}{1-P_i} = e^{Z_i}$$

$$\text{And, } P_i = \frac{1}{1+e^{-Z_i}}$$

Where, $0 \leq P_i \leq 1$

P_i = Probability of Y ($Y_i=1$)

And, $Y_i=1$, if household has post migration status and

$Y_i=0$, if household has pre migration status (Model-I)/ non-remittances receiving Households (Model-II)

Table 5: Binary logistic regression results for pre migration and post migration & for migrants' (remittances receiving) and non-migrants' (non-remittances receiving) households with all the related

variables

Variables Taken (in annual household expenditure pattern)	Migration Status (Model-I)	Remittances Status (Model-II)
Consumption of Food	.0000795* (.0000125)	-8.51e-06 (7.07e-06)
Consumption of clothes and footwear of males	-0.0004002* (.0000918)	-0.0002844* (0.0000648)
Consumption of clothes and footwear of female	0.0001608 (0.0001067)	0.0001526** (0.0000711)
Consumption of various housing items	0.0000507** (0.0000169)	0.0000576* (0.0000144)
Consumption of various festivals & social ceremonies	-0.0001014** (0.0000355)	0.0000749** (0.0000292)
Various means of recreation & travelling	0.0011 (0.000069)	0.00002 (0.0000584)
Consumption of various Durables (furniture, kitchen ware & electronics)	-3.85e-06 (6.62e-06)	-0.0000185** (5.68e-06)
Construction, repair & maintenance of dwellings	1.71e-06** (8.01e-07)	7.50e-07 (5.40e-07)
Saving for girl child	3.06e-06 (2.83e-06)	1.24e-06 (1.63e-06)
Saving for boy child	3.97e-07 (2.69e-06)	4.70e-06** (2.31e-06)
HTAs/ Philanthropy	0.0005457* (0.0001255)	0.0005363* (0.0000959)
Investments on primary and secondary occupations	1.18e-06 (3.24e-06)	-5.59e-06** (2.15e-06)
Investment on health care of male/s	0.0000358** (0.0000157)	2.18e-06 (3.41e-06)
Investment on health care of female/s	7.47e-06 (7.67e-06)	-4.28e-06*** (2.57e-06)
Investment on education for girl children	-0.0000211** (0.0000107)	-0.0000138 (0.0000129)
Investment on education for boy children	0.0000245*** (0.0000138)	0.0000396** (0.0000132)
Cons	-4.281828 (0.4957402)	-0.4497634 (0.3710641)
N	402	385
Log Likelihood	-130.64327	-172.29812
Pseudo R ²	0.5311	0.3534

Figures in parentheses are standard Errors

*Significant at 1% level.

**Significant at 5% level.

***Significant at 10% level.

Source: Field survey

Table 5 presents the results of the binary logistic regression analysis applied for both migration status (Model-I) and remittances status (Model-II) on the sampled households. The estimated results of the probability value show that the differences between male and female children are significant. The significant change (at 1% level) has been observed on annual food expenditure and on Home Town Associations (HTAs) in their post migration status (Model-I) of the households. The significant change in consumption expenditure explores that the regular inflow of remittances has boosted up the consumption expenditure of the households as the basic food necessities of life are now fulfilled. The migrants' and their left behind family members are the religious people as they contribute a significant share (at 1% level) of their remittances for the uplift of local Gurudwaras, Temples, various child welfare schemes say, local sports and education system and community marriage system.

The migration model also analyses and explores that there is change in allocation of resources on annual housing expenditure, construction, repair and maintenance of the dwelling in rural Punjab with the inflow of remittances (at 5% level of significance). After the fulfilment of basic food necessity, the migrants and their left behind family members are keen and focused to make changes at the residential dwellings i.e. conversion of kuccha and semi pucca houses into pucca ones, inclusion of furniture and white appliances at their places. This shows the improvement in the standard of living of the households and the increase in subjective well being of the households.

Definitely, rural folk are more focussed towards the attainment of higher and vocational education for their male children for the sake of both easy and quick urban employability or for the international migration of the upcoming adult generations. Hence, there is increase

in educational expenditure in general and for boys' education expenditure in particular (at 10% level of significance). The regular inflow of remittances has assured the improvement of skills among rural youth i.e. boys of migrants and non migrants households as the internal demonstration effect encourages others households for attainment of education and vocational skills in rural Punjab. With this aim, the change in health care expenditure among male members of the households has also been observed (at 5% level of significance). The rural population, i.e. the males of the households are more likely to get them treated against any medical problem than the female folks. The females are more dependent on the homemade remedies; local RMPs or chemists shops for their ill health issues whereas the males are open for complete and proper medical facilities available to them.

One of the interesting outcomes of migration model is that there is decline in annual clothing expenditure for the male members of the migrants' households (statistically significant at 1% level). The absence of the male members (i.e. migrants' themselves) for longer durations is one of the reasons to support this outcome. The elderly males of the households are not in habit of spending on clothing on regular mode. They spend at the time of need only. The empirical evidences support that the higher educational expenditure among the girl child of the households with the inflow of remittances (statistically significant at 5% level). The de facto head of the households i.e. the females are after the attainment of higher and regular education for the girl child of the households. This would enhance the probability of employability for those girls and would help them to get them much more suitable matrimony alliance. The female head of the households are also keen for the migration of their girl child to outer world, definitely the response for this outcome is comparatively low, but this all signifies the dawn of women empowerment

in rural Punjab, as decision making power of female heads and the attainment of higher levels of education among the girl children are worth to be appreciated and welcomed.

Further, a similar attempt is also made to determine the association between remittances receiving, say, migrants and non-remittances receiving, say, non-migrants' households with respect to the similar independent variables. The results are given in Table 5 under remittances status as Model II. Hence, Table 5, remittances status (Model II) shows the results of logistic regression which explains that with the inflow of remittances of international migration there is increase in the annual household expenditure on clothes and footwear of females, annual expenditure on various housing items. A significant change in the annual household expenditure on various housing items say white appliances and allocation of resources on Home Town Associations (HTAs)/ philanthropy has been explored (at 1% level) among the remittances receiving households other than non remittances receiving (non migrants') households. Like model-I, model-II also observes a behavioural and significant change in household expenditure level with the regular inflow of remittances in rural Punjab. As compared to non remittances receiving households, there is significant change in the females' cloth and footwear expenditure, allocation of resources on various festivals and social ceremonies (says birthdays and marriages, etc.) and also for the household savings for male children (at 5% level). Somehow, some of the expenditures are meant to boost the success of migration (i.e. celebration of birthdays and marriages, etc) and some are meant to follow the trend of migration by the male children of the households. The higher expenditure is made on the education of male children across such households as they should also be able to migrate at early age with the attainment of vocational skills say driving, cooking,

computer operator, construction and mason to name a few for easy absorption in the international job markets. The adverse impact of remittances across rural Punjab is also not to be ignored. The empirical evidences support that across remittances receiving households, less resources are allocated on household durables and there has been decline in the investment in the primary and secondary occupation of the households (at 5% level of significance). The elder and young generations are enjoying their dependency on remittances. These left behind family members are keen to migrate but are not interested and enthusiastic to retain their age old occupation i.e. agriculture or any other. The landless households are not investing in any other occupation whereas the landholders prefer the contract farming given to the non migrants' households. The other adverse impact has been observed on health care expenditure on females across remittances receiving households (significant at 10% level). The de facto head of the households i.e. females are after educational attainment and skill development of their children to reduce the gender disparities and inequalities across rural Punjab but they are not focused towards their own health and its improvement.

7. Conclusion

This paper is an attempt to identify the process of migration and remittances as a source of development. For this motive this paper works for various socio economic variables that support the migration of Punjabi youth to international job markets to a great extent with very sharp economic impacts in terms of remittances and with immediate and long term socio economic benefits reaped by the left behind family members. Based on primary survey of total 385 households selected through the stratified random sampling method, the empirical evidences drawn out of the binary logistic regression explores that the regular inflow of international remittances helps to fulfil the basic food necessity

of the migrants' households. There is increase in the expenditure made for community services in terms of local religious places and community marriages of the young generations of the poor and needy households. The inclusion of home appliances and transformation of the residential buildings supports the higher standard of living across migrants' households of rural Punjab. An important finding supported by the empirical evidences explores that allocation of resources substantially goes in favour of female children in the migrant households compared with the non-migrant households. The internal demonstration effect encourages the non migrants (non remittances receiving) to follow the same suit. Hence, the rural households are making efforts for the attainment of higher education for their children in general and that of the girl children in particular. The male children are enjoying these benefits either for the higher probability of urban employment or to follow household trend of international migration for easy employment whereas the females are given this opportunity for better matrimony alliances and also for higher probability of employment and self employment. The internal demonstration effect of this change in thought and expenditure behaviour among migrants' households is very powerful as the non migrants' households are also trying their best to provide better education and health facilities to their children. The empirical evidences support that de facto head of the households are trying their best to reduce the gender disparities and inequalities from rural Punjab. Thus international migration and remittances are the weapons that might ensure the improved quality of living in rural Punjab with lesser disparities and inequalities across migrants' and non migrants' households.

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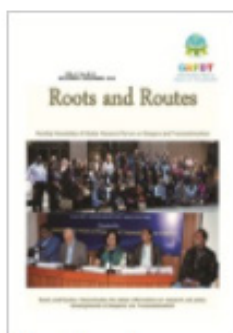
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