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Labour Migration in Indo-Gangetic Plains: Determinants and Impacts on Socio-economic Welfare

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Abstract

In India, male out-migration from rural to urban areas has increased in recent years, especially in the Indo-Gangetic regions of the country. This indicates that most of the developed regions of India are utilizing labour force of backward areas. The paper has investigated on labour out-migration from the states of Uttar Pradesh and Bihar to find its determinants and its impacts on farm economy. The analysis of determinants shown that the number of members in a family and their educational status have a positive impact on migration. As a result of male out-migration, the women left behind in the villages assume a major role in various farm activities resulting in the so-called 'feminization of agriculture'. It has also empowered the female members of the migrant households in terms of enhancing their decision-making role in various activities. The study has observed some policy implications in terms of formation of self-help groups or labour societies to help out-migrants, organization of training programmes for capacity building of women, more thrust on education a girl-child and development of infrastructure in the rural areas.

Key words: Labour migration, Feminization of agriculture, Farm-women empowerment, Impact on farm socio-economy

JEL Classification: J61, J23, J31

Introduction

Migration is widely perceived as both induced by the extent of vulnerability in a social group and resulting increased vulnerability at the point of destination. According to census in India, a person would be considered a migrant by place of last residence, if she/he had last resided at a place other than her/his place of enumeration. The data on migration by last residence in India as per Census 2001 shows that the total number of migrants was 31.4 crore. In the decade 1991-2001, about 8.1 crore were intra-state migrants while, 1.7 crore were inter-state migrants. Rural migration takes place under two compelling circumstances which can

be termed as 'growth pull' (demand pull) or 'crowding out' (supply push) effects. Under the 'growth pull' effect, the destination promises higher level of growth due to increased public/private investment, influx of new technology, structural changes in the production sector or any other growth influencing factor. The inducement to migrate in such case is directly related to the wage differentials. On the other hand, 'the crowding out' effect of migration occurs when there is an abundance of labour force without having sufficient economic opportunities in the local region for the maintenance of livelihood (Narayanmoorthy *et al.*, 1999).

In India, the rate of rural migration is high across the Indo-Gangetic Plains covering the states of Bihar, Uttar Pradesh and Rajasthan, where agricultural productivity is very low and growth of non-agricultural

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sector is primitive. The flow of labour away from the farm has intensified research interest in migration in India in recent years. With ever-increasing population, this poses serious repercussion on agricultural production, food security and household welfare. In the case of rural male out-migration, young men seek employment in the cities, leaving behind other family members (spouse, children and ageing parents) at their native villages. As a result, women often assume major responsibilities in the farming and household chores. In fact, in some countries, women have become the backbone of subsistence food production — a phenomenon termed as feminization of agriculture (Guery, 1995).

The present study has examined the macro and micro level evidences regarding magnitude and determinants of migration, and its implications on structural and socio-economic conditions of agriculture as a whole and rural households in particular. The study has examined the factors influencing labour migration and has assessed the impact of labour migration on the family welfare in the states of Uttar Pradesh and Bihar due to high incidence of labour out-migration from these states.

Data Source and Methodology

A micro-level study based on primary cross-section data was designed to attain the specific objectives and household survey was conducted in the year 2006-07. The secondary data were collected from various issues of NSSO reports, Census of India, Economic Survey and Statistical Abstracts published by the state governments and other published sources. The detailed investigation on labour out-migration was done in two states, viz. Uttar Pradesh (UP) and Bihar of Indo-Gangetic Plains. Two districts from each state, namely Katihar and Samastipur from Bihar and Azamgarh and Varanasi from Uttar Pradesh were considered for the study. Specially structured interview schedule was developed and used for data collection from randomly drawn 200 out-migrant families and 200 non-migrant families with landholdings of less than 2 hectares from both the states.

To examine the factors influencing migration, the logit model with most likely variables was fitted, and was estimated using the maximum likelihood method. The logit model postulates that the probability of migration, P , is a function of an index variable Z ,

summarizing a set of the explanatory variables (X_i). In fact, Z is equal to the logarithm of the odds ratio, i.e. ratio of probability of migration to the probability of non-migration and it can be estimated as linear function of explanatory variables (Gujarati, 1995). The functional form of the logistic model may be given by Equation (1):

$$Y = \frac{P}{1-P} = \frac{1+e^Z}{1+e^{-Z}} = e^Z \quad \dots (1)$$

or,

$$\ln(P/1-P) = Z = F(X_1, X_2, X_3, \dots, X_k) \quad \dots (2)$$

where,

Y = Migration status of the household (1 if any member of the household is migrant, and 0, for non-migrant households),

Z = Vector of explanatory variables,

$X_1, X_2, X_3, \dots, X_k$ = Explanatory variables [per capita land (in ha), size of the family (No.), income other than remittances (in rupees), dummy variable for educational status i.e. (1 for literate and 0 for illiterate) and dummy variable for caste (1 for general caste and 0 for SC/ST/OBC), and

K = Total number of explanatory variables.

To compare the empowerment of women in terms of decision-making capability on farming and non-farming activities among migrant and non-migrants households, an empowerment index was developed. For this scores were assigned on the scale of 1 to 5 on the basis of who makes the decision, assigning the highest score when the decision was taken by female spouse alone. For each activity, the scores were then multiplied by the number of respondents under respective decision makers' category, which were then summed up and converted on the scale of 5 and were named as 'empowerment scores'. The empowerment index was then evolved by dividing the average empowerment scores for migrants/non-migrants for all activities by 5.

Since the empowerment of women was considered in terms of decision-making, it was relevant to find a comparable measure for the drudgery induced due to

migration of male member of the family. This index was termed as 'migration-induced drudgery index'. Scores were assigned on the scale of 1 to 5 on the basis of work participation by the members of a family in various farm and non-farm activities, giving the highest scores when the work was done by the female spouse of the migrant. For each activity, the scores were then multiplied by the number of respondents under respective participants' category, which were then summed up and converted on the scale of 5 and were named as migration-induced drudgery scores. The migration drudgery index (MiDi) was then evolved by dividing the average scores for migrants/non-migrants for all activities by 5.

Results and Discussion

In the pursuit of economic growth since 1990s, the poverty-riddled rural India has largely been ignored in favour of the rapidly growing few urban growth centres. Low rural income growth has always remained serious concerns for the policy makers. The goal of inclusive growth can hardly be achieved without substantially raising the living standard of the hundreds of millions of people residing in rural areas. The study domain of the present study is middle gangetic plain (MGP) region of India consisting of Bihar and Uttar Pradesh states. This region is plagued with very high population and population growth incongruent with (poor) agricultural and non-agricultural growth. Besides, the region has more than 60 percent rural population, where social structure doesn't allow the inclusive growth. In other words, the availability of economy opportunities in the region is biased towards one section of society, leading to significant inter-state migration of rural labour.

From the quinquennial rounds of 38th, 43rd and 55th rounds of NSSO survey, it is seen that in both rural and urban areas, migration rates have been gradually increasing from 21 percent in 1983 to 26 percent in 2007-08 in rural areas and from 32 percent in 1983 to 35 percent in 2007-08 in urban areas. Though, the male migration rates have shown a marginal downward trend. Total number of out-migrants in UP increased from 2.45 million in 1991 to 4.16 million in 2001. In Bihar, the total number of out-migrants increased from 1.22 million in 1991 to 2.85 million in 2001. The number of net migrants by last residence during the past decade, i.e., the difference between in-migrant and out-migrants for each state, showed Maharashtra at the top of the

list with 23.8 lakh net migrants, followed by Delhi (17.6 lakh) as per Census 2001. Uttar Pradesh (-26.9 lakh) and Bihar (-17.2 lakh) were the two states with largest number of persons migrating out of the two states.

Incidence of Migration

The socio-economic characteristics of the migrants depicted in Table 1 reveal that the percentage of households having more than one migrant was higher in UP (308 migrants) than Bihar (245 migrants). On average, 62 per cent of the migrants were up to 30 years of age. The percentage of younger migrants was more in Bihar than in UP. Around 31 per cent of the migrants were in the age group of 31-45 years. This clearly indicates that young men in their productive age were more prone to migration. Similar results were reported by Sindhu and Rangi (1998) and Kumar *et al.* (1998). Most of the migrants from both UP and Bihar were literates and only 25 per cent of the total migrants from these states were illiterates. The majority of the migrants belonged to the schedule castes or backward classes; their percentage was higher in UP (91%) than in Bihar (77%).

Table 1. Socio-economic characteristics of migrants in Bihar and Uttar Pradesh

Characteristic	(in per cent)		
	Bihar	UP	Overall
Number	245	308	553
Average farm-size (ha)	0.32	0.56	0.47
Age profile			
Up to 30 years	69.80	56.49	62.39
31-45 years	26.53	35.39	31.46
Above 46 years	3.68	8.11	6.15
Literacy status			
Illiterate	33.88	19.16	25.50
Primary	50.20	29.87	38.00
Matriculation and above	15.92	50.97	36.48
Social status			
Upper castes	22.86	9.42	15.37
SC/ST/BC	77.15	90.58	84.63

Note: From migrants' households, more than one member migrated in search of livelihood; therefore, total number of migrants is more than 200.

Place and Period of Migration

The study on nature of work being done by the out-migrants from Bihar and U.P. revealed that about half of them (49%) worked as regular labourers (Table 2). It was followed by around 30 per cent of the migrants from Bihar going for construction work and from UP, adopting self-employment (such as vegetable vendors, milk vendors, auto-driving, etc.). Most of the workers from Bihar migrated to Delhi (44%), followed by to Punjab (18%). From UP, 56 per cent of the workers migrated to Maharashtra followed by to Delhi (19%). Most of the migrants (44%) from Bihar had migrated during the past 2 years, while from UP, maximum (48%) migration was during past 2-5 years.

Reason for Migration

Seasonal nature of farming and lack of job opportunities were perceived as the major reasons for migration. During the *kharif* season they had enough work in their own farms or other farms, but during the lean season, it was difficult to get a job in the village which forced them to migrate in search of employment.

Table 2. Nature of work, place and period of migration
(% of total migrants)

Particulars	Bihar	UP	Overall
Nature of work			
Agricultural labourers	6.78	1.33	4.06
Construction work	30.08	4.00	17.04
Self-employed	5.08	30.67	17.88
Regular labour	44.92	53.33	49.13
Others	13.12	10.66	11.91
Place of migration (%)			
Maharashtra	4.98	55.48	30.23
Delhi	43.57	19.27	31.42
Punjab	17.84	8.64	13.24
West Bengal	10.37	1.66	6.02
Haryana	4.15	2.33	3.24
Others	19.09	12.62	15.86
Period of migration (%)			
Last 2 years	44.03	21.43	31.65
> 2 - 5 years	33.74	47.73	41.41
> 5 - 8 years	8.23	11.04	9.76
> 8 - 10 years	2.47	11.36	7.41
> 10 years	11.52	8.44	9.76

Unemployment at the native place was cited as the most important reason of migration by 63 per cent of the migrants, followed by underemployment (19%) and low wage rates (12%). Oppressive conditions of work at the source of migration was also one of the reasons for migration for 4 per cent of the migrants (Table 3).

Table 3. Reasons for out-migration from Bihar and Uttar Pradesh

Reason for migration from native place	(Per cent)		
	Bihar	UP	Overall
Unemployment	68.18	57.70	62.94
Underemployment	13.22	24.26	18.74
Low wage rates	17.36	6.89	12.13
Oppressive conditions of work	1.24	7.54	4.39
Others	NR	3.61	1.81

Factors Influencing Male Out-migration

The factors influencing male out-migration identified using logit regression model were: land/capita, number of members in the family, family income other than remittances, educational status and caste. The estimates of the logit model are given in Table 4. In order to give more precise explanation, odds ratio (ratio of probabilities of adoption to non-adoption) of point estimate of the factors influencing adoption was worked out.

In Bihar, the influence of land/capita was not significant, whereas in UP, it had a negative impact on male out-migration. In other words, more the per capita holding with a family, less were the chances of out-migration from that family. Less than unit value of odds ratio (0.949) also reflected that it disfavoured male out-migration. The size of family had a positive impact on male out migration in both Bihar and UP. Larger the size of the family, more were the chances of men migrating out for jobs. As expected, larger families had higher dependency ratio and hence the probability of migration was high as more members had to be looked after at home. A higher value of odds ratio in UP (1.283) than in Bihar (0.093) indicates that the influence of size of family on male out-migration was more in UP than Bihar.

Income other than remittances had a negative impact on male out-migration in both the states. Less

Table 4. Factors influencing male out-migration – Logit approach

Factor	Bihar		UP	
	Estimates	Odds ratio	Estimates	Odds ratio
Land/capita	0.015 (0.023)	1.015	-0.052* (0.015)	0.949
No. of members	0.093* (0.057)	1.097	0.249*** (0.040)	1.283
Income other than remittances	-0.009*** (0.003)	0.991	-0.287** (0.038)	0.751
Education	0.454* (0.245)	1.575	0.038 (0.235)	1.039
Caste	-1.569*** (0.371)	0.208	-1.578** (0.654)	0.206
Chi square	28.11		14.73	

Note: *, ** and *** denote significance at 1 per cent, 5 per cent and 10 per cent levels, respectively

than unit value of odds ratio also showed that the odds in favour of male out-migration decreased with increase in income, other than remittances, of the family. The estimates of the logit regression showed that literacy had a positive influence on male out-migration, however, it was not significant in UP. In Bihar the chances of literate male migrating in search of better employment were more than of illiterate ones. More than unit value of odds ratio in Bihar shows that the odds in favour of migration increased with the increase in level of education. Negative sign of the logit estimate for caste showed that the chances of migration were less of people belonging to upper caste than lower caste. Odds ratio of less than unity also indicates that the probability of migration of people belonging to lower caste was more.

Impact of Migration on Family Welfare

Around 98 per cent of the migrants in Bihar and 78 per cent in UP reported an increase in the overall happiness of the family due to remittances being received from the migrant members (Table 5). Around 80 per cent of the migrants from Bihar and 68 per cent from UP reported that their children had started going to school as a consequence of out-migration of a family member. Besides, 46 per cent of the migrants from Bihar and 70 per cent from UP reported increase in emphasis on the education of a girl child after migration.

Rural to urban migration of labour may be beneficial to the households through migrants' remittances which may be used for various purposes, including food. More

than 60 per cent of the respondents in both Bihar and UP reported increase in the consumption of cereals, pulses and vegetables, indicating a step towards nutritional security of the family members of the migrants. More than 50 per cent of the respondents of both the states reported rise in the consumption of milk. More than 60 per cent of the respondents from UP reported increase in the consumption of fruits, meats, eggs and fishes, but in Bihar, only 6 per cent of the respondents reported increase in consumption of fruits and 25 per cent reported increase in consumption of meat, eggs and fishes.

Migration also had a positive impact on the healthcare facilities of the family members of migrants as more than 50 per cent of the respondents expressed agreement with the statements related to increased medical expenditure, proper treatment of pregnant women as well as patients suffering from seasonal ailments (Table 5) and at the same time a majority of them expressed disagreement with negative statements like increase in incidence of death during pregnancy and increase in incidence of congenital diseases among children. However, around 80 per cent of the respondents from Bihar and 22 per cent from UP reported a feeling of loneliness during leisure time. Most of the respondents of both the states negated the liquor-related problems like addiction, consumption when without work, and consumption with other villagers.

The score chart of migration-induced drudgery in various farm and non-farm activities in the study area has been depicted in Table 6. The higher value of the

Table 5. Income in family welfare due to migration in Bihar and Uttar Pradesh

(in per cent)

Particulars	Bihar		Uttar Pradesh	
	Agree	Disagree	Agree	Disagree
I. Improvement in education				
Children go to school	79.67	13.19	67.84	28.14
Emphasis on girl's education	45.56	34.44	70.35	25.63
Only boys go to school	6.86	77.14	3.02	90.45
II. Improvement in food consumption				
Increase in cereal consumption	84.77	14.72	70.20	29.80
Increase in pulses consumption	62.94	36.55	69.85	30.15
Increase in green vegetables consumption	86.00	12.50	68.84	31.16
Increase in fruits consumption	6.32	89.47	64.32	35.68
Increase in milk consumption	51.79	47.18	66.83	33.17
Increase in meat/ eggs/fishes consumption	24.86	72.93	66.67	32.80
Increase in overall happiness of the family	98.49	1.01	78.39	20.10
III. Improvement in Health				
Preference to approach doctor in case of seasonal ailments	66.15	32.81	72.36	27.64
Increase in medical expenditure	80.93	18.04	66.67	33.33
Increased frequency of health problems in the family	19.15	77.66	26.13	72.86
Improvement in the care of older persons	47.79	27.94	44.44	52.02
Occurrence of congenital diseases among children	9.63	90.37	15.15	84.34
Treatment of pregnant women	57.81	39.06	63.82	34.17
Incidence of death during pregnancy	6.01	93.44	31.47	67.01
IV. Incidence of Family abuse/ addiction				
Feeling of loneliness during free time	79.90	19.10	21.83	77.16
Addiction to liquor	11.46	86.46	15.08	84.42
Consumption of liquor when without work	6.25	92.71	16.08	83.42
Consumption of liquor with other villagers	5.73	93.23	14.57	84.42

Note: The total is not equal to 100 per cent, as remaining were not able to clearly articulate the implication of migration on given parameters.

migration-induced drudgery index of migrants as compared to the non-migrants clearly shows that migration has increased the drudgery of the female members of the migrant families. In Bihar, the index is as high as 0.80 for migrant households as compared to 0.45 for non-migrant households. In UP, the index for migrants is 0.70 and for non-migrants 0.58. Among various farm activities, highest scores were observed in both these states for hiring of labour, seed selection, irrigation and insecticide spraying, indicating that these activities contributed maximum to the increased drudgery of the female members of migrant households. Among the non-farm activities, the female members

of these households had to share increased burden of milking of animals, selling of milk and management of animals. Besides, they had to also share additional burden of attending bank-related activities, village meetings and social events.

On one side male out-migration has increased the drudgery of female members of these households, on the other side it has empowered these female members in terms of enhancing their decision-making role in various activities. It is evident from the women empowerment indices of 0.84 in Bihar and 0.73 in UP (Table 7). However, as expected, the maximum scores for women empowerment were for general household

Table 6. Score chart of migration-induced drudgery in various farm and non-farm activities in the study area

Activities	Bihar		Uttar Pradesh	
	Migrants	Non-migrants	Migrants	Non-migrants
(A) Farm activities				
Land preparation	3.86	2.27	3.40	3.02
Seedbed preparation	3.86	2.13	3.40	3.03
Seed selection	4.07	2.23	3.45	2.73
Pulling of seedlings	3.89	1.93	3.40	3.03
Transplanting	3.83	1.50	3.40	3.01
Broadcasting	3.94	2.11	3.40	3.03
Irrigation	4.02	2.28	3.39	3.03
Weeding	3.80	2.00	3.40	3.03
Fertilizer application	3.97	2.18	3.39	3.03
Insecticide spraying	4.03	2.19	3.39	3.02
Herbicide application	3.69	2.43	3.39	3.00
Harvesting	3.86	1.85	3.40	3.03
Threshing/drying	3.87	1.92	3.40	3.04
Hiring of labour	4.15	1.79	3.36	2.88
(B) Non-Farm (Livestock)				
Feeding cattle	3.91	3.07	3.40	3.08
Collecting fodder	3.93	2.70	3.43	3.06
Milking animals	4.04	2.36	3.41	2.95
Supervision/management	4.00	2.40	3.56	2.59
Selling of milk	4.05	2.28	3.64	2.65
(C) Others				
Child care	4.32	3.54	3.62	3.35
Bank-related works	4.40	1.89	3.83	2.41
Village meeting	4.33	2.21	3.86	2.48
Social events	4.41	2.25	3.89	2.47
Migration-induced drudgery index	0.80	0.45	0.70	0.58

Table 7. Women empowerment index for migrants and non-migrant households in Bihar and Uttar Pradesh

Decision-making	Bihar		Uttar Pradesh	
	Migrants	Non-migrants	Migrants	Non-migrants
Crops/ Variety selection	4.19	1.38	3.62	1.18
Farm input-use	4.20	1.32	3.63	1.24
Hiring of labour	4.27	1.28	3.63	1.20
Capital investment	3.97	1.33	3.63	1.20
Purchase/sale of livestock	4.20	1.35	3.64	1.17
Purchase/sale of land	3.93	1.30	3.63	1.17
Credit/borrowing of money	4.15	1.29	3.64	1.17
Sale of farm produce	4.32	1.31	3.63	1.16
Storage of seed stock	4.30	1.29	3.65	1.21
General household expenditure	4.40	1.18	3.84	1.25
Children's education	4.24	1.13	3.84	1.23
Empowerment Index	0.84	0.26	0.73	0.24

Table 8. Ranking of socio-economic changes perceived by non-migrants households in Bihar and Uttar Pradesh

(% respondents)

Socio-economic change	Bihar				Uttar Pradesh			
	Agree	Strongly agree	Can't say	Disagree	Agree	Strongly agree	Can't say	Disagree
Shortage of labour	55.44	1.55	1.04	41.97	24.62	1.51	0.50	73.37
Increase in wage rate	26.67	0.51	2.05	70.77	33.67	2.01	0.50	63.82
Reduction in social harmony	64.10	3.08	1.03	31.79	25.13	1.51	5.53	67.84
Decreasing attachment with villagers	67.36	1.04	5.70	25.91	24.62	1.01	7.54	66.83
Jealousy with migrant households	34.87	0.51	24.62	40.00	23.12	28.64	21.61	26.63
More inclusion of migrant households in local bodies / social functions	44.33	0.52	15.46	39.69	13.64	4.04	24.75	57.58
Increase in tendency among youngsters to migrate at early stage for earning (going for higher education)	75.77	16.49	4.64	3.09	2.53	2.02	5.05	90.40

expenditure, followed by decisions regarding sale of farm produce, storage of seed, hiring of labour, children's education, sale-purchase of livestock, farm input-use and crops/variety selection. The empowerment scores for the traditionally male-dominating decisions on capital investment and sale-purchase of land were relatively low in Bihar.

Socio-economic Changes Perceived by Non-migrants

The socio-economic changes perceived due to migration by the family of non-migrants are given in Table 8. While 55 per cent of the non-migrants in Bihar agreed to shortage of labour in the area, 73 per cent of the respondents from UP disagreed to it. Any increase in wage rate due to migration was denied by 71 per cent of non-migrants of Bihar and 64 per cent of UP. The fact that migration caused reduction in social harmony, was agreed to by 64 per cent of non-migrants of Bihar, while it was disagreed by 68 per cent of non-migrants of UP. Around 67 per cent of the non-migrant

respondents from Bihar felt that there was a decrease in attachment with villagers due to migration but the same proportion of non-migrants from UP denied it. Around 35 per cent non-migrants from Bihar and 23 per cent from UP said that they were jealous of the migrant households.

Increased inclusion of the migrant households in the local bodies and social functions was reported by 44 per cent of the non-migrant households in Bihar but by only 14 per cent of the non-migrant households in UP. Around 76 per cent of the non-migrants in Bihar felt that the tendency among youngsters to move out at early stage for earning while forgoing higher education was increasing, but 90 per cent of the non-migrants in UP denied it.

Changes perceived due to migration by the family of non-migrants are presented in Table 9. Most important changes as felt by all the non-migrants in Bihar was that they were selling their produce at cheaper rates. Problem in hiring and supervising labour

Table 9. Changes perceived by non-migrants households due to out-migration in Bihar and Uttar Pradesh

Perceived	Bihar		Uttar Pradesh	
	Yes	No	Yes	No
Problem in hiring/ supervising labour	36.94	63.06	10.36	89.64
Sharing manpower resources	9.16	90.84	72.73	27.27
Problems in getting loan at the time of need	10.82	89.18	22.40	77.60
Forced to do some job to generate finance	36.36	63.64	73.37	26.63
Purchasing of land from migrant households	8.85	91.15	3.11	96.89
If so, are they selling at cheaper rates?	100.00	-	12.50	87.50

was felt by 37 per cent of the non-migrants in Bihar and they were forced to do some job to generate finance as compared to UP, where 73 per cent of the non-migrants felt that they were forced to do some job. An equal percentage of non-migrants also faced problems in sharing manpower with other villagers.

Conclusions and Policy Implications

The study has revealed that in India, interstate male out-migration has been on increase over the years. The fact that most of the migrants are young literates shows that migration drains away the young and dynamic workforce from the source area leaving behind the women, old and children to manage the households. Feminization of agriculture has emerged as one the notable consequences of male out-migration. Most of the migrants have been found belonging to the backward class, indicating the economic vulnerability of this section of the society.

The study on destination of out-migration has revealed that it is to Delhi and Punjab from Bihar and to Maharashtra and Delhi from UP. This indicates that most of the developed regions of India are utilizing labour force of backward areas. Unemployment and underemployment have emerged as the most important reasons for out-migrating. The results of logit regression model have shown that the number of members in a family and their educational status are the driving factors of migration. On the other hand, available land per capita, income other than remittances and caste influence the migration negatively.

The impact of out-migration has revealed that remittances received from the migrants have resulted in increase in the happiness of the family. There has been increased emphasis on the education of children, especially of a girl child. Receivers of remittances have reported increase in the consumption of cereals, pulses, vegetables and milk. Migration has also shown a positive impact on the healthcare facilities of the family members of the migrants. The migration of male members has empowered the female members of the households in terms of enhancing their decision-making role in various activities. As a result of massive flow of labour away from the farm, women often assume major responsibilities in farming and household chores in case of migrant families, as shown by a higher migration-induced drudgery indices of women from migrant households as compared to non-migrant households.

Policy Implications

The migration of labour seems to have a positive impact on the region of destination in terms of its economic development as well as on the migrant families in terms of more economic prosperity than impervious life. However, growing migration to the urban areas causes expansion of slum areas with poor living condition, emergence of social unrest among local labourers at the destination, necessitates a closer examination of socio-economic and psychological issues to migration and development of a road map for the well-being of migrants. Keeping the findings of the study in view, following policy implications are suggested:

- Poor people migrate to come out of their socio-economic vulnerability lack bargaining strength and are ignorant about the environment in which they will have to work. A wide range of wage rates offered is one such example. Labour societies could issue identity cards and negotiate with the contractors to help improve the information base and bargaining strength of migrant workers.
- Better basic infrastructure and good governance will attract huge private investment in farm- as well as non-farm sectors in the poor states like Bihar and Uttar Pradesh, from where a large chunk of labour migrates. Appropriate government policies in this direction would help in arresting labour out-migration.
- Emphasis needs to be accorded to identify the decision-making capability and knowledge level of women by giving thrust on girls education and organizing various training programmes involving trained and qualified women extension workers.

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References

- Guery, du T. (1995) Gender migration, farming systems and land tenure. *Module* (4), SWWP, Nov.1995, www.fao.org.
- Gujarati, D.M. (2003) *Basic Econometrics*, Mc Graw Hill.
- Kainth G.S. (2009) Push and pull factors of migration: A case of brick kiln industry of Punjab state, *Asia Pacific Journal of Social Sciences*, **I**(1): 82-116.

- Kumar, B., Singh, B.P. and Singh, R. (1998) Out-migration from rural Bihar — A case study. *Indian Journal of Labour Economics*, **41**(4): 656-668.
- Narayanmoorthy, A., Jyotishi, A. and Deshmukh, R.S. (1999) Agricultural growth and migration: Search for new evidence. *Indian Journal of Agricultural Extension*, **54**(3).
- NSSO (2007-08) *Migration in India 2007-2008*. NSS 64th round, Ministry of Statistics & Programme Implementation, Government of India.
- Ranjana, K. and Shamim, I. (2007) *Gender Dimensions of International Migration from Bangladesh and India: Socio Economic Impact on Families Left Behind*, sanei report No. 10-07.
- Sidhu, M.S., Rangi, P.S. and Singh, K. (1997) A study on migrant agricultural labour in Punjab. *Research Bulletin*. (Department of Economics and Sociology, PAU, Ludhiana): 1-62.
- Singh, S.N. and Sharma, H.I. (1984) A study of pattern of out-migration: A regression analysis, *Journal of Rural Development*, **3**(3): 168-174.