

Labour Migration and its Implications on Rural Economy of Indo-Gangetic Plains of India

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Abstract

Massive out migration of male population from rural to urban areas has increased at an enormous rate in recent years in India 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. A detailed investigation on labour out-migration was done in the states of Uttar Pradesh and Bihar to study its determinants of migration and their impacts on farm economy. This study reveals that the farm efficiency of the migrant's households has not been significantly affected by this phenomenon indicating that rural-urban Migration is in the form of surplus unskilled labour. The determinants analysis shows that number of members in the family and their education status had a positive impact on migration.

Key words: Labour out-migration, Indo Gangetic plains, Logit model, farm efficiency, Data Envelopment Analysis.

Introduction

Migration of population has been a continuous social phenomenon since the dawn of human history. Moreover, in recent times with significant changes in economic activities, its volume and impact have undergone an enormous change. According to

UN estimates, 50 per cent of the projected increase in world's urban population would be from rural to urban migration. Migrants from rural areas account for 81.26 per cent of the total migrants in India. This reveals that there is a strong tendency to migrate from rural to urban areas. Rural-urban migration is a mechanism of adjustment by individual and group to development gaps created between the dynamic industrial sector in urban/ peri-urban areas and often the more inert agricultural sector in rural areas (Guery, 1995). The direction of migration is determined by the direction of the inequality. In India, the rate of rural male out-migration is high among the states of Bihar, Kerala, Uttar Pradesh and Rajasthan.

In Uttar Pradesh, all the landholders groups, except larger sized landholders have depicted a relatively high propensity to migrate (Oberai *et al.*, 1989). Recently, proportionately more migration is taking place for longer periods among the labour force in search of livelihoods outside their native place.

Labour migration is very much prevalent in Indo-Gangetic plains of India too, with maximum incidence of out-migration from Bihar and Eastern Uttar Pradesh region. The farm economy of Middle Gangetic Plains (Eastern region of Uttar Pradesh) of India is characterized by existence of a large number of small and marginal farmers and low farm productivity (Srivastava, 1999). Rice is the dominant crop in the region and is grown on about 50 per cent of the total cropped area in Eastern Uttar Pradesh. Faced with the grim prospects of eking out a living from their meager incomes, the rural poor are forced to migrate from their native place to relatively more developed areas in search of better employment. Consequently, with ever increasing population there begins serious repercussion on agricultural production, food security and family welfare. Hence, the massive flow of labour away from the farm has greatly drawn the attention of researchers on the phenomenon of out-migration in India in recent years.

In the case of rural male out migration, young men seek employment in the cities, leaving behind their family members (spouse, children and old parents) to manage on their own. As a result, women often have to assume major responsibilities in farming and household chores (Jose and Shanmugaratnam, 1994). Hence, in some countries, women have become the backbone of subsistence food production- a phenomenon termed as feminization of agriculture (Guery, 1995). The last few decades have seen a transformation of the agricultural sector, with increasing number of women joining the agricultural workforce. Even though, the rural to urban migration has received considerable attention; various dimensions of migration, particularly from the point of view of origin have been largely neglected.

Implications of migration are complex in nature and affect the economic growth of the region wherein it exists. Studies on migration usually assume great importance in formulating different policies like labour policy, urban development policy, agricultural policies, tax policies etc., to achieve a balanced and sustainable growth of the economy. In the absence of explicit information, the planners and policy makers are unable to make suitable policies for the disadvantaged in the society. Thus, a closer examination of the magnitude and determinants of migration, and its implications on structural and socio-economic condition of agriculture as a whole and rural household in particular assume greater significance.

The study therefore is an attempt in this direction to bring forth empirical observations on issues related to migration and to examine the magnitude and determinants of migration, to study its implications on structural and socio-economic condition of agriculture as a whole and rural household in particular and to suggest suitable policies which are mutually beneficial to migrants and society. Specifically, this paper aims to attain the objectives of,

1. Study the factors influencing migration of labour.
2. Assess the impact of labour migration on farm economy.

Data Source and Methodology

A micro-level study based on primary cross sectional data was carried out to attain the specific objectives discussed above. The survey was conducted in two states i.e. Bihar and Uttar Pradesh of the Indo Gangetic Plains (IGP), which were selected purposively because of high incidence of migration. The secondary data was collected from various sources such as issues of National Sample Survey (NSS) 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, namely, Uttar Pradesh and Bihar, which were purposively selected. Purposive selection of two districts from each state namely, Katihar and Samastipur from Bihar and Varanasi and Azamgarh from UP were done based on their relative importance with respect to labour out migration. Specially structured interview schedules were developed and used for data collection from 200 out-migrant families and 200 non-migrant families with land holdings less than 2 hectares from both the states.

To examine the factors influencing the migration, the logistic model with the most likely variables was fitted. The logistic model was estimated using the maximum likelihood method i.e., the coefficient that makes our observed change in log odds associated with one unit change in the independent variable.

The model can be specified as

$$Y = g(Z) \quad \dots (1)$$

$$Z = F(X_1, X_2, X_3 \dots \dots X_K) \quad \dots (2)$$

Where,

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

Z = vector of explanatory variable

X₁, X₂, X₃, X_k = Explanatory variables.

K = total number of explanatory variables.

The logit model postulates that P, the probability of migration is a function of an index variable Z, summarizing a set of the explanatory variables. 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 (X_k). It can be expressed as $P = 1/1+e^{-Z}$, which represents the cumulative logistic distribution.

$$1-P = 1/1+e^Z, \text{ or} \quad \dots (3)$$

$$\frac{P}{1-P} = \frac{1+eZ}{1+e-Z} = e^Z \quad \text{or,} \quad \dots (4)$$

$$\ln(P/1-P) = Z = F(X_1, X_2, X_3, \dots, X_k) \quad \dots (5)$$

Once this equation is estimated, factors influencing migration can be ascertained.

Specification of the variables used in the Logit Model

Variables	Definition / Codes
Dependant variable (Y)	Y = 1, Migrant Y = 0, if non-migrant
Land/capita	ha/person
Size of the family	In numbers
Income other than remittances	In Rs
Education status of the head of the household	1=literate, 0=illiterate
Caste	1=General, 0=(SC/ST/OBC)

To study the Farm Efficiencies of the Migrants and Non-Migrants, Data Envelopment Analysis (DEA) Approach was used. DEA is a multi-factor productivity analysis model for measuring the relative efficiencies of a homogenous set of decision making units (DMUs). It is a non- parametric mathematical programming approach to frontier estimation (Coelli, 1994). The DEAP, a data envelopment analysis (computer) program version 2.1 as developed by (Coelli, 1996) was used for the analysis.

Gini Coefficient was used to study the income inequality with and without migrant income. The Gini coefficient is a measure of statistical dispersion most prominently used as a measure of inequality of income distribution or inequality of wealth distribution. It is defined as a ratio with values between 0 and 1. A low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution. Zero corresponds to perfect equality (everyone having exactly the same income) and 1 corresponds to perfect inequality (where one person has all the income, while everyone else has zero income). The Gini coefficient requires that no one have a negative net income or wealth.

Results and Discussion

Migration has been a regular phenomenon in recent times involving people within a given geographical area or beyond the boundaries of a state or nation. As per the data available there has been 23.4 million inter-state out-migrants. Of this, migration for employment accounted for 6.2 million. About 5 lakh migrants were reported seasonal migrants migrating for less than one year. Two states, Uttar Pradesh and Bihar alone account for 41.40 per cent of total out-migration. This includes intra-district, inter-district and inter-state migrants. In India between 1991 and 2001, the total number of migrants increased from 232.11 million to 312.73 million. 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. This explicitly shows that rural male out-migration has increased over the years and hence the strategies for development will shift to capitalistic frameworks which serve the interest of developed regions unless the process is reversed in favour of rural areas. Consequently agonizing stagnation in levels of agricultural productivity on account of dwindling labour force will be the outcome in these rural areas.

Household Profile of Migrants *versus* Non- Migrants

Most of the migrants as well as non-migrants had been possessing operational holdings up to one hectare. However; a perusal of table 1 shows that the percentage of migrants falling under this category was more than that of non-migrants. Around 46 percent migrants and 42 percent non-migrants in Bihar were landless, whereas the percentage of landless in UP was less being 18 percent among migrants and 28 percent among non-migrants. Large sized land holdings of 1-2 hectares were mostly owned by non-migrants in both the states. The average size of holdings of migrants was relatively less than that of non-migrants in both Bihar and Uttar Pradesh. The table clearly shows that the incidence of migration was higher among the landless households and small holders. This result was expected since the landless households depend on the availability of job during peak crop operations. (Paris *et al.* 2005).

Table1: Distribution of Sample Households under Study on the Basis of Land Holdings

Particulars	(Percent)		
	Bihar	Uttar Pradesh	Overall
Migrants			
Landless	45.50	17.50	31.50
Up to 1.0 ha.	51.50	68.00	59.75
> 1.0 – 2.0 ha.	3.00	14.50	8.75
Total	200	200	400
Non-migrants			
Landless	41.50	28.00	34.75
Up to 1.0 ha.	50.00	50.50	50.25
> 1.0 – 2.0 ha.	8.50	21.50	15.00
Total	200	200	400
Average size of Holdings (Ha)			
Migrants	0.32	0.56	0.47
Non-migrants	0.49	0.61	0.55

Table 2 shows the occupational pattern of sample households selected. A study of the occupational pattern of sample households under study reveals that in the study area, the percentage of non-migrant families involved in farming (50%) or working as landless agricultural labourers (26%) was more than that of migrants which were 46 and 14 respectively. Moreover, the percent of non farm wage labourers (37%) was more among migrants when compared with that of non Migrants (20 %). Since, the number of landless households in Bihar were much more than those in UP, the percent of migrants and non-migrants involved in farming in Bihar (32 and 37 percent respectively) was much lower than those in UP.

Table 2: Occupational Pattern of Sample Households under Study

Particulars	(Percent)					
	Migrants			Non-migrants		
	Bihar	UP	Overall	Bihar	UP	Overall
Main Occupation						
Farming	31.71	54.46	46.15	37.42	61.6	49.51
Landless agril. Labour	29.37	5.08	13.96	43.06	9.1	26.08
Non-farm wage labour	36.40	37.34	37.00	11.27	27.6	19.44
Business	1.98	2.28	2.17	5.43	0.9	3.17
Government service	0.54	0.83	0.72	2.82	0.9	1.86

The socio-economic characteristics of the migrants are depicted in table 3. The number of migrants gives an idea about frequency of migrants in a household. In UP, the percentage of households having more than one migrant was relatively higher when compared with that of Bihar. In UP there had been 308 migrants from 200 households while Bihar had only 245 migrants from 200 households. On an average, 62 percent of the migrants were below 30 years of age with percentage of younger migrants being more in Bihar when compared with that of UP. Around 31 percent of the migrants were 31 to 45 years of age. This clearly indicates that young men in their productive age were more involved in migration. Similar results were reported by Sidhu *et.al.* (1997) and Kumar *et.al.* (1998) in their studies. Most of the migrants of both UP and Bihar were literate and only 25 percent of the total migrants from both UP and Bihar were illiterate. Most of the migrants belonged to schedule caste or backward class, the percentage being higher in UP (91%) as compared to that in Bihar (77%). The underlying fact is that the backward classes belonging to the lower social hierarchy were more capable of doing menial jobs and tasks, which required lot of energy.

Seasonal nature of farming and lack of job opportunities were perceived as the major reasons for migration. During Kharif season they got enough work in their own farms or other farms but it was difficult to get a job in the village during lean season, which forced them to migrate in search of employment. From the study of Migrants responses it became clear that unemployment at the source of migration was the most important reason of migration. 63 percent of the migrants in the study area migrated due to unemployment and the other reasons were underemployment (19%) and low wage rates (12%). In addition, an oppressive condition of work at the source of migration was also one of the reasons for migration for 4 percent of the migrants (Table 4). The study also revealed that most of the migrants from Bihar migrated to Delhi and Punjab and those from UP migrated to Maharashtra and Delhi. This clearly indicates that the developed regions in India are utilizing the labour force of backward areas.

Table 3: Social Characteristics of Migrants (Percent)

Particulars	Bihar	UP	Overall
Number	245	308	553
Age Profile			
Up to 30 Years	69.80	56.49	62.39
31 to 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 Caste	22.86	9.42	15.37
SC/ST/BC	77.15	90.58	84.63

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

Table 4: Reasons for Migration

Particulars	(Percent)		
	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

Economics of Crop Production in the Study Area

The results obtained on yield and returns pattern of rice cultivation of both migrants and non-migrants as depicted in table 5 shows that the grain yield in case of non-migrants of both Bihar (32.55 quintals) and UP (33.09 quintals) was not significantly different from that of migrants. Similar situation was observed in case of by product yield. The return over cost of production for migrants from Bihar was Rs 6216, which was only slightly lower than that of non-migrants which was Rs 8152.44. Following a similar pattern, the returns over cost of production for non-migrants from UP (Rs 10484.73) was only slightly higher than that of migrants (Rs 9668.42). The return to cost ratio of non-migrants in Bihar (1.77) and UP (1.89) was marginally higher than that of non-migrants. The results clearly indicate that the returns of migrants were not significantly higher than that of non-migrants in both Bihar and UP.

Table 5: Yield and Returns Pattern from Rice Cultivation

Particulars	(Rs. / hectare)			
	Bihar		Uttar Pradesh	
	Migrants	Non- migrants	Migrants	Non- migrants
Total input cost	10808.41	10572.84	11960.22	11837.55
Grain Yield (quintals)	27.69	29.68	32.55	33.09
By product yield (tonnes)	18.65	20.42	34.33	35.84
Grain revenue	16060.75	17670.58	19855.5	20326.53
By product revenue	963.2725	1054.693	1773.145	1995.756
Total returns	17024.03	18725.27	21628.64	22322.28
Return over cost	6215.62	8152.44	9668.42	10484.73
Return/cost	1.58	1.77	1.81	1.89

A perusal of Table 6 shows the yield and returns pattern of wheat cultivation of both migrants and non-migrants. The grain and by product yield for migrants was only slightly higher than that for non-migrants. The return over cost of non migrants in Bihar was Rs 4762 which was quite higher than that of migrants (Rs3098). Similarly, in UP, the return over cost of non-migrants was Rs 11144 which was higher as compared to that of migrants (Rs 9410).The returns to cost ratio of non-migrants in Bihar was 1.40, which was higher than that of the migrants (1.24). In UP, the return to cost ratio of migrants and non-migrants were 1.66 and 1.80, respectively.

Table 6: Yield and Returns Pattern from Wheat Cultivation

Particulars	(Rs./hectare)			
	Bihar		Uttar Pradesh	
	Migrants	Non- migrants	Migrants	Non- migrants
Total input cost	12738.31	11871.79	14286.08	13987.52
Grain Yield (quintals)	21.47	22.65	32.07	34.09
By product yield (tonnes)	20.94	21.98	30.85	31.71
Grain revenue	13633.45	14326.13	20364.45	21660.79
By product revenue	2203.30	2307.9	3331.8	3470.6595
Total returns	15836.75	16634.05	23696.25	25131.446
Return over cost	3098.45	4762.23	9410.17	11143.92
Return/cost	1.24	1.40	1.66	1.80

The input use efficiencies of adopters and non-adopters were represented by technical, allocative and economic efficiencies. These efficiency measures were worked out using Data Envelopment Analysis. The input use efficiencies depicted in table 7 reveal that both in paddy as well as wheat cultivation, the technical, allocative and hence economic efficiencies of non-migrants was only marginally higher than that of the migrants. This is mainly because, with the out-migration of males in case of migrant households, the management of home and farm is left in the hands of the family members who stay back in the village, most of whom are women and old parents. The economic efficiencies of paddy cultivation for migrants of Bihar and UP were 45 and 42 per cent, respectively while that of non-migrants were 54 and 47 per cent respectively. In wheat cultivation the efficiencies of migrants in Bihar and UP were 35 and 52 per cent respectively while that of non-migrants was 50 and 59 per cent respectively.

The distribution of technical, allocative and economic efficiencies of farm for paddy and wheat cultivation under various efficiency class intervals is presented in Tables 8 and 9 as well as with figures 1 and 2. In the case of paddy cultivation, it was observed that most of the migrants showed lower efficiency when compared with that of the non migrant households. In Bihar, 34 percent of the migrants showed technical efficiency of 60 to 70 percent, most (39 %) of the non-migrants showed an efficiency of 70 to 80 percent. Similarly in UP, most of the migrants showed lower efficiency as compared to the non-migrants. 35 percent of the migrants in Bihar and 42 percent in UP showed an allocative efficiency of 50 to 60 percent whereas t 44 percent of the non-migrants in Bihar and 36 percent in UP showed an allocative efficiency of 60 to 70 percent. Similarly in case of economic efficiency, most of the migrants showed lower efficiency as compared to the non-migrants.

In the case of wheat cultivation, in Bihar 33 percent of the migrants showed an efficiency of less than 50 percent as compared to 20 percent in case of non-migrants. In UP, maximum 49 percent of the migrants showed an efficiency of 70 to 80 percent, whereas 46 percent of non-migrants were showed an efficiency of 80 to 90 percent. In case of allocative efficiency, around 28 percent of the migrants from Bihar and 35 percent from UP showed an efficiency of 60 to 70 percent and whereas 31 percent of non-migrants from Bihar and 50 percent from UP showed an efficiency of 70 to 80 percent. Similar results were observed in the case of economic efficiency as well where most of the migrants showed lower efficiency as compared to the non-migrants.

Table 7: Economic Efficiencies for Paddy and Wheat Cultivation for Migrants and Non-Migrants in the Study Area

States	Migrants			Non-migrants		
	TE	AE	EE	TE	AE	EE
	Paddy					
Bihar	73	61	45	78	69	54
UP	72	58	42	75	63	47
	Wheat					
Bihar	62	58	35	71	72	50
UP	76	69	52	80	74	59

Table 8: Relative Distribution of Economic Efficiency (EE) for Paddy Cultivation of the Sample Household

Efficiency Class (%)	TE				AE				EE			
	Bihar		UP		Bihar		UP		Bihar		UP	
	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM
<50	2	-	3	-	6	1	18	6	69	30	71	65
50-60	12	6	13	7	35	17	42	22	29	45	25	32
60-70	34	22	32	29	23	44	36	36	2	18	4	2
70-80	28	39	30	31	30	24	4	28	-	7	-	1
80-90	18	20	17	24	6	7	-	6	-	-	-	-
90-100	6	13	5	9	-	7	-	2	-	-	-	-

Table 9: Relative Distribution of Economic Efficiency (EE) for Wheat Cultivation of the Sample Household

Efficiency Class (%)	TE				AE				EE			
	Bihar		UP		Bihar		UP		Bihar		UP	
	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM
<50	33	20	-	-	17	10	-	-	72	44	-	-
50-60	13	13	-	-	27	7	-	-	10	14	38	44
60-70	15	10	26	4	28	13	35	18	1	14	27	20
70-80	2	13	49	31	11	31	30	50	-	18	23	22
80-90	2	7	22	46	-	22	23	19	-	-	10	12
90-100	18	28	3	19	-	8	12	13	-	-	2	2

Figure 1: Relative distribution of Economic efficiency (EE) for Paddy cultivation of the sample household

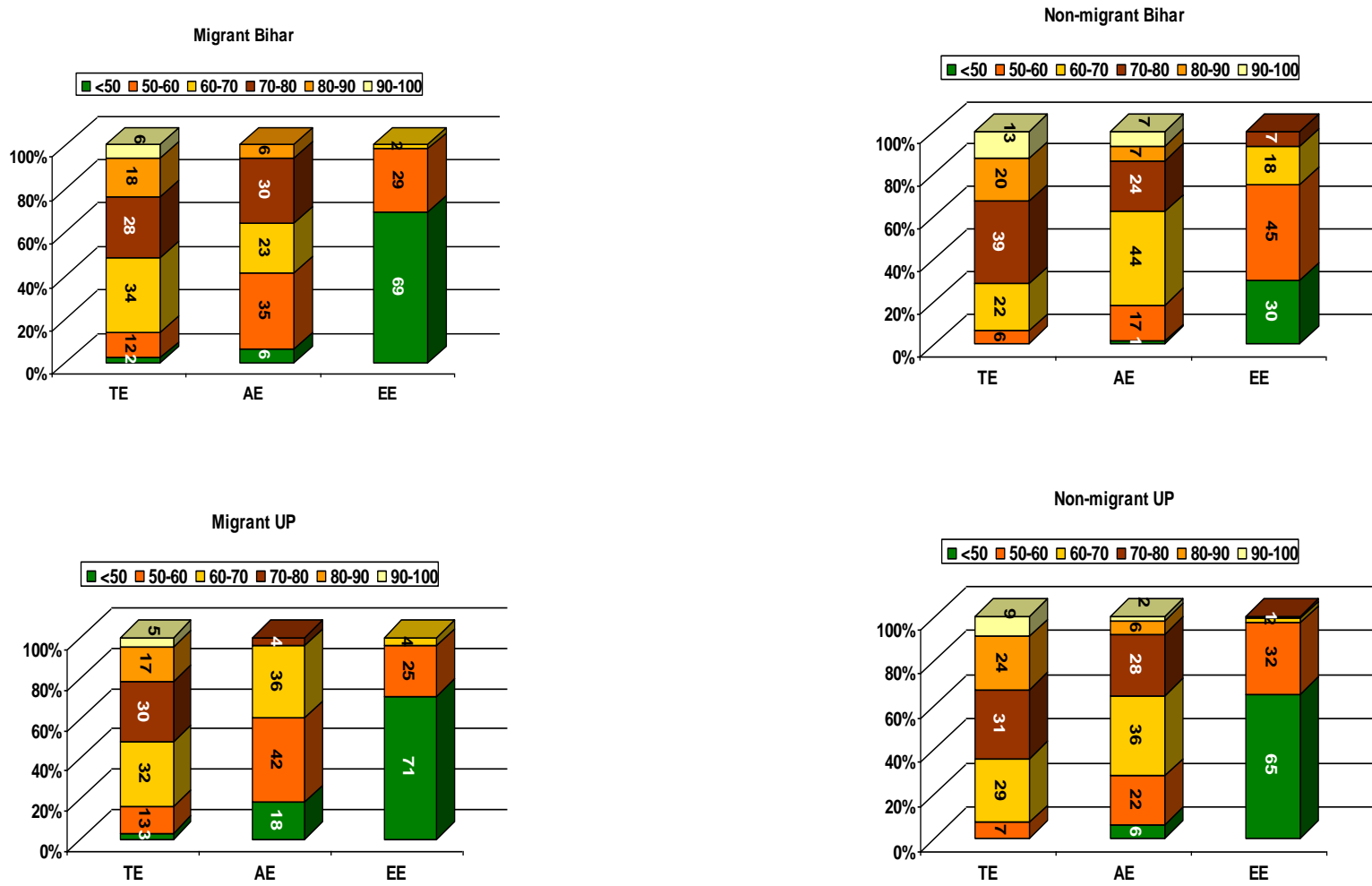
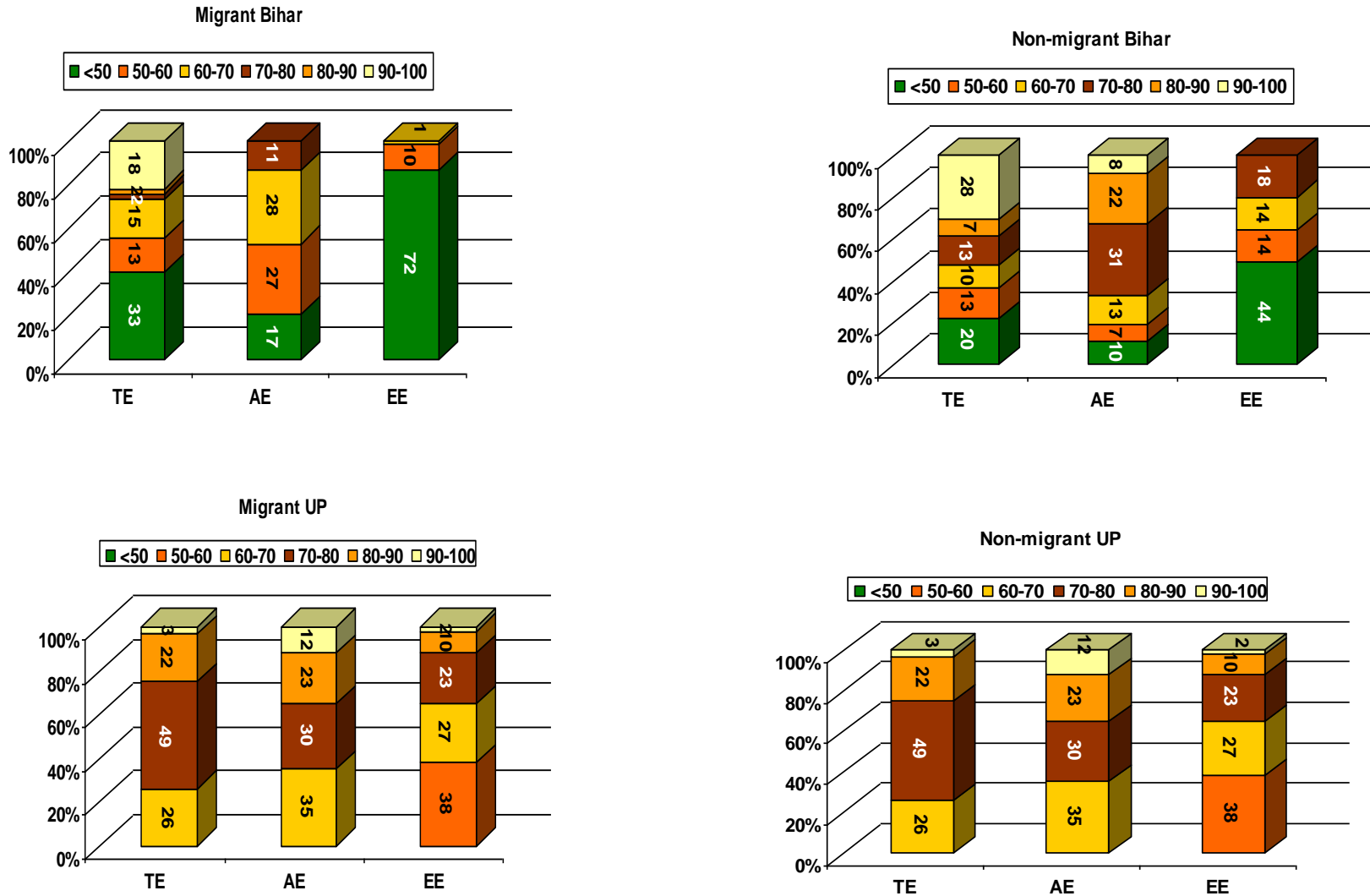


Figure 2: Relative Distribution of Economic Efficiency (EE) for Wheat Cultivation of the Sample Household



Income Inequality among Migrant and Non-migrant Households

There is overwhelming evidence that internal migration can lead to positive change in both sending and receiving areas (Deshingkar and Grimm, 2004). Migration can help to reduce poverty or to halt the slide into poverty. Gini coefficient was worked out as an indicator of income inequality and it was observed that the coefficient worked out without considering migrant's income in both UP and Bihar (0.324 and 0.386) was higher than those considered with migrant's income which were 0.244 and 0.200 for UP and Bihar respectively (Tables 10 and 11).

Table 10: Income Inequality among Migrants and Non-Migrants in Bihar

Income Range (000)	With Migrants		Without Migrants	
	% of households	% of income	% of households	% of income
0-40	87.00	68.37	64.62	32.15
41-80	10.00	17.86	18.97	23.18
81-120	1.50	4.39	10.26	20.42
121-160	0.50	2.35	3.08	9.10
161-200	0.50	2.81	1.54	6.15
>200	0.50	4.22	1.54	9.00
Gini Coefficient	0.200		0.386	

Table 11: Income Inequality among Migrants and Non-Migrants in UP

Income Range (000)	With Migrants		Without Migrants	
	% of households	% of income	% of households	% of income
0-30	50.50	30.50	69.70	48.50
31-60	40.00	47.83	27.78	43.16
61-90	7.50	14.61	1.52	4.30
>90	2.00	7.06	1.01	4.04
Gini Coefficient	0.244		0.324	

Factors Influencing Male Out-migration

The factors influencing male out-migration were identified using logistic regression model. The factors identified were land/capita, number of members in the family, family income other than remittances, education and caste. Table 12 indicates the estimates of the logit model. In order to give more precise explanation, odds ratio of point estimate of the factors influencing adoption was worked out. The odds ratio can be defined as the ratio of probability of adoption to the probability of non-adoption.

In Bihar, the influence of land/capita was not significant whereas in UP, the land/capita had a negative impact on male out-migration. In other words, more the per capita holding with the family, less were the chances of people migrating from that family. Less than unit value for odds ratio (0.949) also reflects that it disfavored male out migration. The size of the 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 taken care for. Larger value of odds ratio in UP (1.283) as compared to Bihar (0.093) indicates that the influence of size of family on male out-migration was more in UP as compared to Bihar. Income other than remittances had a negative impact on male out-migration in both the states. Less than unit value of odds ratio also show that the odds in favor of male out - migration decrease with every increase in income other than remittances with the family. The estimates of the logistic regression show that literacy had a positive influence on male out-migration. However, the literacy status of the households was not significantly influenced the outmigration in UP. In Bihar the chances of literate male

migrating in search of better employment was more than that of the illiterate ones. More than unit value of odds ratio in Bihar shows that the odds in favour of migration increases with the increase in level of education. Negative sign of the logistic estimate for caste shows that the chances of people from upper caste to migrate were less as compared to those belonging to lower caste. Odds ratio of less than unity also indicates that the probability of migration of people from lower caste was more.

Table 12 : Factors Influencing Male Out-Migration – Logistic Approach

Factors	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	

Conclusion and Policy Implications

It is apparent from the study that in India, inter-state male out-migration has been increased significantly over the years. Increase in male out-migration has been as high as 134 percent in Bihar and 70 percent in UP over the decade 1991 to 2001. Migration has mainly taken place from Bihar to Delhi and Punjab and from UP to Maharashtra and Delhi. This indicates that most of the developed regions of India are utilizing labour

force of backward areas. Most of the migrants are either landless or small land holders who have had to depend on the availability of job during peak cropping season or work as non-farm wage labour.

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 take care of the decision making in farming and non farming operations. However, this also shows that there are not enough employment opportunities in the rural areas to commensurate with the level of education. In spite of the young males migrating from the migrating households, there has not been much difference in the farm efficiencies of migrants and non-migrants.

In order to formulate effective policies to reverse rural male out-migration, it is imperative to identify the factors affecting rural male out-migration. The results of logistic regression model show that number of members in the family and their education status had a positive impact on migration. On the other hand, available land per capita, income other than remittances and caste negatively influenced migration. The study indicates that the real gaps in containing rural male out migration have been in the development and expansion of critical support services in the source areas. Hence the World Bank is right in describing schemes like National Rural Employment Guarantee Act (NREGA) as a policy barrier to stop internal mobility but we need to be cautious while saying that lifting people out of poverty requires shifting population from villages to cities as urban bias in the development policy aggravates the urban unemployment problem.

Policy Implications

1. Expansion of small-scale, labor-intensive industries.

2. Modifying the linkage between education and employment.
3. Better basic infrastructure and good governance will attract huge private investment in farm- as well as non-farm sector in poor states like Bihar and Eastern UP, from where large chunk of labour migrates. These are the regions from where demand of final products are ever increasing and further fuelled due to large population.
4. Organising the rural poor into SHGs and taking up some economic activities could provide a source of income and also help increase access to credit at comparatively lower cost.
5. Emphasis needs to be accorded to identify the decision making capability and knowledge level of women by giving thrust of girls' education and imparting various training programmes involving trained and qualified women extension workers.
6. Efforts should be directed towards creating urban like amenities in rural areas.

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