An Analysis of Rural to Urban Labour Migration in India with Special Reference to Scheduled Castes and Schedules Tribes

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Abstract

Migration plays an important role in the process of economic development and social transformation. This paper analyzes the push factors of rural to urban labour migration. The empirical results shows that increasing per capita Net State Domestic Product decreases the number of out-migrants from the rural areas of that state whereas increasing the proportion of population living below poverty line, the proportion of Scheduled Castes and illiteracy rate in the rural area of the state decreases the out-going rural to urban labour migrants from that state. The proportion of Scheduled tribes in the rural area is found not to affect the number of rural to urban out-going labour migrants. Male and female rural to urban labour migrants differ in their responses to the above mentioned push factors.

Key words: labour migration, rural to urban migration, migration and children, gravity model of migration

Introduction

One important facet of study on population is the study of migration arising out of various social, economic or political processes. Sutherland (2013)[10] states that migration is necessary for people to cope with poverty. According to the World Bank (2011)[13], more than 215 million people live outside their countries of birth due to various reasons, and over 700 million migrate within their countries. According to the National Sample Survey Organization report (June 2010: 64th round)[8] nearly a third of Indians are migrants. India is expected to be the most populous country by 2050 with a largely young population. According to MPI (2011)[6], the scale of internal mobility in India is likely to grow due to India's expanding middle class and continuing poverty.

Most of the studies on rural to urban labour migration (Bhattacharya, 2002[1], Parida and Madheswaran, 2010[9]) generally analyses the mixed effect of the interplay of both push and pull factors simultaneously and separate effect of only push factors is not known. This study fills this research gap by analysing the push factors of rural-urban labour migration keeping the pull factors (i. e., destination characteristics) same for all the states and union territories.

Literature Review

According to Todaro (1969)[11], the main reason of rural-urban migration is rural-urban expected income differential. The expected wage is nothing but the product of higher urban wage and probability of finding a job in the urban sector (Bhattacharya, 2002)[1]. Mitra and Murayama (2008)[7] find that prospects for better job opportunities are a major determinant of male migration. Dubey, Jones and Sen (2004)[3] find that migration in India is caste selective, dominated by the upper castes in social hierarchy, and that the possession of human capital is an important determinant of the likelihood of rural to urban migration. Ullah (2004)[12] observes that the flow of migration to the major cities is the result of rural–urban dichotomies in income, employment opportunity and absorptive capacity.

Greenwood (1985)[5] says that Gravity Model is the most common theoretical framework used in empirical analysis to study the spatial determinants of migrations which argues that migration is directly correlated with population size and inversely correlated with the distance between the origin and the destination regions.

In India, as per 2001 census[2], 314.5 million people (about 30.6 percent of the total population) have been reported as migrants by place of birth. The total migrants in Delhi UA are 55.5 by place of last residence. Thus, though Delhi UA accounts for only 1.76 percent of the total migrants of India but keeping in view that Delhi's total population is only 1.38 million, the total migrants in Delhi UA becomes 40 percent of its population. Four states Uttar Pradesh, Bihar, Haryana and Uttrakhand are responsible for 72 percent of the total number of migrants for work/employment in Delhi UA from the rural areas of Indian states and union territories.

Research Methodology

In this study, an attempt has been made to study (at the macro level) the determinants of rural to urban in-ward labour migration to Delhi by using the modified "Gravity Model" with the help of ordinary least square (OLS) estimation. In this study I have primarily used data from Indian census 2001 (the migration data of the census 2011 is yet to be released), consumption expenditure and employment and unemployment surveys carried out by the NSSO during July 1999 to June 2000 (because it is the closest to the census 2001 data) and the data from the Planning Commission of India. Since I am considering only in-ward migration to Delhi from other states and Union Territories of India, I have dropped the destination variables from the regression equation.

$$ln(M_{ij}/P_i) = \beta_0 + \beta_1 ln(P_j/P_i) + \beta_2 ln D_{ij} + \beta_3 ln Y_i + \beta_4 ln Illit_i + \beta_5 ln BPL_i + \beta_6 ln SC_i + \beta_7 ln ST_i$$

Eq. (1)

Where,

M_{ij} = *Number of male labour migrants whose previous place of residence was state i (rural) and whose present place of residence was state j (urban) of all duration of residence in the destination urban place.*

P_i = *Total rural population (No. of rural workers) of state i.*

P_j = *Total urban population (No. of rural workers) of state j.*

D_{ij} = *The arial distance between the capital cities of state i and j.*

Y_i = *Per Capita Net State Domestic Product (NSDP) at constant 2000-2001 prices for state i (NSDP divided by population of 2001).*

$IILIT_i$ = *The rural literacy rate of state i.*

BPL_i = *Proportion of population living below poverty line in rural areas of state i.*

SC_i = *Proportion of scheduled caste population living in rural areas of state i.*

ST_i = *Proportion of scheduled tribe population living in rural areas of state i.*

Findings

Ordinary Least Square (OLS) results of the labour migration from the rural areas of the selected states of India to Delhi are presented in Table 1 and 2. The OLS results presented in these tables are the robust results which were corrected for both heteroscedasticity and possible serial correlation problems. The mean of variance inflation (VIF) factors and the tolerance figures indicate that the degree of multicollinearity is very low, and it does not affect the estimated coefficients. The R^2 (the measure of goodness of fit) for the equation is quite reasonable along with high significance level of F-statistics. Since all the variables are in the form of logarithms, the parameter estimates represent elasticities. The study encompasses 30 states including union territories. Some of the states/UTs (Andaman & Nicobar Islands, Dadra & Nagar Haveli, Goa and Lakshadweep) have been left out

of the study due to lack of availability of the data. Delhi is the destination area of the migrants and the purpose is to explain the inter-state difference in the number of migrants to Delhi, hence is was left out as an explanatory variable.

Applicability of the Gravity Model of Rural to Urban Labour Migration

The estimated results in table 1 suggest that in the rural to urban labour migration, the gravity variables (population size and distance) are statistically (at 1 percent level) as well as economically significant, with positive and negative signs (as expected), and absolute values of the coefficients are 0.40 (population elasticity of rural to urban labour migration) and -1.77 (distance elasticity of rural to urban labour migration) respectively. The origin population size acts as a pushing factor where as the size of urban population is an indication for the rate of urbanisation (as a pulling factor). Both origin and destination population have positive roles to play in the migration process, which is evident from the empirical results. The distance is the proxy for all migration costs (including the psychic cost or place utility) and has played a deteriorating role in the internal rural to urban labour migration process in India.

The Push Factors as the Determinants of rural to Urban Labour Migration

Table 1 shows that the origin rural poverty (BPL_i) has the positive coefficient (1.44) as expected and is significant (at 1 percent level), suggesting that the origin rural poverty is one of the major pushing factors responsible for rural-urban labour migration.

The coefficient of origin states' per capita net state domestic product is statistically significant (at 5 percent level) as well as economically significant (having expected negative sign). This finding is similar to Greenwood (1997)[4] and Bhattacharya (2002)[1] which stated that the per capita net state domestic product (NSDP) is the most representative macro-economic variable responsible for migration of people as high economic prosperity means more activities, services and opportunities for people living in that area. The result shows that origin per capita income elasticity of labour migration is greater than one in absolute value (-1.14). This suggests that the rural to urban migration in India is basically from the relatively less developed states.

The coefficient of rural illiteracy is highly significant statistically (at 1 percent level) and practically (the coefficient is greater than one in absolute value, i.e. -1.56) suggesting that illiteracy is a big hindrance rather than a pushing factor in inter-state rural to urban labour migration in India. Its negative sign prompts us to think about the low number of labour migrants from the rural areas of the states whose spoken language is different from Hindi. This shows the difficulty which the labourers speaking other than Hindi face in mingling with the local society.

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SC incidence in rural regions is seen to reduce outmigration rates as its coefficient is negative and statistically highly significant (at 1 percent level) and practically significant (-.35). But the most crucial finding of the study is the insignificant ST status, which is generally thought to be like SC status. These results for the SC and ST variables would seem to suggest that it is SCs in particular who are deterred from undertaking rural–urban migration. This, of course, raises the question as to why SC behaviour differs from that of ST migrants. The social, geographical and economic differences between SCs and STs could be responsible for this (Bhattacharya, 2002[1]; Dubey, Jones and Sen, 2004[3]).

Gender Impact in Rural to Urban Labour Migration

Table 2 clearly shows that in the males and females cases separately too, the "Gravity Model" is well established in India but the differences in between the two lie in the following:

The adjusted R^2 value is higher in males' case (0.72) than the female's case (0.60) which means that the included regressors in the models explain 72 percent and 60 percent differences in the inter-state male and female rural to urban labour migration, respectively. It clearly shows that male rural to urban migrants respond differently to the economic variables than their females counterparts and establishes the needs of some feminine gender specific variables to be included in the model.

The intercepts, as well as the coefficients of the destination and origin population ratio, distance, illiteracy, proportion of population living below poverty line in the rural areas, SCs and STs, in both the males and females cases have the expected signs as explained in the general case earlier but they differ in their magnitude and significance levels. It shows again that male and female inter-state labour migrants respond differently to economic and social variables. The higher differences lie in the illiteracy and proportion of population living below poverty line in the rural areas. If illiteracy goes down by 1 percent, male migration will increase by 1.2 percent whereas female migration will increase by nearly 2.0 percent. Similarly, if proportion of population living below poverty line in the rural areas goes down by 1 percent, male migration will decrease by 1.4 percent whereas female migration will decrease by 1.2 percent. These differences could be because of the freedom to relocate, which a woman gets, increases with education and prosperity.

The major difference in the male and female rural to urban labour migrants is clearly visible in their responses to per capita net state domestic product. The coefficient of this variable is significant in males' case but insignificant in females' case. This result, in fact, is very interesting since most of the male migrants come from the states having lower per capita NSDP as compared to the destination state. On the other hand, a female labour migrant (or female gender in general) often has to consider a host of factors such as the higher social security provisions in the destination places before taking a decision to migrate and thereby restricting the role of expected per capita income.

Conclusions

We found strong empirical support for the key prediction of the Gravity Model that rural to urban labour migration is influenced by the gravity variables (population size and distance between the places). This study further found that there exist other push factors (like income, illiteracy, poverty and the proportion of SC population) which operating at origin places, are the main determinants for rural to urban labour migration. The result showed that male and female inter-state labour migrants respond differently to economic and social variables.

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Appendix 1: Tables

Table 1: Inter-state Rural-Urban Labour Migration (Person)

Variables	Coefficients	Collinearity Statistics	
		Tolerance	VIF
Constant	20.460(2.939)*		
P_j/P_i	.421(3.829)*	0.478	2.091
D_{ij}	-1.715(-7.038)*	0.602	1.660
Y_i	-1.136(-2.048)**	0.437	2.286
$Illi_i$	-1.193(-2.879)*	0.579	1.727
BPL_i	1.411(3.452)*	0.430	2.325
SC_i	-.327(-2.543)**	0.451	2.219
ST_i	-.076(-0.320)	0.579	1.728
R^2	0.786		
Adjusted R^2	0.717		
d-Statistics	2.137		
F-Statistics	11.518*		
Std. Error of the Estimate	0.799		
N	30		

Source: Data Analysis

The t-statistics are presented in parentheses in the tables and *, ** and *** implies the statistical level of significance at 1 percent, 5 percent and 10 percent, respectively.

Table 2: Inter-state Rural-Urban Labour Migration (Male and female)

Variables	Coefficients (Male)	Coefficients (Female)
Constant	23.165(3.116)*	19.190(2.240)**
P_j/P_i	0.404(3.769)*	0.322(2.980)*
D_{ij}	-1.770(-6.946)*	-1.472(-5.065)*
Y_i	-1.143(-2.068)**	-0.817(-1.342)
$Illi_i$	-1.556(-3.182)*	-1.993(-3.494)*
BPL_i	1.437(3.547)*	1.198(2.712)*
SC_i	-.348(-2.761)*	-0.268(-1.966)***
ST_i	-0.066(-0.281)	0.126(0.500)
R^2	0.789	0.699
Adjusted R^2	0.722	0.604
d-Statistics	2.245	2.445
F-Statistics	11.786*	7.307*
Std. Error of the Estimate	0.790	0.862
N	30	30

Source: Data Analysis

The t-statistics are presented in parentheses in the tables and *, ** and *** implies the statistical level of significance at 1 percent, 5 percent and 10 percent, respectively.