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Migrant's Livelihood -A State Level Study from India

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Abstract

Migration is an emerging issue of development economics. In India, people have always moved from one place to another since time immemorial. We observe three types of migration: Temporary, Semi-permanent and Permanent. The study emphasized on the nature of jobs that the different types of migrants engaged and attempts to understand the various types of jobs they hold. In the census, works are designated according to their length of job which is an important determinant here. It could be argued that main workers earn more money than marginal workers. This should be reflected in the economic decision making process of the migrants. For analytical purposes, we have considered Tobit regression to unravel the incidence of migrants among various types of job lengths. In this paper, we are interested in studying the nature of the job that the migrants carry with them. Tobit is merely used to study what are the factors that affect the probability of migrant belonging to any of the particular sets. This probability is different for different category of migrants.

Keywords: *Migration, Work, livelihood, Rule of Law Index, Rural-Urban Divide*
JEL: J61, J62, K14, I30

1. Introduction

1.1. Migrants and their livelihood:

The movement of people from one region to another is termed as migration. Human migration is a universal social phenomenon. It is not only a physical movement but also a social process that brings about socio-economic, cultural, and political changes in a given society. Migration is one of the standard options for livelihood. When people do not get jobs in the local area, they move to a new place to obtain a meaningful livelihood. In modern times, the process of migration is much accelerated due to good facilities of transport, improved network of communication and better economic opportunities for better livelihood in developing countries like India. Migration raises not only the question of the educational, occupational, and other needs of the migrants but also creates issues of socio-cultural adjustment.

According to the United Nations, there are three times more internal migrants than international migrants in the world. Migration is the most volatile component of population growth, that's why it is the most important issue from both economic and demographic perspective. Indian constitution under Article-19 provides basic freedom to move any part of the country, right to reside and earn livelihood. According to UNDP Human Development Report of 2009, internal migration is raised by four times than international migration.

Man is, by nature, a migrant species. People migrate for various reasons. In many cases, migration is driven by the hope of a better livelihood. Thus, livelihood issues are at the core of any discussion of migration. It is necessary to see whether migrants have been able to

achieve a better livelihood at their destination. Banerjee and Duflo (2019) have identified numerous instances in which migrants' expectations are not met. However, they are not always able to make the decision to reverse migrate.

In India, migration is an important factor that affects mainly socio-economic development. Migration is regarded as an important livelihood strategy in India. The issues of migrants' livelihoods are the focus of this paper. We will see whether they have been able to get painful jobs or have to resort to subsidiary earnings. State wise data from the Indian population census has been used for our investigation.

The paper is organized as follows: First, we have to focus on some literature related to our paper in Section 2. We discuss our basic data structure and methodology in Section 3. Section 4 examines the different types of jobs held by different types of migrants. Section 5 concludes the paper.

1.2. Objectives of the study:

The main objectives of the study are as follows:

- To categorize the migrants according to their stay in the place of migration.
- To analyze the working structures of different types of migrants.
- To ascertain the jobs of various lengths that the migrants of various categories achieve.

In order to achieve these objectives, we have used state level data.

2. Review of Literature:

Migration is a very complex issue. Several socioeconomic factors play important here. We have compiled a list of some of the most important works in this field.

Migration is a common occurrence in both developed and developing countries (Oyeniyi, 2013). According to HDR (2009), migration within the border is more significant than migration across the border. Because the financial costs of crossing the border are prohibitively high. Aside from that, there is a significant psychological burden, as well as different cultures and socioeconomic conditions. Migrants benefit from migration in the form of higher income, better health care and education, better living conditions, and greater social opportunities. According to Sudhershan Rao Sarde (2008), most migrants migrate in search of work elsewhere. Migrants travel long and short distances for work, and in most cases, they do not get the job of their choice. They have no choice but to work in inhumane conditions. Reena Badiani and Abla Safir (2008) have studied the conditions of temporary migrants in India. In India, poor rural people migrate temporarily to non-farm work, residing permanently to the place of origin if the income earned from the place of origin is the same as that earned from the place of destination. This may be the case with the diversification of the occupational structure. An interesting study is by Sengupta (2013). The paper examined the relationship between poverty and migration using NSSO 64th round data from 2007-08. She investigated whether out migration is a meaningful way out of poverty. Among the factors that are pushing out rural migration are lack of educational skill, pressure of family, absence of productive assets and inadequacy of agricultural incomes are the main factors in pushing the rural out migration. In a cross country study, Simpson (2017) investigated factors that push or pull migration. A number of economic and non-economic factors are found to push or pull migration. Among these factors, the macro-economic conditions at home and abroad are very important. It is typically argued that areas with low unemployment generally attract more migrant labour. Deshingkar and Start (2003) have analyzed the nature of seasonal and circular migration for employment. They argued that such migrations are a good option for

non-poor people as well as poor people during survival. They help augment income in a variety of ways. They focused on two states in particular: Andhra Pradesh and Madhya Pradesh. Migration boosts income and wealth in both of these areas by attracting people from poor areas. Also, there are migrants from relatively prosperous areas who want to augment their income. Mitra (2010) used a slum survey to investigate the relationship between migration, livelihood, and well-being in four Indian cities: Jaipur, Ludhian, Mathura, and Ujjain. This study demonstrates that various informal channels are used to evaluate urban jobs. It is clear that the migrants' economic situation is improving over time. Choithani, Duijne, and Nijman (2021) investigate the change in livelihood caused by rural-urban migration in India. In 2019, they collected primary data in Lalgola, West Bengal, and Barharia, Bihar. They discovered that the scarcity of alternative local livelihoods other than agriculture is driving migration. In addition, seasonal migration has evolved into a more permanent form of circular labour migration. The timing and nature of the transformation vary greatly across India. This is due to the fact that the decline in agricultural employment varies over time. Domestic and international labour migrations have different effects. Singh and Basu (2020) studied the relationship between vulnerability and migration. They opined that migration is an important source of livelihood. It diversifies earnings. It lowers the risk of rain-fed agriculture and climate change. They conducted research on a group of migrant and non-migrant families in Karnataka. It is difficult to confine migration to a single, well-defined category. While migration increases employment opportunities, it also creates a scarcity for others. Again, migration may be an adaptive strategy for households, but where there is a huge flow of migrants in the city, the pressure on the urban infrastructure may be unbearable.

Some papers on migration and its causal relationships have been reviewed. There are some significant gaps in the literature. Few papers in the Indian context attempt to categorize migrants of varying duration. The treatment of migrants uniformly may lead to an incorrect understanding of their interactions with various socioeconomic factors. They also do not take into account the types of jobs that migrants obtain. We believe that the current paper will be able to address both serious questions in a preliminary manner. In fact, this is the main pillar on which the current paper is built.

3. Data Source and Methodology:

The study has been carried out using data collected by the Census of India. Since the beginning of the 20th century, the Indian census has been collecting data on migration based on place of birth. Since 1971, migration data has been collected on the basis of the place of last residence and duration of migration. This criterion gives information related to the last move of the migrants. The village or town is the lowest unit for determining the place of last residence. Any residence change within the village or administrative town is not considered migration. Data on migration were provided as changes in residence elsewhere in the district, from one district to another within the state and from one state to another state.

The study is based on Census data. Migration data has been used for the decades 2011. The analysis is based on 2011 Census D-6 series data on migration. Considering the rural and urban divide, there are 70 observations in all. In order to explain the potential skill level of the migrants, they are categorized into three groups, namely, Temporary, Semi-Permanent and Permanent migrants. In this study, migrants whose duration of residence is less than one year (<1year) are termed as Temporary migrants. Migrants whose duration of residence is between one to four years (1-4years) are called Semi-permanent and those whose duration is five years or more (>=5years) are termed as Permanent migrants[1].

In the census, works are designated according to their length of job. Work may not be actual laboring activity but also includes supervision works. The length of the job is an important determinant here. Workers who have worked for 183 days or more prior to the enumeration are deemed to be main workers. Those who have worked for less than 183 days, on the other hand, are considered marginal workers. The distinction between these two workers is based on the supposition that the importance of the work performed has a positive association with the time spent on it.

For the analytical purpose, we use the Tobit regression. Since our dependent variable is a censored one. Now we discuss the basic structure of the Tobit model.

3.1. The Model

The Tobit model is a statistical model proposed by James Tobin (1958) to describe the relationship between a non-negative dependent variable y_i and an independent variable (or vector)x_i. The word Tobit is taken from Tobin and adding "it" to it. The Tobit model can be described in terms of a latent variable $y*$.

The structural equation in the Tobit model is:

$$y_i^* = \beta Xi + \epsilon_i$$

Where $\epsilon_i \sim N(0, \sigma^2)$. $y*$ is a latent variable that is observed for values greater than truncation point τ and censored otherwise[2]. When the distribution is censored on the left, observations with values at or below τ are set toτ_y. The observed y is defined by the following measurement equation

$$y_i = \begin{cases} y_i{}^* & if\ y_i{}^* > \tau \\ \tau_y & if\ y_i{}^* \leq \tau \end{cases}$$

In the typical tobit model, we assume that $\tau = 0$ i.e. the data are censored at 0. Suppose, however that $y_i^*$is observed if $y_i^* > 0$ and is not observed if$y_i^* \leq 0$. Thus, we have

$$y_i = \begin{cases} y_i{}^* & if\ y_i{}^* > 0 \\ 0 & if\ y_i{}^* \leq 0 \end{cases}$$

3.2. Estimation

The use of τ and τ_y are just a generalization of having τ and τ_y set at 0. If a continuous variable y has a probability density function $f(y)$ and τ is a constant, then we have

$$f(y) = [f(y^*)]^{d_i}\ [F(\tau)]^{1-d_i}$$

In other words, the density of y is the same as that for y^* for $y > \tau$ and is equal to the probability of observing $y^* < \tau$ if $y = \tau$. d is an indicator variable that equals 1 if $y > \tau$ i.e. the observation is uncensored and is equal to 0 if $y = \tau$ i.e. the observation is censored. We know that

$$P(censored) = P(y^* \leq \tau) = \Phi\left(\frac{\tau-\mu}{\sigma}\right) = 1 - \Phi\left(\frac{\mu-\tau}{\sigma}\right)$$

$$P(uncensored) = 1 - \Phi\left(\frac{\tau-\mu}{\sigma}\right) = \Phi\left(\frac{\mu-\tau}{\sigma}\right)$$

Thus, the likelihood function can be written as

$$L = \prod_{i}^{N} \left[\frac{1}{\sigma}\Phi\left(\frac{y-\mu}{\sigma}\right)\right]^{d_i} \left[1 - \Phi\left(\frac{\mu-\tau}{\sigma}\right)\right]^{1-d_i}$$

In the traditional tobit model, we set $\tau = 0$ and parameterize μ as $Xi\beta$. This gives us the likelihood function for the tobit model:

$$L = \prod_{i}^{N} \left[\frac{1}{\sigma}\Phi\left(\frac{y_i-\beta Xi}{\sigma}\right)\right]^{d_i} \left[1 - \Phi\left(\frac{\beta Xi}{\sigma}\right)\right]^{1-d_i}$$

As Sigelman and Zeng (1999) point out, there are three expected values that we might be interested in. To simplify things, we'll keep looking at the case where censoring is at zero i.e. $\tau = 0$.

Expected value of the latent variable y^*:

$$E[y^*] = \beta Xi$$

Expected value of $y|y > 0$:

$$E[y|y > 0] = \beta Xi + \sigma\lambda(\alpha)$$

where, $\lambda(\alpha) = \frac{\Phi\left(\frac{\beta Xi}{\sigma}\right)}{\Phi\left(\frac{\beta Xi}{\sigma}\right)}$ is the inverse Mills ratio.

Expected value of y:

$$E[y] = \Phi\left(\frac{\beta Xi}{\sigma}\right)[\beta Xi + \sigma\lambda(\alpha)]$$

where, $\lambda(\alpha) = \frac{\Phi\left(\frac{\beta Xi}{\sigma}\right)}{\Phi\left(\frac{\beta Xi}{\sigma}\right)}$ is again the inverse Mills ratio.

4. Analytics of the study:

4.1. Conditions of the migrants: Frequency Analysis

We discuss some basic features of the migrant types in India. Migration is a demographic phenomenon that has both a temporal and a spatial dimension. However, before delving into the other issues concerning migrants, we must first examine the distribution of various types of migrants. Table 1 summarizes the result for India[3]. A part of the semi-permanent migrants are the seasonal migrants. Temporary migration is quite high in urban areas compared to their rural counterparts in India. The percentage of temporary migrants in rural areas stands at 4.15% and in urban areas, the figure stands at 5.30%. But in some states like Chandigarh, Haryana, and Maharashtra, the percentage of temporary migrants in rural regions is comparatively high. These migrants are mostly unskilled and thus prefer to remain within their favourable area. Permanent migration is the highest in both the rural and urban areas. There are migrants coming to the place of destination for job opportunities and ultimately settling there.

Table-1: Percentage of Total migrants in India

Area	Temporary	Semi-permanent	Permanent
Rural	4.15 (9685689)	14.81 (34716308)	**81.04** (189082280)
Urban	**5.30** (7681017)	**19.68** (28624358)	75.01 (108021689)
Total	4.59 (17366706)	16.68 (63340666)	78.73 (297103969)

Source: Authors calculation from 2011Census data.

According to the 2011 Census, the percentage of temporary migrants was very low compared to the percentage of semi-permanent and permanent migrants in all Indian states and UTs (see Table A1). This is true for all kinds of migrants in both rural and urban areas. Temporary migration is mostly composed of unskilled labour forces with little or no education, possessing hardly any human capital. That is why they cannot afford to live in any region or place for a longer period of time. So they prefer to move for better income opportunities. The table shows that the majority of the poorly developed states of India have high permanent migration rates with low temporary and semi-permanent migration rates, such as Bihar, Jharkhand, Madhya Pradesh, Orissa, etc.

Now in Table 2, we represent the distribution of different categories of migrants on the basis of job types. The percentage distribution of temporary migrant workers according to their jobs in India and West Bengal (W.B.) is presented in the following table. Temporary migrant workers who opt for main work (work for more than 183 days), i.e., those who work for the major part of the year, are mostly found in urban areas. This is true for both India and the state of West Bengal. The proportion of temporary migrant workers is higher in rural India and West Bengal than in urban areas. The reason behind this is; as job prospect is high in urban area than rural counterparts, the distribution of main worker is high in urban than rural. Due to the non-availability of non-farm work in rural areas, more marginal workers tend to move from those areas. As a result, they attempt to relocate in search of secondary jobs for a period of time before returning home.

Table-2: Percentage Distribution of Temporary migrant workers

Area Name	Place of enumeration	Main worker	Marginal worker	Non-worker
India	**Total**	40.32	12.53	47.15
India	**Rural**	38.46	**17.34**	44.21
India	**Urban**	**42.50**	6.92	50.58
W.B	**Total**	28.39	11.21	60.39
W.B	**Rural**	20.93	**13.29**	65.78
W.B	**Urban**	**38.04**	8.53	53.43

Source: Authors calculation from 2011Census data

In this study, we focus on the types of jobs in which different types of migrants are engaged. So we have to concentrate on the distribution of main and marginal migrant workers. Using Census data, we attempt to understand the various types of jobs that these three types of migrants hold. In India, including West Bengal, the main migrant workers are mostly found among the temporary and permanent migrants.

Table-3: Percentage Distribution of Semi-permanent migrant workers

Area Name	Place of enumeration	Main worker	Marginal worker	Non-worker
India	**Total**	33.63	12.08	54.29
India	Rural	28.58	**18.26**	53.16
India	Urban	**40.05**	4.24	55.72
W.B	**Total**	19.70	11.48	68.82
W.B	Rural	12.77	**14.94**	72.30
W.B	Urban	**32.23**	5.23	62.55

Source: Authors calculation from 2011Census data

Table 3 shows the percentage distribution of semi-permanent workers on the basis of different types of jobs. For semi-permanent migrant workers, the proportion of main migrant workers in urban areas dominates the proportion of those migrant workers in rural areas. In

India, the percentage of semi-permanent main migrant workers in urban areas is 40.05%, with West Bengal accounting for 32.23%. In the rural areas, the figure stands at 28.58% in India and 12.77% in W.B. For marginal workers, the percentage of semi-permanent migrants in rural areas stands at 18.26% in India and 14.94% in West Bengal.

Table-4: Percentage Distribution of Permanent migrant workers

Area Name	Place of enumeration	Main worker	Marginal worker	Non-worker
India	**Total**	36.30	14.85	48.84
India	**Rural**	32.94	**20.44**	46.62
India	**Urban**	**42.22**	5.03	52.75
W.B	**Total**	26.57	12.91	60.52
W.B	**Rural**	19.86	**16.85**	63.29
W.B	**Urban**	**38.94**	5.65	55.41

Source: Authors calculation from 2011Census data

From table 4, we see that the percentage distribution of permanent migrant workers in India and W.B. The proportion of main permanent migrant workers is high in urban areas, i.e., 42.22% in India and 38.94% in W.B. Rural areas have a higher proportion of marginal workers than urban areas. In India, the percentage of permanent main migrant workers in urban areas is 42.22%, while in West Bengal it is 38.94%. For marginal workers in the rural area, the figure stands at 20.44% in India and 16.85% in West Bengal.

In the urban area, there is a greater prospect of jobs. As a result, any type of migrant has a better chance of finding main work in the urban area. However, because the prospect of a job is lower in rural areas, the possibility of getting main work is minimal. Hence, we see the highest percentage of marginal workers in rural areas as compared to urban areas. Among the various types of migrants, the possibility of finding subsidiary jobs is higher among permanent migrants in rural areas, and for them, it is easier to find such jobs.

4.2. Condition of the migrants: Tobit Analysis

Now we delve into the results of the tobit analysis. We ran two tobit regressions, one for each of the main job types for temporary and permanent migrants. Because, the proportion of migrants with main jobs is highest in these two categories of migrants, the proportion of temporary and permanent migrants based on their jobs is used as the dependent variable in this analysis, while the independent variables include monthly per capita income, crime rate, unemployment rate, gross value-added economic activity, and a locational parameter.

The monthly per capita expenditure is our first variable. The consumption data is provided by the NSSO. The NSSO 67th round (2010-11) appears to be more appropriate for the census year. The monthly per capita consumption expenditure reflects an individual's economic prosperity.

Another significant variable is cognizable crime rate. This information was gathered from Crime Bureau Reports for the relevant years. Simpson (2017) takes this into account in an international migration study. She did, however, use it as a negative push factor at the start. We used it as a deterrent factor at the destination in our study. A high crime rate should deter a nearby migrant from choosing the location of their destination. The National Bureau of Crime collects and disseminates crime data in India. The number of FIRs registered against a crime is used to collect crime data. If multiple crimes are registered in a single FIR case, only the one attracting the most severe punishment is counted. The cognizable crime rate is calculated using the 2011 Census data.

Another factor is the unemployment rate. This information was gathered from the 2011-2012 NSSO Employment and Unemployment Survey Reports. Unemployment occurs when a person actively looking for work is unable to find work. It serves as a barometer of the economy's health. The unemployment rate, which is the number of unemployed people divided by the number of people in the labour force, is the most commonly used measure of unemployment.

The following variable is Gross value added economic activity (GVA). This information was gathered from the National Statistical Office (NSO), Ministry of Statistics and Program Implementation of the Government of India (2010-2011). GVA is the value that producers have added to the goods and services they have purchased. When producers sell their wares, their income should exceed their costs, and the difference is the value they have added. The Gross Value Added (GVA) of a country is an important economic indicator. It depicts the overall state of the economy and provides a clear picture of the state of economic activity from the producers' or supply-side perspective. It assesses each individual producer's contribution to the economy.

Finally, we consider the location of various types of migrants. We define location as either rural or urban. The Census Bureau's urban-rural classification is a geographic delineation that identifies both individual urban areas and the nation's rural areas. The Census Bureau defines urban areas as densely developed areas that include residential, commercial, and other non-residential urban land uses. Following each decennial census, the Census Bureau delineates urban areas by applying specific criteria to decennial census and other data. The term "rural" refers to all population, housing, and territory that is not part of an urban area.

First we delve into the analysis of permanent main migrant workers.

Table-5: For Main Permanent Migrant workers

```
Tobit regression                                  Number of obs     =         70
                                                  LR chi2(1)        =       5.46
                                                  Prob > chi2       =     0.0195
Log likelihood = -274.78748                       Pseudo R2         =     0.0098

------------------------------------------------------------------------------
       MainP |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 AverageMPCE |   .0046852   .0019667     2.38   0.020     .0007618    .0086087
       _cons |   31.57445   4.592842     6.87   0.000     22.41198    40.73692
-------------+----------------------------------------------------------------
      /sigma |   12.26313   1.036423                      10.19552    14.33073
------------------------------------------------------------------------------
             0  left-censored observations
            70     uncensored observations
             0 right-censored observations
```

Source: Authors calculation from 2011Census data.
Main P=Percentage of main worker for permanent migrants and Average MPCE=Average monthly per capita consumption expenditure.

The results depend on the types of jobs and the types of migrants. In the case of permanent migrants, the proportion of main workers is solely determined by economic factors as measured by the average MPCE. The higher the economic opulence, the greater is the possibility of marginal jobs. As the migrants have shifted their home to another region, they must be sure about their earnings to maintain their livelihood. So the economic factor plays a vital role here.

Now we come to the temporary migrants. Again, for the temporary migrants, economic factor plays significant role for main jobs. The GVA is negatively related to the main jobs. Participation in main jobs is positively related to a household's economic prosperity. The unemployment rate is negatively related to the participation in the main jobs for temporary migrants.

Table-6: For Main Temporary Migrant workers

```
Tobit regression                                  Number of obs     =         70
                                                  LR chi2(3)        =      13.64
                                                  Prob > chi2       =     0.0034
Log likelihood = -259.92995                       Pseudo R2         =     0.0256

------------------------------------------------------------------------------
MainTempor~y |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 AverageMPCE |   .0053443   .0016662     3.21   0.002     .0020186    .0086701
         GVA |  -7.86e-07   3.20e-07    -2.46   0.017    -1.42e-06   -1.48e-07
UnemployRate |  -.6166237   .2724012    -2.26   0.027    -1.160339   -.0729086
       _cons |   36.33971   3.766438     9.65   0.000     28.82187    43.85755
-------------+----------------------------------------------------------------
      /sigma |   9.917953   .8382195                       8.24486    11.59105
------------------------------------------------------------------------------
             0  left-censored observations
            70     uncensored observations
             0 right-censored observations
```

Source: Authors calculation from 2011Census data.

Main Temporary=Percentage of main worker for temporary migrants, Average MPCE=Average monthly per capita consumption expenditure, GVA=Gross Value-Added Economic Activity and Unemploy Rate= Rate of unemployment.

5. Conclusion:

In the present study, we have taken up the issue of livelihood. We have found that the migrants can be divided into three categories: permanent, semi-permanent and temporary. The Census classified two types of jobs: main and marginal. These again depend on the number of working days involved. We then selected a set of covariates and correlated them with the proportion of migrants.

We find that the correlation is directly related to the types of jobs. Main jobs are always determined by economic prospects. They are high if the economic variables are high. The greater the involvement in the main jobs, the lower the involvement in subsidiary jobs. Again, if the families have some income from small businesses, their participation in the labour market declines. Law and order is an important deterrent to a migration decision.

The government's policy depends on improving the welfare of the migrants. If the migrants get a good income from a certain type of job, they will rarely venture into other subsidiary activities to mop up their income. This would improve the leisure time of workers and enhance their quality of life.

The impact of the paper is to include the rule of law factors within the migrant's job opportunities. It is easily seen that not only economics but also the maintenance of law and order can manifest itself in better job and income possibilities.

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Appendix

Table A1: State wise Distribution of Migrant Types

States	**Total /Rural /Urban**	**Temporary Migrants**	**Semi-permanent Migrants**	**Permanent Migrants**	**Row Sum**
Andaman & Nicobar Islands	Total	8.96	22.26	68.78	100
	Rural	8.94	20.77	70.29	100
	Urban	8.99	24.99	66.02	100
Andhra Pradesh	Total	4.56	18.64	76.80	100
	Rural	4.17	16.58	79.25	100
	Urban	5.17	21.86	72.97	100
Arunachal Pradesh	Total	6.63	24.43	68.93	100
	Rural	7.40	22.97	69.63	100
	Urban	5.40	26.78	67.81	100
Assam	Total	3.60	15.77	80.63	100
	Rural	3.48	15.48	81.04	100
	Urban	4.06	16.86	79.09	100
Bihar	Total	2.21	12.88	84.92	100
	Rural	1.99	12.50	85.51	100
	Urban	3.55	15.28	81.17	100
Chandigarh	Total	5.27	19.05	75.68	100
	Rural	10.62	27.98	61.40	100
	Urban	5.10	18.77	76.12	100
Chhattisgarh	Total	4.42	16.18	79.40	100
	Rural	4.15	14.73	81.12	100
	Urban	5.01	19.34	75.65	100
Dadra and Nagar Haveli	Total	14.60	35.70	49.71	100
	Rural	16.96	31.71	51.32	100
	Urban	13.46	37.61	48.93	100
Daman and Diu	Total	16.03	37.84	46.13	100
	Rural	9.48	25.87	64.66	100
	Urban	17.12	39.83	43.05	100
Delhi	Total	4.19	16.53	79.28	100
	Rural	5.22	21.05	73.73	100
	Urban	4.17	16.42	79.42	100
Goa	Total	7.94	18.88	73.18	100
	Rural	7.28	16.73	75.98	100
	Urban	8.34	20.17	71.49	100
Gujarat	Total	5.26	18.27	76.47	100
	Rural	5.31	15.61	79.08	100
	Urban	5.21	20.90	73.88	100
Haryana	Total	5.49	16.71	77.80	100
	Rural	5.73	13.78	80.49	100
	Urban	5.22	20.08	74.70	100
Himachal Pradesh	Total	5.63	16.98	77.39	100
	Rural	5.31	15.40	79.28	100
	Urban	7.30	25.27	67.43	100
Jammu and Kashmir	Total	6.33	15.80	77.87	100
	Rural	6.51	14.40	79.09	100
	Urban	5.95	18.73	75.33	100
Jharkhand	Total	2.86	15.02	82.12	100
	Rural	2.46	14.08	83.46	100
	Urban	3.71	17.04	79.25	100
Karnataka	Total	5.83	20.35	73.83	100
	Rural	5.21	17.25	77.54	100
	Urban	6.66	24.56	68.78	100

Kerala	Total	5.59	17.97	76.44	100
	Rural	5.06	16.80	78.14	100
	Urban	6.25	19.44	74.32	100
Lakshadweep	Total	29.52	40.00	30.48	100
	Rural	25.30	42.30	32.39	100
	Urban	30.71	39.36	29.94	100
Madhya Pradesh	Total	4.26	15.86	79.89	100
	Rural	3.97	14.74	81.29	100
	Urban	4.85	18.12	77.02	100
Maharashtra	Total	6.12	18.65	75.23	100
	Rural	6.37	16.65	76.97	100
	Urban	5.87	20.67	73.46	100
Manipur	Total	4.39	17.82	77.79	100
	Rural	4.50	17.87	77.63	100
	Urban	4.22	17.72	78.06	100
Meghalaya	Total	5.91	20.18	73.91	100
	Rural	5.63	18.90	75.48	100
	Urban	6.46	22.66	70.89	100
Mizoram	Total	5.43	20.38	74.20	100
	Rural	7.22	20.42	72.36	100
	Urban	4.51	20.35	75.14	100
Nagaland	Total	9.29	24.45	66.26	100
	Rural	11.91	26.83	61.27	100
	Urban	6.86	22.23	70.92	100
Odisha	Total	4.26	16.57	79.18	100
	Rural	3.83	15.18	80.99	100
	Urban	5.66	21.16	73.18	100
Puducherry	Total	5.45	19.59	74.96	100
	Rural	4.88	18.55	76.57	100
	Urban	5.71	20.08	74.21	100
Punjab	Total	4.88	14.81	80.30	100
	Rural	4.76	13.04	82.20	100
	Urban	5.04	17.24	77.71	100
Rajasthan	Total	4.75	15.70	79.55	100
	Rural	4.72	14.76	80.52	100
	Urban	4.85	18.25	76.90	100
Sikkim	Total	8.85	22.44	68.71	100
	Rural	9.81	21.41	68.79	100
	Urban	7.18	24.23	68.59	100
Tamil Nadu	Total	5.53	20.17	74.30	100
	Rural	4.92	17.76	77.31	100
	Urban	6.03	22.20	71.77	100
Tripura	Total	5.31	13.28	81.41	100
	Rural	6.03	13.06	80.91	100
	Urban	3.93	13.70	82.37	100
Uttar Pradesh	Total	3.20	13.49	83.31	100
	Rural	2.56	11.82	85.62	100
	Urban	4.96	18.08	76.96	100
Uttaranchal	Total	6.49	19.11	74.40	100
	Rural	6.35	17.06	76.59	100
	Urban	6.73	22.62	70.64	100
West Bengal	Total	3.20	13.87	82.93	100
	Rural	2.92	13.67	83.41	100
	Urban	3.69	14.21	82.10	100
ALL INDIA	Total	4.59	16.68	78.73	100
	Rural	4.15	14.81	81.04	100
	Urban	5.30	19.68	75.01	100

Source: Authors calculation from 2011Census data.

[1] These distinctions between various types of migrants are new to the literature. Though some people are used to two fold migration, any three fold category is absent. We have used the three fold category to understand the relationship between migration and its determinants.

[2] The Tobit model can be generalized to take account of censoring both from below and/or from above. It can also take account of interval censored data.

[3] Table A1 in the appendix presents the percentage distribution of temporary, semi-permanent and permanent migrants in all states of India.