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KUNAL KESHRI\* - RAM. B. BHAGAT\*

## **Temporary and seasonal migration in India**

### 1. INTRODUCTION

Migration from one area to another in search of improved livelihoods is a key feature of human history (Srivastava and Sasikumar, 2003). These moves might be of short to long distance as well as of short to long duration (Kosinski and Prothero, 1975; Massey, 1990; Stone, 1975). It is evident from the available literature that there is a widespread occurrence of temporary and seasonal migration for employment in developing countries (Brauw, 2007; Deshingkar and Farrington, 2006; Hugo, 1982; Lam *et al.*, 2007; Mberu, 2006; Yang, 1992). Temporary migration is also one of the most significant livelihood strategies, adopted among the poorest section in rural India, predominantly in the form of seasonal mobility of labour (Breman, 1978; Breman, 1996; Deshingkar and Farrington, 2009a; Deshingkar and Start, 2003; Haberfeld *et al.*, 1999; Mosse *et al.*, 2005; Rao and Rana, 1997; Rogaly, 1998; Rogaly *et al.*, 2001).

Temporary migration, often used interchangeably with circular, seasonal, short-term and spontaneous migration, has been a subject of much discourse. It is a sort of mobility where the economic activity of a person is moved but not the usual residence (Bilsborrow *et al.*, 1984). Researchers and statisticians differ on the definition of temporary migration in respect to the duration of stay. However there is an agreement on the fact that the temporary but uninterrupted absence from the place of origin is an important condition for temporary migration (Hugo, 1982; Zelinsky, 1971). In essence, temporary migration is a move made for a short period of time with the intention of returning to the place of usual residence. An important group of circular migrants consists of seasonal migrants, those who combine activities in several places according to seasonal labour requirements. Six months is generally used as the maximum duration of a temporary move (Mberu, 2006; Pham and Hill, 2008; Srivastava and Sasikumar, 2003).

Temporary migration is also perceived as a transitional step before a permanent change of residence (Pham and Hill, 2008). Moreover, contemporary trends indicate that a growing number of migrants choose to retain strong

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links with their villages because of social ties and a long term intention to look for a better life in the village (Bhagat, 2010; Deshingkar, 2006; Deshingkar *et al.*, 2008; Ha *et al.*, 2009; Srivastava and Shasikumar, 2003).

In the economy of rural households of developing countries, temporary migration plays an important role, not only by securing household survival but also by providing income to household members. Households diversify their economic activities outside the traditional agricultural sector to secure alternative sources of income by sending out members to work in urban areas for a short duration (Deshingkar and Farrington, 2009a; Pham and Hill, 2008). Yang and Guo (1999) have found that in rural areas, men's decision to migrate is mainly shaped by community level factors whereas for rural women, temporary labour migration is predominantly determined by individual characteristics. In urban areas, however, individual as well as household factors seem to determine temporary migration (Yang, 1992).

## 2. TEMPORARY AND SEASONAL MIGRATION IN INDIA

Internal migration in India has been low historically (Davis, 1951) and migration statistics up to the early 1990s show a further decline in mobility (Kundu and Gupta, 1996). However, National Sample Survey figures for 1992-93 and 1999-2000 suggest that there is an increase in mobility during the last decade (Srivastava and Sasikumar, 2003). In addition, census results show that labour mobility (migration due to employment or work) has also increased during the same period (Bhagat, 2010). Temporary and seasonal migration is an important form of labour mobility in a country with an increasing shift of labour force from agriculture to industry and the tertiary sector.

Large-scale temporary intra and inter-State mobility of labour is observed in various parts in India (Breman, 1996; Deshingkar and Farrington, 2009a; Mosse *et al.*, 2005). For instance, women's labour mobility from Bihar and some parts of West Bengal to the Bardhaman, Murshidabad and Medinipur districts of West Bengal in the transplanting season (known as *Boro* in local language) as well as the harvesting season (known as *Aman*) of paddy crops (Rogaly *et al.*, 2001) and the movement of tribal groups from Maharashtra, Madhya Pradesh, Rajasthan, and Gujarat to work in sugar mills have been documented in the literature (Haberfeld *et al.*, 1999; Mosse *et al.*, 2002; Sharma *et al.*, 2009). With the stalling of the rural economy people have begun to move from rural areas, particularly in the lean season of agriculture, to nearby or distant urban areas for employment in construction, the garment industry or in the informal sector as a street vendor, rickshaw puller, domestic helper, or waiter and labourer in small hotels (Breman, 1994; Deshingkar and Farrington, 2009a; Haberfeld *et al.*, 1999; Vijay, 2005). Seasonal labour

migration is an essential part of the lives and livelihoods of the poorest sections of rural India and its significance is growing (Mosse *et al.*, 2005). For example, in Tamil Nadu, landless agricultural labourers who are trapped in the debt bondage and who belong to lower social strata, i.e. scheduled tribes and scheduled castes, migrate to the sugar cane industry centres (Bird and Deshingkar, 2009; Gnanou, 2008). Moreover, long-term migration appears to be dominated by males but in the case of seasonal migration, which is more frequent among the poorest of the poor and the tribal population, women and men migrate in almost equal numbers (Rao, 2005).

For India the two most important sources of migration data are the decennial Census and the National Sample Survey. Although the census covers the entire population, it fails to provide information on short-term and temporary migration (Bhagat and Mohanty, 2009; Kundu, 2009; Skeldon, 2002). On the other hand, the National Sample Survey (NSS) collected information on employment-related temporary and short-term migration in year 1999-2000.

Despite a number of studies based on the field surveys of individual researchers, there is dearth of literature that covers a large population and presents a generalised analysis of temporary migration in India. Therefore, there is a need to use large scale survey data to be able to generalize the findings on temporary and seasonal migration as well as to understand the regional variations and association with poverty and illiteracy. In this regard the most recent available migration data of the 55th round of NSS (1999-2000) provides a good opportunity to explore the regional and socio-economic profile of the temporary mobile population moving in search of employment. The present study more specifically presents the intensity of migration, the regional variations, the rural-urban differentials and, most importantly, the socio-economic characteristics of temporary migration in India. We hypothesise that poor and illiterates are more prone to migrate temporarily or seasonally. As temporary migration in India is influenced by the seasons, the term “temporary” and “seasonal” migration are overlapping and used interchangeably in this analysis.

### 3. DATA AND METHODS

The present study utilized the Unit Level Data of the 55th round of National Sample Survey (NSS), which was carried out in 1999-2000 by the National Sample Survey Organization (NSSO) - a wing of the Indian Government, Ministry of Statistics and Programme Implementation. The National Sample Survey is a nationally representative, large-scale and multi-round survey. The NSS collects socio-economic information annually and data on migration in India as part of its “Employment and Unemployment” Schedule every five years. This survey was conducted in all the States and Union

Territories (UTs) of India<sup>1</sup>. In a first step the central sample at the all-India level, 10,384 first stage units of the entire Indian Territory (6,208 villages and 4,176 urban blocks) were selected for survey for canvassing schedule 10<sup>2</sup>. This survey covered a sample of 120,578 households (71,417 in rural and 49,161 in urban areas) and covered a population of 371,188 persons in the rural sector and 225,500 in the urban sector living in these households. The reference period of the survey was July 1<sup>st</sup>, 1999 to June 30<sup>th</sup>, 2000 (NSSO, 2001).

Information on migration particulars was collected for each member of the sample households through the employment-unemployment schedule. Questions regarding the temporary migration of people were asked to the head of the household. In this survey, the *usual place of residence (UPR)* of a person was defined as a place (village/town) where the person had stayed continuously for a period of at least six months or more. The *last place of usual residence* was defined as a place (village/town) where the migrant had stayed continuously for a period of six months or more before moving to the place of enumeration. If the place of enumeration was different from the last usual place of residence then the person was termed a migrant. Furthermore, a household member who stayed in the sample village/town for at least six months and who during the 365 days preceding the date of survey stayed away from the village or town (usual place of residence) for 60 days or more for either employment or in search of employment then this person was termed a temporary and seasonal migrant. In the survey, temporary and seasonal migration were considered on the basis of the usual place of residence of the respondent. It is not possible to identify the place of destination (rural/urban) of a temporary or seasonal migration.

Migration rates were calculated to study the intensity of migration. Migration rates for any specific category of persons of a State for a specified period of time since migration was estimated by dividing the number of persons migrating of that specific category in that region and during the specified period of time by 1000 persons of the specific category in that region. Migration rates were calculated separately for rural and urban areas because of the distinct nature of migration from rural and urban places of origin. In several instances smaller States and Union Territories were not considered due to small sample size; however they were considered for the all-India level analysis.

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<sup>1</sup> India is a Union of States. States are the members of the federal system and share a distribution of power with the Centre. They are governed by the elected state governments. Union Territories, on the other hand, are mainly the acquired territories after independence by the Union of India and directly administered by the Central government.

<sup>2</sup> In the 55th round a sample of households was revisited after a gap of three months and an abridged version of main schedule was canvassed (Schedule 10.1) including migration-related questions. For analysis we have considered sample of first visit only which was based on the Schedule 10.

All the analysis except the State-wise was conducted using the working age population (15-64 year)<sup>3</sup> since temporary migration is mainly employment-related (Yang and Guo, 1999).

The variable Monthly per Capita Consumer Expenditure (MPCE) Quintile distribution was obtained by dividing the total household expenditure by the household size and then distributing the households into five equal quintiles. The MPCE quintiles were also constructed for rural and urban areas. They were defined as lowest, lower, medium, higher and highest quintiles. This procedure was also used by Kundu and Sarangi (2007) to study the relationship between poverty and migration among urban dwellers.

We fitted various binary logistic regression models to estimate the likelihood of a person being a seasonal migrant. The dependent variable was binarily coded where “1” is a seasonal migrant and “0” is other.

A growing body of research has shown that household income is a significant predictor of temporary migration (Kundu and Sarangi, 2007; Yang, 1992). But, in India, income-related information is not collected in sample surveys. However, the NSS collects information regarding the household consumer expenditure per month, which is a good measure of the economic condition of the households (Kundu and Sarangi, 2007). The MPCE quintiles were taken as a proxy for economic status of the household, which were categorised into low (reference category), medium and high groups for logistic regression analysis.

Educational attainment is another important indicator of socio-economic development and found to be associated with temporary migration (Yang, 1992; Yang and Guo, 1999). It was classified into four broad categories namely illiterate (reference category), literate but below middle including primary level, middle but below secondary and secondary or above.

A caste is an endogamous social group in India where status is determined by birth. Ranking of the caste is based on four-fold Varna categories with Brahmins at the top followed by Warriors (martial community), Vaishyas (trading community) and Shudras (the untouchables) at the bottom (Bhagat, 2006). After independence the Indian Constitution declared certain castes and tribes as scheduled castes (SCs) and scheduled tribes (STs) to create a system of affirmative action in employment and education for these castes. Other backward classes (OBCs) are a group of castes that are also supposed to be backward in respect to socio-economic development, but their position is better than STs and SCs. Privileges have been granted to the OBCs since 1990. Caste is perceived to have an important relationship with the temporary migration particularly in the countryside (Gnanou, 2008; Haberfeld et al., 1999; Mosse et al., 2005; Sundari, 2005; Vijay, 2005). STs, SCs and OBCs represent approximately 9, 20 and 36 percent

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<sup>3</sup> The cross-classification of age groups and seasonal migration shows that around 20 percent of seasonal migrants fall in the 0-14 age group. But we assumed that seasonal migration is predominantly employment related and, therefore, we considered the working age population (15-64) for the analysis. However, for the State and UT estimates the entire sample was considered.

of the Indian population. The remaining caste groups are known to be not backward and categorized as ‘others’, who do not belong to either STs, SCs and OBCs, in the logistic regression model. For the logistic regression analyses, scheduled tribes were the reference category. Religion was also taken as a control variable with three categories namely Hindu (reference category), Muslim and Others. The last group incorporated remaining religious groups.

Age and sex are also considered important predictors of temporary migration ([Djamba et al., 1999](#); [Yang, 1992](#); [Yang and Guo, 1999](#)). Age (in years) was introduced in the analysis as a continuous variable. Males were the reference group. Place of residence was also included in the model (with rural as the reference category). The migration status regarding permanent migration was included in the models with non-migrant status as the reference category. A variable ‘Region’ with six categories: North (reference category), Central, East, North-East, West and South was introduced in the model to include the effect of States and UTs (see Appendix Table A). The States and UTs were grouped according to geographical zones. The available literature shows a marked difference in demographic behaviour between north, south and east India ([Dyson and Moore, 1983](#)).

Six different sets of logistic regression models were fitted to analyse the factors of temporary and seasonal migration. In model I and II the entire sample (rural as well as urban) was considered. Monthly per Capita Consumer Expenditure Quintiles (combined for rural and urban areas) and educational attainment were taken for model I and both of these were also considered in model III and V in which regression was run for rural and urban samples separately. In model II along with MPCE quintiles and education, caste, religion, age, sex, place of residence, migration status and region were taken as explanatory variables and the same set of variables (except place of residence) was included in model IV (rural sample) and model VI (urban sample) to assess the impact of these factors on temporary and seasonal migration. For the statistical estimation appropriate weights were used.

#### 4. RESULTS

##### 4.1 *Intensity and pattern of temporary and seasonal migration in India*

India is the second most populous country in the world with vast geographical as well as socio-economic variations which are reflected in the pattern of temporary and seasonal migration. The number of temporary migrants is highest in Uttar Pradesh (1,714,863) followed by Madhya Pradesh (1,513,103), Maharashtra (917,842), Andhra Pradesh (916,744) and Bihar (900,307) (Table 1). Figure 1 presents the regional variation of temporary migration in India. Temporary migration rates are very high in the States of Madhya Pradesh and Kerala (16-20 per thousand), followed by the States of Karnataka, Andhra

Pradesh, Gujarat, Punjab, Haryana and West Bengal with moderate levels of migration (11-15 migrants per thousands). Other States like Uttar Pradesh, Bihar, Maharashtra, Tamil Nadu and Orissa have lower levels of temporary and seasonal migration rates. With the exception of Nagaland, all North Eastern States have low migration rates.

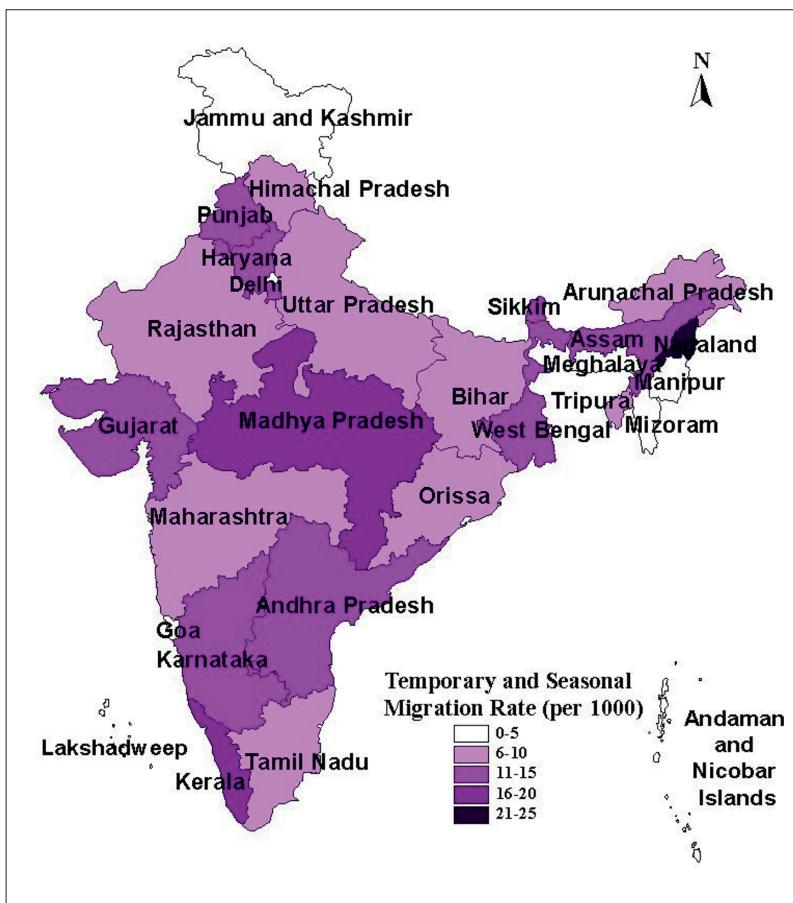
*Table 1 – Total population, temporary and seasonal migrants and temporary and seasonal migration rate (migrants per thousand), Indian States and union territories, National Sample Survey (NSS), 1999-2000*

States and Union Territories	Total Population (in thousands)	Temporary and seasonal migrants (in thousands)	Temporary and seasonal migration rate (per 1,000)
Andhra Pradesh	72,572	916.7	12.6
Arunachal Pradesh	663	7.1	10.6
Assam	21,203	293.4	13.8
Bihar	88,664	900.3	10.2
Goa	1,242	7.1	5.7
Gujarat	43,453	601.7	13.8
Haryana	18,610	249.6	13.4
Himachal Pradesh	5,321	53.5	10.1
Jammu and Kashmir	6,937	26.8	3.9
Karnataka	47,546	664.8	14.0
Kerala	26,685	479.2	18.0
Madhya Pradesh	74,568	1,513.1	20.3
Maharashtra	88,109	917.8	10.4
Manipur	1,458	3.5	2.4
Meghalaya	1,698	8.8	5.2
Mizoram	466	0.6	1.3
Nagaland	652	14.2	21.8
Orissa	34,228	355.9	10.4
Punjab	21,335	336.4	15.8
Rajasthan	45,357	425.1	9.4
Sikkim	425	7.1	16.6
Tamil Nadu	56,268	524.8	9.3
Tripura	2,626	20.3	7.7
Uttar Pradesh	158,400	1,714.9	10.8
West Bengal	70,602	783.5	11.1
Andaman and Nicobar Islands	281	0.8	2.7
Chandigarh	733	8.4	11.4
Dadra and Nagar Haveli	159	1.5	9.7
Daman and Diu	106	1.9	18
Delhi	12,008	25.6	2.1
Lakshadweep	44	0.5	12.3
Pondicherry	786	7.3	9.3
India	903,206	10,872.3	12.0

*Source:* 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

*Note:* The table is based on all ages.

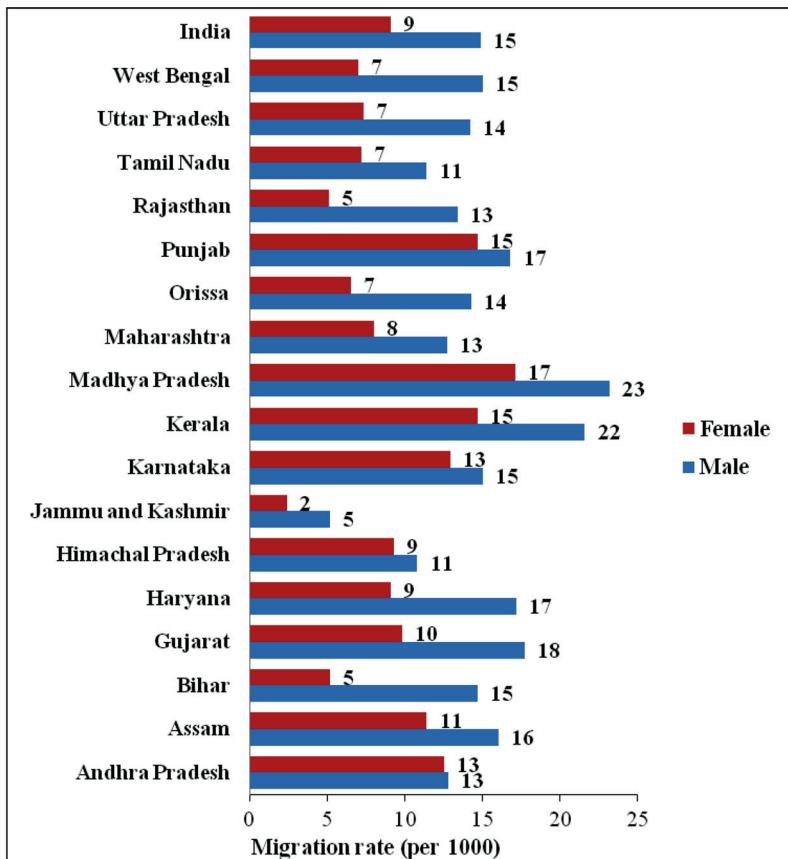
Figure 1 – *Temporary and seasonal migration rate (migrants per thousand) in India, National Sample Survey, 1999-2000*



Source: 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

At the national level migration rates are higher among men (15 per 1000) compared to women (9 per 1000). Figure 2 portrays the gender differentials in temporary migration in India and its major States. Wide gender differentials in migration rates do exist across States. It is to be noted that in Bihar, Rajasthan, Orissa, Gujarat and West Bengal temporary and seasonal migration rates are very high among males compared to females. However, some Central and South Indian States, like Madhya Pradesh, Maharashtra, Tamil Nadu and Kerala, show moderate differentials by gender whereas in Andhra Pradesh male and female migration rates are almost the same.

Figure 2 – *Gender differentials in temporary and seasonal migration rate (migrants per thousand) in major Indian States, National Sample Survey, 1999-2000*



Source: 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

Table 2 shows temporary and seasonal migration rates by place of residence across the major States of India. These are significantly higher in rural areas (12.5) than in urban areas (10.6). In Gujarat the temporary migration rate in rural areas is more than six times higher than in urban areas. Madhya Pradesh also witnessed an almost three times higher temporary and seasonal migration rate in rural areas compared to urban areas. Moreover, Orissa, Karnataka, Maharashtra, Punjab and West Bengal show comparatively higher migration in rural areas. Apart from this, there are some States in which we barely find any rural-urban differentials. For instance, in Bihar, Himachal Pradesh, Rajasthan and Tamil Nadu, temporary and seasonal migration rates are almost the same in rural and

Table 2 – *Temporary and seasonal migration rate (migrants per thousand) by place of residence, major Indian States, National Sample Survey (NSS), 1999-2000*

State	Temporary and seasonal migration rate (per 1,000)		
	Rural	Urban	Total
Andhra Pradesh	11.7	15.0	12.6
Assam	13.2	18.7	13.8
Bihar	10.3	9.1	10.2
Gujarat	18.9	2.9	13.8
Haryana	12.5	15.8	13.4
Himachal Pradesh	10.0	10.3	10.1
Jammu and Kashmir	4.2	2.7	3.9
Karnataka	15.5	9.9	14.0
Kerala	18.3	17.1	18.0
Madhya Pradesh	23.8	8.4	20.3
Maharashtra	12.0	7.9	10.4
Orissa	11.7	3.8	10.4
Punjab	16.7	13.8	15.8
Rajasthan	9.5	9.1	9.4
Tamil Nadu	9.8	8.5	9.3
Uttar Pradesh	8.8	18.9	10.8
West Bengal	11.8	8.4	11.1
India	12.5	10.6	12.0

Source: 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

Note: The Table is based on all ages.

urban areas. Interestingly, there are some States where the urban temporary migration rate is higher than the rural ones. In Uttar Pradesh, for example, the seasonal migration rate of urban areas is more than twice the one of rural areas and similar results are also found in Andhra Pradesh, Haryana and Assam.

Using Monthly per Capita Expenditure Quintiles as an economic indicator, we have tried to unravel the question whether temporary mobility is high among the poor or not. Table 3 displays the rural-urban differentials in temporary and seasonal migration rates by MPCE quintiles. Results suggest that the migration rate is very high among persons belonging to lowest MPCE quintile. Whereas in rural areas migration rates increase for lower income groups, in urban areas a reverse trend can be observed. Temporary migration rates decrease among higher income groups. Rural-urban differences diminish as one moves towards the highest expenditure quintile.

*Table 3 – Temporary and seasonal migration rate (migrants per thousand) in India according to monthly per capita consumer expenditure (MPCE) by place of residence (age-group, 15-64 years), India, National Sample Survey, 1999-2000*

MPCE quintiles	Rural	Urban	Total
Lowest	24.9	9.6	23.0
Lower	16.6	9.9	16.0
Medium	16.7	12.5	13.1
Higher	13.6	11.4	13.1
Highest	13.9	13.2	13.4
Total	16.8	11.5	15.4

*Source:* 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

Temporary migration rates of different caste groups vary considerably: very high values (31.9 per thousand) are observed for schedules tribes. The rate is almost twice that for scheduled castes and the total population. Further results show that in rural areas, STs have higher rates of temporary migration (34.7) followed by SCs (18.2) whereas in urban areas other backward classes are found to be more mobile (Table 4).

*Table 4 – Temporary and seasonal migration rate (migrants per thousand) in India according to caste by place of residence (age-group, 15-64 years), India, National Sample Survey, 1999-2000*

Caste	Rural	Urban	Total
Scheduled tribes	34.7	10.3	31.9
Scheduled castes	18.2	10.2	16.7
Other backward classes	13.9	14.8	14.1
Others	13.3	9.9	12.0
Total	16.8	11.5	15.4

*Source:* 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

Results suggest that the proportion of temporary and seasonal migrants is higher among illiterates since migration rates decrease with increasing educational status. However, the temporary migration rate is quite high among illiterates in rural areas compared to urban areas. On the other hand, in urban areas no linear relationship is found between education and temporary migration and the highest temporary and seasonal mobility is observed among the below secondary educated persons (Table 5).

*Table 5 – Temporary and seasonal migration rate (migrants per thousand) in India according to caste by place of residence (age-group, 15-64 years), India, National Sample Survey, 1999-2000*

Educational status	Rural	Urban	Total
Illiterate	17.9	10.6	16.9
Literate but below middle	16.7	10.0	15.0
Middle but below secondary	14.0	15.1	14.4
Secondary or above	15.6	10.8	13.1
Total	16.7	11.4	15.3

*Source:* 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

#### *4.2 Factors associated with temporary and seasonal migration in India*

Bi-variate results show that overall people with low educational attainment, who are poor and belonging to lower social strata, are more prone to migrate temporarily. In order to assess whether these observations hold true after adjusting for the other socio-economic, demographic and geographical factors, we fitted binary logistic regression models. The percent distribution of co-variates used in the multivariate analysis is provided in Table 6. Multivariate results show that for model I, a statistically significant negative relationship is found between expenditure groups (MPCE tertiles) and seasonal migration. This observation implies that poor people are more likely to migrate seasonally or temporarily (Table 7). Similarly, with increasing educational attainment the chances of migrating seasonally or temporarily decrease. This relationship does not change in Model II even after controlling for caste, religion, age, sex, place of residence, migration status and region. The caste group is found to be a significant predictor of seasonal migration as scheduled tribes are two times more likely to migrate seasonally compared to SCs, OBCs and other caste groups. Persons of other religions are more likely to migrate than Hindus and Muslims. Furthermore, the likelihood of temporary migration declines with increasing age. Results also suggest that men have higher odds of migrating than women. Place of residence and migration status independently affect the temporary and seasonal migration as rural people have higher probabilities to migrate seasonally compared to their urban counterparts. We also observe a positive and significant association between permanent migration status and temporary migration. Apparently people from the Central Region are more likely to migrate temporarily followed by the Southern Region compared to other regions.

Table 6 – *Percent distribution of the covariates used in logistic regression analysis, India and States, National Sample Survey, 1999-2000*

Covariates	Percentage
<i>MPCE tertile</i>	
Low	29.0
Medium	33.1
High	37.9
<i>Educational attainment</i>	
Illiterate	41.4
Literate but below middle	21.4
Middle but below secondary	15.6
Secondary or above	21.7
<i>Caste</i>	
Scheduled tribes	8.7
Scheduled castes	19.2
Other backward classes	35.6
Others	36.6
<i>Religion</i>	
Hindu	82.9
Muslim	11.3
Others	5.8
<i>Mean age (in years)</i>	33.3
<i>Sex</i>	
Male	50.9
Female	49.1
<i>Place of residence</i>	
Rural	72.7
Urban	27.3
<i>Migration status</i>	
Non-migrant	61.4
Migrant	38.6
<i>Region</i>	
North	12.0
Central	23.9
East	20.9
Northeast	3.4
West	15.3
South	24.5
Sample size (N)	359,505

Source: 55<sup>th</sup> National Sample Survey 1999-2000, unit level data.

The results of models III and IV (in which the rural sample was considered for logistic regression) are more or less similar to those of models I and II, respectively. Nonetheless, rural people from the Western Region were significantly more likely to migrate temporarily. In sum, results suggest that in rural areas persons belonging to lower income groups and scheduled tribes,

who are illiterate, male, migrants, and of higher/older age, have a higher probability to migrate temporarily.

Results of the models V and VI based on the urban sample are quite different. For instance, with increasing economic well-being chances of temporary migration increase. This condition remains almost similar even after controlling for other socio-economic and migration-related variables. Furthermore, the relationship between educational attainment and temporary migration is not linear in either model, which is in sharp contrast to the result of rural areas. Persons with a middle but below secondary level education have the highest probability to migrate seasonally or temporarily. In contrast to rural areas, caste has not been found to be significantly associated with temporary and seasonal migration in urban areas except the OBCs, which have shown a higher likelihood to migrate. The urban inhabitants of the North Eastern Region are more likely to migrate whereas people from Western Region are less likely to migrate compared to other regions.

*Table 7 – Results of logistic regression analysis using various models for the determinants of temporary and seasonal migration (age-group, 15-64 years), India, National Sample Survey, 1999-2000*

Covariates	All (N=359,505)		Rural (N=215,849)		Urban (N=143,656)	
	Model I	Model II	Model III	Model IV	Model V	Model VI
<i>MPCE tertile</i>						
Low®	1.00	1.00	1.00	1.00	1.00	1.00
Medium	0.74***	0.83***	0.75***	0.83***	1.33***	1.39***
High	0.68***	0.86***	0.63***	0.75***	1.39***	1.48***
<i>Educational attainment</i>						
Illiterate®	1.00	1.00	1.00	1.00	1.00	1.00
Literate but below middle	0.94*	0.80***	0.98	0.79***	0.89	0.84*
Middle but below secondary	0.93*	0.73***	0.85**	0.62***	1.32***	1.24**
Secondary or above	0.89**	0.71***	1.00	0.69***	0.88*	0.80**
<i>Caste</i>						
Scheduled tribes®		1.00		1.00		1.00
Scheduled castes		0.52***		0.53***		1.06
Other backward classes		0.46***		0.42***		
Others		0.44***		0.44***		1.03
<i>Religion</i>						
Hindu®		1.00		1.00		1.00
Muslim		0.99		1.05		0.90
Others		1.25***		1.35***		1.13
<i>Sex</i>						
Male®		1.00		1.00		1.00
Female		0.34***		0.29***		0.53***
<i>Place of residence</i>						
Rural®		1.00				
Urban		0.75***				

...Cont'd...

TEMPORARY AND SEASONAL MIGRATION IN INDIA

Table 7 – *Cont'd*

Covariates	All (N=359,505)		Rural (N=215,849)		Urban (N=143,656)	
	Model I	Model II	Model III	Model IV	Model V	Model VI
<i>Migration status</i>						
Non-migrant <sup>®</sup>		1.00		1.00		1.00
Migrant		1.80***		1.95***		1.72***
<i>Region</i>						
North <sup>®</sup>		1.00		1.00		1.00
Central		1.33***		1.36***		1.34***
East		1.09		1.13*		0.86
Northeast		0.98		0.91		1.79***
West		1.12*		1.33***		0.64***
South		1.16**		1.16*		1.07
<i>Age<sup>a</sup></i>		0.98***		0.98***		0.99***
<i>Log-likelihood</i>	-28328.005	27502.59	18280.91	-17644.47	8916.69	-8726.23
<i>Pseudo-R<sup>2</sup></i>	0.0033	0.0321	0.0041	0.0387	0.0036	0.0240

Notes: \* p<0.10, \*\* p<0.05, \*\*\* p<0.001, <sup>®</sup> = Reference category, <sup>a</sup> = Age is taken as continuous variable.

## 5. DISCUSSION AND CONCLUSION

There is a widespread occurrence of temporary and seasonal migration for employment purposes in India and it is one of the most important livelihood strategies adopted by the poorest people of the country. Between 1999 and 2000 (the reference period of the analysis), 10.8 million persons of all ages migrated seasonally or temporarily in search of employment in India. When comparing these figures with the 2001 census, in which recorded 14.4 million persons who moved permanently for work or employment in the previous decade, it could be argued that the volume of temporary migration for one year is quite high (Census of India, 2001).

The intensity of seasonal migration is found to be highest in the States of Madhya Pradesh and Kerala, which are located in Central and Southern India, respectively. With the exception of Kerala, seasonal and temporary migration seem to be highest in the States where a high level of intra and inter-State socio-economic inequalities are observed (Bhagat, 2010). Several micro level studies have found that during the lean agricultural season, people from these States move to big cities in the same State or to near-by States. Previous studies have also confirmed that by migrating temporarily, a number of households have succeeded to enhance their socio-economic status (Deshingkar and Farrington, 2009b; Deshingkar *et al.*, 2006; Sharma *et al.*, 2009).

In developing countries like India, women's status is low and it is a well established that majority of women migrate because of marriage (Srivastava and Sasikumar, 2003). Nevertheless, the participation of educated women in activities outside the family home and the demand for female labour force participation has increased and this has led to an increasing migration among women (Banerjee and Raju, 2009). We assume this increase should also be

reflected in temporary forms of labour mobility. Results are interesting in this regard since, the proportion of women among temporary migrants (for employment or in search of employment) is quite high compared to the percentage of employment related permanent migration among women in the 2001 Census. Nevertheless, larger gender differentials in temporary and seasonal migration rates exist in North Indian States compared to South Indian States, which may well be due to differences in the social status of women in Northern and Southern India (Dyson and Moore, 1983).

The relationship between poverty and migration has long been a hotly debated issue. It is well recognized that the poorest people migrate for survival within the country and this mobility is generally in the form of short-term migration, even if the capacity to afford a move is lower among the poor (Kundu and Sarangi, 2007; Skeldon, 2002). Overall, the intensity of temporary and seasonal migration declines with the increase in economic status of the household, though results pertaining to rural and urban areas differ. This is in contrast to the results regarding permanent migration as evidenced by some recent NSS and Census based studies. They found that poor and underprivileged people are less mobile in India (Bhagat, 2010; Singh, 2009). Our findings suggest that in rural areas poor people are temporarily more mobile compared to people belonging to higher income groups. Nevertheless, the opposite is true for urban areas. This is consistent with earlier findings that have shown a positive association between income and temporary migration in urban areas (Kundu and Sarangi, 2007; Yang, 1992).

Results suggest that in rural areas, temporary and seasonal migration is highest among illiterates and that mobility declines with increasing education. In rural areas the status of migrant labour is assumed to be a compensating mechanism used by disadvantaged households that are characterised by lower educational levels and lower incomes from agriculture (Haberfeld et al., 1999). In urban areas, no linear relationship between education and seasonal migration is found. People with modest educational attainment show higher seasonal mobility, whereas illiterates and persons with higher educational attainment have a lower mobility.

Temporary and seasonal mobility is higher among scheduled tribes than other caste groups in rural areas. This is plausible, since scheduled tribes that are composed of various tribal and ethnic groups located in the plateau, hilly and forested areas of Central India have been historically, socially and economically disadvantaged social groups. Previous studies have also documented that seasonal migrants in the countryside consist of tribal groups, casual labourers and peasants who are in debt (Breman, 1994; Mukherji, 2006; Rogaly, 1998). In urban areas, caste is not found to be a significant predictor of seasonal migration. This may be due to the decreasing importance of the caste system/identity in urban India.

Our initial hypotheses that poor and illiterates are more prone to migrate

temporarily and seasonally are true for rural areas. Permanent and temporary migrations are two different forms of mobility. The latter is more likely to be affected by poverty and illiteracy. This study suggests that temporary and seasonal migration in rural India is mainly distress driven migration.

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## Appendix

Table A – Grouping of States and Union Territories according to region

North	North East	South
Delhi	Arunachal Pradesh	Karnataka
Haryana	Assam	Kerala
Himachal Pradesh	Manipur	Tamil Nadu
Jammu and Kashmir	Meghalaya	Andhra Pradesh

...Cont'd...

TEMPORARY AND SEASONAL MIGRATION IN INDIA

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Table A – *Cont'd*

<i>North</i>	<i>North East</i>	<i>South</i>
Punjab	Mizoram	Lakshadweep*
Rajasthan	Nagaland	Pondicherry*
Chandigarh*	Sikkim	Andhra Pradesh
	Tripura	
<i>Central</i>		
Madhya Pradesh		
Uttar Pradesh		
<i>East</i>	<i>West</i>	
Bihar	Goa	
Orissa	Gujarat	
West Bengal	Maharashtra	
Andaman and Nicobar Islands*	Dadra and Nagar Haveli*	
	Daman and Diu*	

*Note:* \* Union Territories