

Rural to Urban Migration: A District Level Analysis for India

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Rural to Urban Migration: A District Level Analysis for India

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Abstract

Based on the recent census data this paper analyses the district level rural to urban migration rates (both intra-state and the inter-state) among males and females separately. Both the rates are closely associated irrespective of whether the migrants originate from the rural areas within the state or outside the state. This would suggest that women usually migrate as accompanists of the males. Though many of the relatively poor and backward states actually show large population mobility, which is primarily in search of a livelihood, the mobility of male population is also seen to be prominent in the relatively advanced states like Maharashtra and Gujarat. Rapid migration of rural females within the boundaries of the states is, however, evident across most of the regions. The social networks, which play an

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important role in the context of migration are prevalent among the short distance migrants and tend to lose their significance with a rise in the distance between the place of origin and destination though there are some exceptions to this phenomenon. Besides the north-south divide in the Indian context is indeed a significant phenomenon with a few exceptions of metropolitan cities. As regards the effect of factors at the place of destination, prospects for better job opportunities are a major determinant of male migration. Low castes and minority groups tend to pull migration through network effects. Among females also these effects are evident though with the inclusion of the male migration rate they become less significant. Finally the paper brings out the policy implications.

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Arup Mitra and Mayumi Murayama

1. Introduction

Rural to Urban migration is a response to diverse economic opportunities across space. Historically it has played a significant role in the urbanization process of several countries and continues to be significant in scale, even though migration rates have slowed down in some countries (Lall, Selod and Shalizi, 2006). In India, though rural-urban migration has been found to be modest (accounting for around 30 per cent of the total urban growth), in the context of urban poverty, urban slums and informal sector employment a great deal has been talked in reference to rural-urban population mobility¹. In other words, much of the urban ills are attributed to the rural-spills.

This paper is an attempt to understand the rural-to-urban migration flows for males and females separately at the district level. Given the diverse spatial characteristics of the country it is quite natural to expect that rural-urban migration rates will be varied across states and even within the states. The paper analyses the district specific rates and their variability on the one hand and on the other hand examines the impact of certain factors at the place of destination on the male and female population mobility.

Since at the district level the reasons for migration have not been listed by the population census – and even at the state level the reasons for migration are neither mutually exclusive nor exhaustive – we try to examine the associations between migration rates and other variables at the place of destination. Though the literature has assigned a great deal of importance to the factors at the place of origin we find difficulty to include them while dealing with the secondary data on migration. For example, rural migrants in the urban areas of a specific district have originated from different districts located within the state and outside the state. In other words, in relation to one observation, i.e., rural-to-urban migrants in a specific district there is a spectrum of socio-economic characteristics, which then becomes difficult to analyze.

¹ Because of a large initial base of population and a high natural growth of population the annual rate of population growth remains modest, and also the migration rate does not appear to be exceptionally high. However, it implies a phenomenal increase in absolute terms.

Hence, we have tried to assess only the influence of factors at the place of destination, i.e., the urban areas of the districts, on the incoming male and female migrants from the rural areas within the state and outside the state.

The organization of the paper is as follows. In the present section we set the background. In section 2 we assess different streams of migration at the all-India level over the decades and section 3 deals with the magnitude of rural-urban migrants at the district level, computed from 2001 population census data. Section 4 examines the associations between migration rates and other explanatory variables. Section 5 summarizes the major findings. The database of the study, as indicated above, is drawn mainly from the population census of India, and the definition of migration based on the last residence concept of migration refers to those who migrated in ten years preceding the year of survey (1991-2001).

Attempts have been made to explain rapid city growth in developing countries primarily by two major hypotheses (Williamson, 1988): (1) unusually rapid rates of population growth pressing on limited farm acreage and pushing landless labour into cities, and (2) migrants being pulled into the cities by the economic forces such as domestic terms of trade squeezing agriculture, the diffusion of technology from the developed world favouring modern large scale urban industries, foreign capital flows into urban infrastructure, housing, power, transportation, and large scale manufacturing.

As per the first view, the main cause of rapid urban growth is traced to the increasing pressure of population on farmland in densely populated agrarian economies. Deficiency of reproducible tangible capital relative to labour in the face of a high-population density exacerbates the problem of rural unemployment and underemployment, which in turn fosters the rural-urban population movement. In the face of limited demand for labour in the formal sector, in particular the organized industrial sector, excess supplies in the urban labour market force them to be engaged in the informal service sector. The low rate of growth of industrial employment and the high rate of rural-to-urban migration make for excessive, even explosive urbanization involving a transition from rural unemployment to excessive urban unemployment and underemployment.

In explaining migration across space, income differentials are taken as motivating factor in moving people from low-income areas to relatively high-income areas (Harris and Todaro, 1970)². In the rural areas, sluggish agricultural growth and limited

² Stark (1984), however, argues that the relative deprivation, which is some function of income statistics other than a person's own current income, influences migration. Hence, attempts must be made to generate data to assess the effect of relative deprivation rather than income differential on migration.

development of the rural non-farm sector raises the incidence of rural poverty, unemployment and underemployment. Given the fact that most of the high productivity activities are located in the urban areas, the rural-urban income differentials, particularly for the poor and unemployed, are enormous. Thus, many of them migrate to the urban areas in search of jobs. Even when jobs in the high productivity activities are limited in number relative to the supply, and often they are not accessible, population still flows to the urban areas in search of opportunities in the 'informal sector.'

Caste-kinship bonds and other kinds of village networks help rural job seekers to arrange such urban-based jobs (Banerjee, 1986). In the face of a high natural growth of population, rural-urban migration aggravates the situation of excess supplies of labour in the urban areas. Within the urban informal sector this tends to reduce the level of earnings and get manifested in a high incidence of urban poverty. Thus in the process rural poverty gets transformed into urban poverty – the phenomenon is also described as 'urbanisation of poverty'³.

The paper by Lall, Selod and Shalizi (2006) synthesizes the current state of knowledge concerning internal migration in developing countries. They provide a policy-oriented survey of the research carried out on internal migration in developing countries over the past five decades. Some of the questions around which they summarize the findings relate to how internal migrants behave at different stages of the migration process, how do migrants prepare for migration, how do they migrate, what are the difficulties they face on arriving in urban areas and what links do they maintain with rural areas. Keeping in view this exhaustive review we do not wish to repeat the issues here. We turn to the empirical content of the paper in the following sections.

2. Urban Growth and Rural to Urban Migration

Population in the urban areas expands due to the following three factors: natural growth of population, rural to urban migration and reclassification of rural areas as urban in course of time. Around two-fifth of the total urban growth in the Third World is accounted by the rural-to-urban migration (Gugler, 1988). The process can be

³ See Harris and Todaro (1970) and Ravallion and Datt (2002). Todaro (1969) treats this sector as a transitory phenomenon but in reality this has emerged as a persistent one. Mitra (1994) argued that natural growth of population maintained the urban supplies of labor at a high level, resulting in informal sector employment and poverty.

identified as ‘over-urbanisation’ as long as (1) rural-urban migration leads to a misallocation of labour between rural and urban sectors in the sense that it raises urban unemployment, underemployment and poverty, and (2) rural-urban migration increases the social cost for providing for a country’s growing population (Gugler, 1988).

With a significant fall in the mortality rate, the natural growth of urban population has grown at a high level thus raising the long run supply of labour substantially. In fact, in developing countries the natural growth of urban population is not significantly lower than its rural counterpart although fertility rate declined considerably in most of the developed countries because of significant changes in the socio-economic life styles of the urban population. In the Indian case although the urban birth and death rates are found to be much lower than their rural counterparts for the periods 1971-80 and 1981-89, the urban rates of natural increase were only marginally lower than the rural rates. As can be seen from Table 1 much of the urban growth continues to be due to natural growth of population. Even during 1991-2001 natural growth played a major role in stepping up the urban growth.

However, around one-fifth of the urban growth is accounted by rural to urban net migration. There was a continuous rise in the contribution of net migration to total urban growth since the sixties though between 1991 and 2001 there has been a slight decline in the rate compared to the previous decade (Table 1).

Table 1: Decomposition of Urban Growth

Components of Urban Growth	1961-71	1971-81	1981-91	1991-01
1. Natural Increase	64.6	51.3	61.3	59.4
2a. Population of new towns or less declassified towns	13.8	14.8	9.4	6.2
2b. Increase due to expansion in urban areas and merging of towns	2.9	14.2	7.6	13.0
3. Net Migration	18.7	19.6	21.7	21.0

Source: Based on population census data; see Kundu (2006).

The definition of migration based on the last residence concept of migration refers in our analysis to those who migrated in ten years (1991-2001) preceding the year of survey 2001. The gross decadal inflow of rural to urban migrants as a percentage of total urban population in 2001 turns out to be a little above 7 per cent at the all-India level (Table 2). However, it varies considerably across states (Table 2a). Both industrialized states like Gujarat and Maharashtra and the backward states like Orissa and Madhya Pradesh show high rates of migration. Similarly examples can be

found from both the types of states which have recorded sluggish migration rate, e.g. industrialized states such as Tamil Nadu and West Bengal and backward states such as Uttar Pradesh, Bihar and Rajasthan (Based on the information given in Table 2 the plots on the map of India are given). Hence, it is not possible at this stage to draw any clear-cut conclusion regarding the magnitude of the migration rate in relation to the nature of the states.

Table 2: Total Gross Decadal Migrants as a % of Total Urban Population in 2001

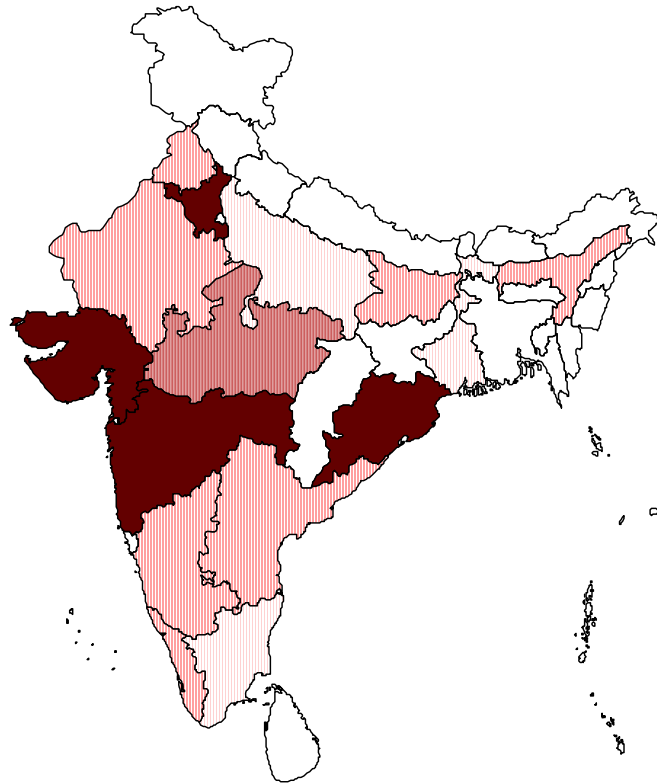
States	Rural-to-Urban Migrants (1991-2001) as a % of Urban Population
Andhra Pradesh	6.72
Assam	7.12
Bihar	6.28
Gujarat	10.63
Haryana	11.45
Karnataka	7.03
Kerala	6.99
Madhya Pradesh	9.50
Maharashtra	10.41
Orissa	10.97
Punjab	7.63
Rajasthan	6.18
Tamil Nadu	3.34
Utter Pradesh	4.44
West Bengal	4.83
All India	7.32

Note: Migration is defined as the gross decadal (1991-2001) inflow of intra- and inter-state rural to urban migration (based on the last residence concept) as a percentage of total urban population (2001). Bihar includes Jharkhand, Madhya Pradesh includes Chhattisgarh and Uttar Pradesh includes Uttaranchal.

Source: *Census of India 2001*, Migration Tables.

India

Migration 1991-2001



Rural to Urban Gross Decadal Migration

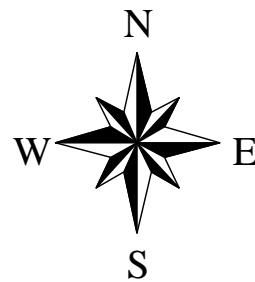
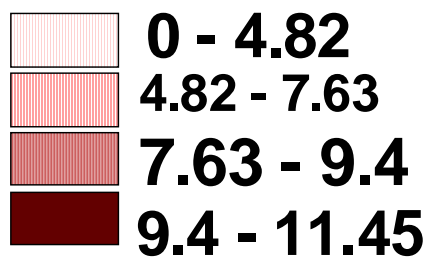


Table 2a: Gross Decadal Intra and Inter State Migration of Males and Females as a % of Total Male and Female Urban Population in 2001

State	Intra-State Male	Intra-State Female	Inter-State Male	Inter-State Female	Intra+Inter State Male	Intra+Inter State Female
Andhra Pradesh	6.11	6.59	0.39	0.34	6.5	6.93
Arunachal Pradesh	13.39	14.82	7.67	7.17	21.06	21.99
Assam	5.75	6.22	1.25	0.93	7.01	7.15
Bihar	4.14	6.83	0.42	0.7	4.56	7.53
Chhattisgarh	6.58	8.64	2.22	2.38	8.8	11.02
Gujarat	6.78	8.33	3.89	2.21	10.67	10.54
Haryana	4.56	6.72	6.09	5.38	10.65	12.09
Himachal Pradesh	13.37	14.48	8.09	4.65	21.46	19.13
Jammu & Kashmir	3.03	3.29	1.46	1.48	4.49	4.77
Jharkhand	2.71	3.93	3.02	3.8	5.73	7.73
Karnataka	5.38	6.16	1.36	1.16	6.74	7.32
Kerala	4.81	8.06	0.6	0.4	5.41	8.46
Madhya Pradesh	5.09	6.95	1.26	1.56	6.35	8.51
Maharashtra	5.83	7.18	4.77	2.92	10.6	10.09
Meghalaya	2.26	2.51	2.08	1.47	4.34	3.98
Mizoram	7.08	7.7	2.28	1.15	9.36	8.85
Nagaland	4.11	3.91	3.34	2.53	7.45	6.44
Orissa	9.44	10.31	1.1	1.1	10.54	11.41
Punjab	2.58	4.76	4.8	2.88	7.38	7.64
Rajasthan	4.17	5.92	1.15	1.18	5.32	7.1
Sikkim	7.04	8.2	6.26	5.23	13.31	13.42
Tamil Nadu	2.78	3.44	0.22	0.22	2.99	3.66
Tripura	6.18	8.37	0.4	0.38	6.58	8.75
Uttar Pradesh	2.66	4.33	0.59	0.64	3.25	4.97
Uttaranchal	5.43	6.04	4.24	4.18	9.67	10.22
West Bengal	2.45	4.23	1.43	1.11	3.88	5.34

Andaman & Nicobar	4.43	4.89	8.81	6.75	13.24	11.65
Chandigarh	0.12	0.1	13.99	12.79	14.11	12.89
Dadra & Nagar Haveli	0.35	0.31	29.15	19.98	29.5	20.29
Daman & Diu	0.24	0.2	8.89	5.96	9.12	6.16
Delhi	0.09	0.14	11.25	9.43	11.34	9.57
Goa	4.4	6.67	6.7	5.46	11.1	12.13
Lakshadweep	11.16	9.56	3.38	0.61	14.54	10.17
Pondichery	1.68	1.86	4.88	6.2	6.55	8.06

Source: Based on *Population Census, 2001*.

Migration is a both old and new human practice. There is no place or time, in which migration does not occur. However, the scale, type and implications of migration vary greatly between individuals and societies. Due to the vast size of the country and large differences in physical and human dispositions across the country, migration trend in India shows some specific features.

First, among the four types of migration direction-wise, i.e., rural-to-rural, rural-to-urban, urban-to-rural and urban-to urban migration, rural-to-rural migration has been dominant. In 2001, rural-to-rural migration (during the last decade, i.e., based on migrants with duration of residence of 0-9 years at the place of enumeration) has accounted for 54.7 percent of total migration within country. The share of rural-to-rural migration, however, has been on decline, dropping from the level of 62.0 percent in 1971. Instead, rural-to-urban migration has shown a gradual increase, with its share in total migration rising from 16.5 percent to 21.1 percent between 1971 and 2001 along with a slight increase of urban-to-urban migration to 14.7 percent from 13.6 percent over the same period.

Second, with respect to the distance of migration, intra-state migration is predominant accounting for 82.1 percent of migration (duration of 0-9 years). More than a half of migration took place within the district and the incidence of migration decreases as the distance becomes longer.

Third, among intra-state migrants, 60.5 percent moved from rural to rural places (duration 0-9 years) followed by 17.6 percent of rural-to-urban migration while in case of inter-state migrants, the largest portion (37.9 percent) migrated from rural to urban destinations. In inter-state migration, the incidence of rural-to-rural and urban-to-urban movements is almost at the same level, i.e., 26.6 percent and 26.7

percent respectively.

Fourth, migration streams in India have been dominated by females. Women constituted 66.5 percent of total migration flows (duration 0-9 years). Women outnumbered men in intra-district as well as intra-state migration flows, accounting for 73.9 percent and 70.3 percent respectively. With respect to inter-state migration and migration from other country, the share of male migrants surpassed that of female, contributing 50.6 percent and 75.3 percent of total migration. Thus, the longer the distance of migration is, the higher the share of male migration becomes. Of the total female migration, more than 60 percent moved within the district. Therefore, short distance migration is the dominant form for women. In case of male migrants, while migration within the district is also predominant (43 percent), the share of longer distance migration is larger than that among female migrants.

Fifth, it is noted that if we take a look at the rural-to-urban migration during the last 10 years, the number of male and female was almost equal in total rural-to-urban flows. While women outnumber men in intra-state rural-urban flows, the number of male was significantly greater in case of inter-state rural-urban migration.

3. Rural to Urban Migration at the District Level

Turning to rural-urban migration rates at the district level the intrastate migration flows are seen to dominate the interstate flows. Here the migration rates are defined as the gross decadal inflow (1991-2001) of population from the rural areas to the urban areas of the districts as a percentage of total urban population in the district in 2001. The male and female migration rates – whether intra state or inter state – are strongly correlated (0.889 among the intra state migrants, 0.896 among the inter-state migrants and 0.92 among the combined category). The associations between the inter-state and intra-state rates are however highly negligible suggesting that there is no systematic pattern in terms of magnitude between the intra-state flows and the inter-state flows. In other words, districts which receive migrations largely from the rural areas within the states are not necessarily the ones which also receive large or small quantum of migrants from outside the state. This would mean that the intra-district rates and the inter-district rates are influenced by different sets of factors. In section 4 by allowing the same set of factors at the place of destination to influence both the intra and inter state migration rates we bring in the differences more distinctly.

The inter-district variations in the rates are highest in the case of inter-state migration flows. Since the intra state migration rates are much higher in magnitude

than the inter-state rates and secondly since the intra-state rates do not show high variations (compared to the inter-state rates), the combined category of migration is closer to that of the intra-state flows in terms of the inter-district variations (Table 3). The high variability of inter-state migration rates at the district level suggests that the long distance migration pattern is more diverse being subjected to variations in ability to cope with economic, social and cultural factors.

Table 3: District Level Variations: Coefficient of Variation (%)

Type of Migration	Male	Female
Total Migration	69.94	49.98
Intra-State Migration	70.25	54.05
Inter-State Migration	157.78	138.23

Source: Based on the Population Census Data, 2001.

Among the intra-state rural-to-urban migrants nearly 28 per cent of the districts registered a male migration rate of more than 7 per cent during 1991-2001 whereas less than 8 per cent experienced a rate up to 1.5 per cent (Table 4). Many of these districts which experienced a male intra-state rural-urban migration rate of more than 10 per cent of the urban population are located in the north-east, east, west and central India (Column 1 of Table 8). Eleven districts of Arunachal Pradesh (north-east) alone fall into this category. Similarly nine districts of Orissa (east) experienced rapid migration of males. Among the South Indian states only two districts of Kerala showed a male intra-state migration rate of more than 10 per cent. If we divide the states into two groups - north and south - the phenomenon of male migration (intra-state) is found to be largely prevalent in north India. Though many of the relatively poor and backward states actually show large population mobility, which is primarily in search of a livelihood, males are also seen to be highly mobile in the relatively advanced states like Maharashtra and Gujarat.

Corresponding to intrastate female migrants from the rural to the urban areas nearly 32 per cent of the districts recorded a rate of more than 9 per cent and only 5 per cent of the districts show a rate up to 2 per cent (Table 5). Rapid migration of rural females within the state is however evident across most of the regions: several of the south Indian states in addition to the north Indian states recorded high migration rates of females (Column 2 of Table 8).

Table 4: Intra-State Rural to Urban Male Migration Rate at the District Level: (Migrants over the ten years (1991-2001) as a percentage of Total Urban Population in the District in 2001)

Migration Rate	No. of Districts	Percentage of Districts
Up to 1 per cent	20	3.46
More than 1 and up to 1.5 per cent	22	3.81
More than 1.5 per cent and up to 2.5 per cent	70	12.11
More than 2.5 per cent and up to 4 per cent	128	22.15
More than 4 per cent and up to 6 per cent	116	20.07
More than 6 and up to 7 per cent	60	10.38
More than 7 per cent	162	28.03

Note: Percentage figures are calculated relative to a total of 578 districts in all states and union territories (except Manipur).

Source: Based on Population Census Data, 2001.

Table 5: Intra-State Rural to Urban Female Migration Rate at the District Level: (Migrants over the ten years (1991-2001) as a percentage of Total Urban Population in the District in 2001)

Migration Rate	No. of Districts	Percentage
Up to 1 per cent	17	2.94
More than 1 and up to 2 per cent	17	2.94
More than 2 to per cent and up to 4 per cent	77	13.32
More than 4 per cent and up to 6 per cent	117	20.24
More than 6 per cent and up to 7 per cent	44	7.61
More than 7 per cent and up to 9 per cent	123	21.28
More than 9 per cent	183	31.66

Note: Percentage figures are calculated relative to a total of 578 districts in all states and union territories (except Manipur).

Source: Based on Population Census Data, 2001.

As regards the inter-state male migrants more than half of the districts show a less than 1 per cent migration rate whereas only around 11 per cent of the districts reveal a more than 4.5 per cent migration rate (Table 6). The social and cultural diversity in the Indian context seems to be major hindrances to population mobility. The social networks which play an important role in the context of migration are

prevalent among the short distance migrants and tend to lose their significance with a rise in the distance between the place of origin and destination though there are some exceptions to this (migrants from Bihar to Delhi or Maharashtra or West Bengal for example). However, as noted in the case of intra-state rural male migrants, south Indian states again do not show a high inter-state male migration rate, i.e. more than 7 per cent. The north-south divide in the Indian context is indeed a significant phenomenon with a few exceptions of metropolitan cities.

Table 6: Inter-State Rural to Urban Male Migration Rate at the District Level: (Migrants over the ten years (1991-2001) as a percentage of Total Urban Population in the District in 2001)

Migration Rate	No. of Districts	Percentage
Up to 1 per cent	324	56.06
More than 1 and up to 1.5 per cent	52	9.0
More than 1.5 per cent and up to 2 per cent	43	7.44
More than 2 per cent and up to 3 per cent	46	7.96
More than 3 per cent and up to 3.5 per cent	18	3.11
More than 3.5 per cent and up to 4.5 per cent	32	5.54
More than 4.5 per cent	63	10.90

Note: Percentage figures are calculated relative to a total of 578 districts in all states and union territories (except Manipur).

Source: Based on Population Census Data, 2001.

As regards the female inter-state migration, 55 per cent of the districts show a rate of less than 1 per cent while only 14 per cent recorded a rate of more than 3.5 per cent (Table 7). Among the states, which registered a high female population inflow (more than 7 per cent) from other states, it may be noted again that most of them are located in north India.

Table 7: Inter-State Rural to Urban Female Migration Rate at the District Level: (Migrants over the ten years (1991-2001) as a percentage of Total Urban Population in the District in 2001)

Migration Rate	No. of Districts	Percentage
Up to 1 per cent	317	54.84
More than 1 per cent and up to 1.5 per cent	55	9.52
More than 1.5 per cent and up to 2 per cent	43	7.44
More than 2 per cent and up to 2.5 per cent	35	6.06
More than 2.5 per cent and up to 3 per cent	22	3.81
More than 3 per cent and up to 3.5 per cent	24	4.15
More than 3.5 per cent	82	14.19

Note: Percentage figures are calculated relative to a total of 578 districts in all states and union territories (except Manipur).

Source: Based on Population Census Data, 2001.

Table 8: Rapid Migration Rates across States

States and UTs and number of districts with male intra state migration rate of more than 10 per cent each	States and UTs and number of districts with female intra state migration rate of more than 10 per cent each	States and UTs and number of districts with male inter state migration rate of more than 7 per cent each	States and UTs and number of districts with female inter state migration rate of more than 7 per cent each
Andhra Pradesh (1), Arunachal Pradesh (11), Bihar (1), Chhattisgarh (2), Gujarat (3), Haryana (1), Himachal Pradesh (6), Jammu and Kashmir (3), Kerala (2), Lakshadweep (1), Madhya Pradesh (5), Maharashtra (6), Nagaland (1), Orissa (9), Sikkim	Andhra Pradesh (8), Arunachal Pradesh (11), Assam (1), Bihar (11), Chhattisgarh (6), Gujarat (6), Haryana (5), Himachal Pradesh (8), Jammu and Kashmir (4), Jharkhand (2), Karnataka (6), Kerala (7), Madhya Pradesh	Arunachal Pradesh (6), Andaman (1), Chandigarh (1), Dadra and Nagar Haveli, (1) Daman and Diu (1), Delhi (8), Gujarat (2), Haryana (4), Himachal Pradesh (4), Maharashtra Punjab (2), Pondicherry (1), Sikkim (3), Uttaranchal (1)	Arunachal Pradesh (5), Chandigarh (1), Dadra and Nagar Haveli (1), Daman and Diu (1), Delhi (7), Gujarat (1), Haryana (4), Himachal Pradesh (3), Pondicherry (2), Sikkim (2)

(1), Tripura (2), Uttaranchal (8)	(12), Maharashtra (12), Mizoram (1), Nagaland (1), Orissa (12), Rajasthan (1), Sikkim (1), Tripura (3), Uttar Pradesh (2), Uttaranchal (9), West Bengal (1)		
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Source: Based on Population census data, 2001.

4. Factors Affecting Rural to Urban Migration

While a large number of empirical studies on migration have been conducted on the basis of field surveys in urban destinations, the focus of researches is primarily on migrants and in some studies non-migrants are added for the sake of comparison. Therefore, urban specificities which migrants have been pulled by or pushed to are not analysed per se although some of the important factors related to the livelihoods of migrants, such as urban labour market and living conditions are investigated within the scope of individual researches. Also, the majority of the migration researches set its unit of analyses either at the national level or local areas selected and demarcated by the researchers. Thus, the intermediate level, particularly district level analysis is almost absent. This is considered critical since district is an important unit for capturing migration flows as defined in census data on migration.

An exception, Kaur (1996) has analysed spatial pattern of male rural-to-urban migration based on district-wise data of 1971 census. She has classified the districts into three categories, i.e., areas with relatively high proportion of rural-urban male migrants among total urban male population (24 percent and above), areas with moderate proportion (16 to 24 percent) and areas with relatively low proportion (below 16 percent). The distribution of 356 districts according to the above classification was 24.4 percent, 36.0 percent and 35.7 percent respectively. The regions having districts with high rural-to-urban male migration rates were described as those witnessed rapid development of mining, industrial activities, service sectors, considerable colonisation, and rapid expansion of administrative and security machinery due to new political and strategic importance accorded to the areas. On the other hand, the group of areas with low proportion of rural-to-urban male migrants was mainly confined to the northern half of the country. There urbanisation in the

post-independent era was low due to stagnant agricultural economy and tardy industrial development.

As for the differences in distance of migration, Kaur (1996) finds that the areas with relatively high proportion of intra-state rural-urban male migrants were mainly found in areas which experienced low to moderate rate of urbanisation in recent decades. In contrast, the regions with high inter-state rural-urban male migration experienced high rate of urbanization in recent decades. They included industrial-mining areas, Assam region, Punjab-Haryana tract and areas with considerable agricultural colonisation.

Kaur's (1996) study gives an overview of spatial distribution of rural-urban migration and its relationship with some urban characteristics. However, she has dealt only male migrants and her attention was directed only on economic factors. Moreover, she did not apply any statistical analysis relating to the districts' socio-economic characteristics, thus her conclusions are more or less descriptive in nature.

In the backdrop of lack of this line of research, we would draw on the findings of micro level and some macro studies, in order to get insights to understand the association between migration and urban conditions.

Work participation and sex ratio

The association of work participation and incidence of migration has been extensively reported firstly as the main reason of migration and secondly as the consequences of migration. At the national level, the questions on reasons for migration have been canvassed since 1981 census for the migrants by last residence. In 1981, among the rural-to-urban migrants, 'employment' was the most cited reason by male migrants (47.5percent) followed by the reasons 'family moved' (23.5percent) and 'education' (8.1percent) (Sinha 1986). The economic motivations of migrants are found to lead to the higher work participation rate among migrants compared with non-migrant population in urban centres (Oberai, Prasad and Sardana, 1989). To the contrary, as for the female, 1981 census reported that the half of migrants (51.5percent) mentioned 'marriage' as the main reasons for urban migration while second largest reason was 'family moved' (29.3percent) and 'employment' was cited only by 4.2 percent of female migrants. 'Education' was the primary reason for 3 percent of females (Sinha, 1986). The apparent gender differentials in the reasons of migration have earlier resulted in focusing only on male migrants as a sensitive indicator of economic implications of migration as well as development in general. It should be noted that earlier male pre-dominated in rural-urban migration but in the 1970s, there was a shift toward greater female participation in urban-ward flows. In other countries such as

Southeast and East Asia, the increasing female participation in urban-ward migration was associated with the light, labour intensive industrialisation and urban-based services, which utilised female labour. In contrast, the female increase in the particular stream of migration in India was mainly attributed to associational migration (accompanying or joining male family members in the urban areas (Skeldon, 1986).

Since the 1980s, however, feminist and gender perspective has been intensively incorporated into migrations studies (e.g., Fawcett, Khoo and Smith, 1984; Chant ed., 1992). A strong objection is raised that the male bias and female self-perception of their gender role have led to undervaluation of women's role as workers (Singh 1984; Karlekar 1995). Singh (1984) refuted the assumption that female migration was solely a result of social and cultural practice. Even in rural-to-rural migration streams of female, Singh argues, was not unrelated with female participation in rural-based work including agriculture and construction. Furthermore, rural-to-urban migration of women is not an isolated phenomenon and needs to be explored with reference to counterbalancing trends and opportunities in rural areas.

The significance of employment prospect as a determining factor of female migration even in associational migration has been discussed by many micro studies (Sharma, 1986; Kasturi, 1990; Neetha, 2004; Chattopadhyay, 2005; Kaur, 2006). Macro data also evidences that work participation rates of migrant women in the largest cities was higher than non-migrant women as per 1971 census data (Singh, 1984). However, there are broad regional variations among the female migrants' work participation rates, reflecting differences in social cultural norms practices related to gender roles embedded in the sending societies of migrants. In general, the work participation rates among migrants from the north are lower than those from the south (Singh, 1984; Basu, Basu and Ray, 1987). Singh (1984) further finds, on the basis of the 1971 census data, that there was a general negative association between sex ratios (number of male per 100 female) and female work-force participation at a place of destination (Delhi, in her case study) with some regional variations with respect their place of origin. In Delhi, the relatively stronger link between low sex ratios (a larger share of female among total migrants) and high workforce participation by female migrants are observed in the migrant flows from the southern states.

The differences in work participation rates are also observed along the line of religion and caste group of migrants. On the basis of a large sample survey in Bihar, Kerala and Uttar Pradesh, Oberai, Prasad and Sardana (1989) reports in all the urban areas of the three states, female migrants' work participation rates are generally higher among Christians and Scheduled Castes/Tribe whether married or unmarried.

Education

It has been widely observed that the propensity to migrate increases with education (Connell et. Al., 1976, Banerjee, 1986). Banerjee's study (1986) on the inter-state migrants in Delhi finds the share of matriculated and graduates among migrants in the sample was many times higher than that among the population from which they originated (in this case, Punjab, Rajasthan and UP). If we compare the educational level of migrants and non-migrants at the place of destination, broad-based information is rather limited. A study which canvassed information regarding socio-economic characteristics of in-migrants and non-migrants in three states of Bihar, Kerala and Uttar Pradesh shows that in case of Bihar and Kerala, the educational level of in-migrants is higher than that of non-migrants whereas in UP the pattern was reversed (Oberai, Prasad and Sardana, 1989).

In case of female migrants, the level of education is polarised; there are migrants, literate and employed in modern occupations and also illiterate migrants who are mostly found in occupations with generally low status (Singh, 1984). The level of education is again significantly related to regional and ethnic characteristics of migrants. Among the migrant domestic workers studied, the majority of live-out domestics who are mostly married are found to be illiterate whereas live-in workers, largely single are comparatively better educated (Neeta, 2004).

Child/women ratio

Child/women ratio is usually an indicator of female fertility. In the light of rural-to-urban migration, relevant information is largely limited to the marital status of female migrants. If we look at the marital status of migrants compared with non-migrants in urban areas, the share of being married is higher than non-migrants. According to 1971 census, the differences of marital status were wider in case of female migrants than male migrants⁴. The share of those being married among migrants and non-migrants was 65.7percent and 25.5 percent in case of female while it was 58.0 percent and 29.6 percent for male. Another discernible gender difference is that the ratio of being widowed and divorced is much higher among female migrants than non-migrants. As for male, the rate is almost similar (Sinha1986).

There are distinct regional and ethnic variations also in the marital status of migrants. According to Singh (1984), there was substantial number of unmarried female migrants from Kerala. Studies on domestic workers in Delhi also found substantial number of single female migrants, mostly Christian STs who are working as live-in domestics (Neeta 2004; Chattopadhyay 2005)..

⁴ The areas of origin, whether rural or urban, are not separated.

It is the study done by Oberai and Singh (1983) in Ludhiana district of Punjab, which included the question regarding the effect of rural-to-urban migration on fertility. They found generally higher fertility among migrants, especially, longstanding in-migrants, than non-migrants. However, recent in-migrants have lower fertility than urban non-migrants due to the initial period of separation between spouses and uncertainties as well as costs involved immediately before and after the migration. The fertility among the migrants was also lower than the rural residents. Thus, they conclude that migration has the effect of reducing completed family size as also of lowering fertility during the period immediately following migration.

It is reported that infant mortality rate among the migrant children is usually high because of lack of proper child care facilities and support. Citing a study of migrant women in Delhi's slums, Karlekar (1990) notes the mortality rate for female children was significantly higher than for males due to less medical care given to girls than boys.

SC/ST Social network

The importance of social network in migration is widely acknowledged. Thus, the fact that there are a large concentration of migrants belonging to scheduled caste (SC) and scheduled tribe (ST) status, especially in the informal sector (Basu, Basu and Ray, 1987; Kasturi, 1990, Neeta, 2004) suggests the positive effects of SC/STs presence in urban destinations on inducing further rural-to-urban migration.

Bhattacharya (2002) in his regression analysis of intra-state rural-urban migration models on the basis of 1981 census data has examined the impact of the SC and ST status as a proxy of social network, on rural-urban migration. His unit of data is state level data and he has analysed only those who mentioned 'employment' as the reason of migration. In his findings, the presence of SC population in urban areas is found to give positive effect on the migration of SCs from rural areas while SC incidence in rural regions is seen to reduce out-migration rates. The ST status, however, was seen not have any effects on rural-to-urban migration.

Keeping in view some of these distinct patterns and stylized facts we have tried to regress the rural to urban intra-state and inter-state male and female migration rate on work participation rate at the place of destination, literacy rate, employment composition, child-woman ratio, caste composition in terms of the incidence of lower caste. Also, the association between female and male migration rates is examined.

As regards the intra-state male migrants literacy rate in the place of destination attracts inflow of migration while the percentage of workers engaged in household manufacturing shows a negative effect (Table 9). The percentage of scheduled tribe

male also shows a positive influence. Higher level of literacy at the place of destination is indicative of better quality work force at least in terms of awareness which in turn develops greater access to extensive information in the job market. And this in turn attracts more migrants. Also, higher literacy rate implies availability of greater educational facilities at the place of destination, which then attract the potential migrants interested. Since household manufacturing is largely a residual activity it is not expected to act as a pull factor. On the other hand the presence of lower castes draws more from the same communities due to the prevalence of network effects. The networks operate more significantly among the social groups which are indeed minorities, as these networks are nothing but joint efforts to cope with uncertainties – a manifestation of survival strategies.

Among the inter-state male migrants the work participation rate and the percentage of scheduled tribe population at the place of destination show positive effect while household manufacturing and cultivation reduces the inflow rate (Table 9). Higher work participation tends to suggest higher levels of employment opportunities at the place of destination, and thus its positive effect on migration is understandable. Urban cultivation in the Indian context covers rural areas, which are in the process of becoming urbanized. Those who migrate from the rural areas obviously come in search of non-agricultural activities, whereas urban areas with a large relative size of cultivation would appear to be less vibrant in terms of generating employment opportunities in the non-agricultural sector. The negative impact of urban cultivation on population inflow is, therefore, not unusual. However, while this argument may be true for the males, among the females it may not hold. Particularly those who accompany the males tend to accept petty jobs, which they can pursue along with the household activities. This could be one of the reasons why work force engaged in cultivation show positive effect on intrastate female migration (Table 10). Among the other factors literacy, scheduled caste female population and child-woman ratio show positive effect on the female intrastate migration while household manufacturing reduces the inflow rate. The positive association between child woman ratio and female migration is indicative of the fact that women with large number of children are in urgency to migrate in search of jobs to the urban areas. On the contrary with lower child-woman ratio in-migration of females tends to decline implying more single male migration to the urban areas.

With the inclusion of male migration rate in the set of explanatory variables cultivation and household manufacturing (in addition to literacy, scheduled caste population and child-woman ratio) also show positive effects on the female intrastate migration rate. The influence of male migration rate on that of female is positive and highly significant. These findings together would suggest that women accompanying

the male members of the households can hardly reveal any independent choice in reference to job market. Even the so-called residual activities tend to be an outlet for them. That with higher participation of women in the job market at the place of destination the female migration rate declines after controlling for male migration, reveals a complex story. As females accompanying their husbands participate in the job market, the possibility of getting employment for the single-women-migrants declines and this possibly discourages them to migrate.

For the inter-state female migrants, work participation rate, child-woman ratio and literacy show positive effect while scheduled tribe population, household manufacturing and cultivation tend to reduce the rate (Table 10). With the inclusion of the male migration rate, which is indeed a significant variable, several other variables like work participation rate and agricultural employment turn out to be insignificant, again suggesting least preference being assigned to women in terms of their job market participation when they accompany the male members. The decision of the males to migrate is the most important determinant for the long distance female migrants.

Table 9: Influence of Factors at the Place of Destination on Male Migration

Variables	INTRAM	INTERM
MMAINWPR	0.03 (0.93)	0.16 (7.05)*
MMARWPR	-0.12 (-1.00)	-0.05 (-0.58)
MLIT	0.13 (4.59)*	-0.04 (-1.97)*
MSC	-0.01 (-0.33)	-0.009 (-0.39)
MST	0.03 (2.73)*	0.03 (3.26)*
MHHMFG	-0.16 (-3.56)*	-0.10 (-3.05)*
MAGCUL	-0.01 (-0.52)	-0.1 (-5.72)*
INTER	-5.86 (-2.17)*	-0.61 (-0.30)
N	578	578
Adj R2	0.14	0.21

Note: MMAINWPR is main work participation rate among males, MMARWPR is marginal work participation rate among females, MLIT is male literacy rate, MSC is the proportion of male scheduled caste population to total male population, MST is the proportion of male scheduled tribe population to total male population, MHHMFG is the percentage of male workers engaged in household manufacturing, MAGCUL is the percentage of male workers engaged as agricultural workers and cultivators. INTRAM and INTERM are the intrastate and interstate male migration rates at the district level, respectively.

Table 10: Influence of Factors at the Place of Destination on Female Migration

Variables	INTRAF	INTRAF	INTERF	INTERF
FMAINWPR	-0.02 (-0.37)	-0.07 (-3.64)*	0.22 (8.33)*	0.007 (0.56)
FMARWPR	-0.04 (-0.44)	0.08 (2.13)*	-0.08 (-1.69)	-0.012 (-0.55)
INTRAM/ INTERM		0.95 (54.14)*		0.72 (48.76)*
FLIT	0.10 (3.82)*	0.03 (2.58)*	0.05 (3.31)*	-0.01 (-1.81)**
FSC	0.06 (1.97)*	0.05 (3.52)*	0.006 (0.36)	0.01 (1.89)**
FST	-0.005 (-0.39)	-0.02 (-4.25)*	-0.04 (-4.90)*	-0.003 (-0.96)
CHLD-WOM	9.88 (2.70)*	5.20 (3.52)*	21.08 (10.81)*	1.91 (2.03)*
FHHMFG	-0.05 (-2.51)*	0.02 (1.98)*	-0.09 (-9.33)*	-0.01 (-2.49)*
FAGCUL	0.06 (3.42)*	0.03 (5.09)*	-0.07 (-8.09)*	-0.003 (-0.84)
INTER	-3.64 (-1.32)	-2.16 (-1.94)**	-8.30 (-5.63)*	0.48 (0.71)
N	578	578	578	578
Adj R2	0.07	0.85	0.28	0.86

Note: (1) FMAINWPR is main work participation rate among females, FMARWPR is marginal work participation rate among females, FLIT is female literacy rate, FSC is the proportion of female scheduled caste population to total female population, FST is the proportion of female scheduled tribe population to total female population,

FHHMFG is the percentage of female workers engaged in household manufacturing, FAGCUL is the percentage of female workers engaged as agricultural workers and cultivators and CHLD-WOM is the child-woman ratio. INTRAM and INTERM are the intrastate and interstate male migration rates at the district level, respectively. INTRAF and INTERF are the intrastate and interstate female migration rates at the district level, respectively.

(2) In the equation for the intra-state female migration the intra-state male migration rate and in the equation for the inter-state male migration the inter-state female migration rate have been included as the explanatory variables.

As mentioned in section 2 female migrants are quite large in number and therefore the sex ratio (number of females per 1000 males) of the population at the place of destination will naturally be influenced by the sex ratio of the in-migrants. Though the female-male ratio among the rural migrants – both intra-state and inter-state – influences positively the female-male ratio at the place of destination, the explanatory power of these equations is very weak, suggesting that there are many other determinants of sex ratio in the urban areas of the districts (Table 11)..

Table 11: Effect of Gender Ratio among Migrants on the Overall Gender Ratio at the Place of Destination (Dep Var. F-M Ratio at the Place of Destination)

Variables	Inter-State	Intra-State
F-M Ratio among Migrants	0.03 (5.69)*	0.012 (2.46)*
Intercept	857.56 (107.41)*	887.42 (147.55)*
Adj. R ²	0.05	0.01

Note: * represents significance at 5 per cent level.

5. Conclusion

Migration rates defined in terms of the gross decadal inflow of population as a percentage of total population at the place of destination does not seem to be high in a large number of districts. The intra-state rates are substantially larger than the inter-state rates. Secondly, the male and female migration rates are closely inter-connected irrespective of whether they migrate from the rural areas within the state or outside the state. This would suggest that women usually migrate as accompanists of the males though several other micro surveys have noted that like the

migration of single males, single-females are also increasingly moving out in search of jobs (Mitra, 2003). Though many of the relatively poor and backward states actually show large population mobility, which is primarily in search of a livelihood, the mobility of especially male population is also seen to be prominent in the relatively advanced states like Maharashtra and Gujarat. Rapid migration of rural females within the boundaries of the state is, however, evident across most of the regions: several of the south Indian states in addition to the north Indian states recorded a high migration rate of females.

As regards the inter-state male migrants more than half of the districts show a less than 1 per cent migration rate whereas only around 11 per cent of the districts reveal a more than 4.5 per cent migration rate. The social and cultural diversity in the Indian context seems to be a major hindrance to population mobility. The social networks, which play an important role in the context of migration are prevalent among the short distance migrants and tend to lose their significance with a rise in the distance between the place of origin and destination though there are some exceptions to this phenomenon (migrants from Bihar to Delhi or Maharashtra or West Bengal for example). However, as noted in the case of intra-state rural male migrants, districts in south Indian states again do not show a high inter-state male migration rate, i.e. more than 7 per cent. The north-south divide in the Indian context is indeed a significant phenomenon with a few exceptions of metropolitan cities.

As regards the female inter-state migration, 55 per cent of the districts show a rate of less than 1 per cent while only 14 per cent recorded a rate of more than 3.5 per cent. Among the states which registered a high (more than 7 per cent) female population inflow from other states, most of them are located in north India.

The effect of factors at the place of destination on migration is interesting. Prospects for better job opportunities are a major determinant of migration. Low castes and minority groups tend to pull migration through network effects. Among females also these effects are evident though with the inclusion of the male migration rate the effect of other factors becomes less significant. All this would imply that females migrating as accompanists may subsequently join the job market but the influence of economic factors at the place of destination does not play a major role in encouraging or discouraging mobility. Even the so-called residual activity at the place of destination becomes a source of livelihood for them once it is decided that they have to accompany the male members of the households. However, this does not mean that only sociology decides female migration and not economics. After excluding the male migration rate from the female migration function the effect of economic factors is more or less similar to that in the male migration function though the explanatory power of the equation is very low, possibly indicating relatively fewer cases of single-women migration . The

main policy focus needs to have three different orientations. One is for the male migrants who come to the city in search of jobs. Availability of high productivity jobs in the rural areas can reduce in-migration to the urban areas and on the other hand productivity augmenting strategies need to be adopted for those who are engaged in low productivity jobs in the urban low productivity informal sector. The other aspect of the policy has to deal with the job market prospects of women who accompany male migrants. In spite of the fact that they are engaged in residual activities several micro studies tend to suggest that they are the ones who actually meet the consumption requirements of the households (Mitra, 2005). Hence, these women earners need to be empowered to access better job market opportunities, which they can pursue along with the household or domestic work. The third aspect concerns the single women migrants. Though they are guided by the economic factors at the place of destination their vulnerability in terms of social crime and housing uncertainty is most serious and migration policy in developing countries cannot afford to ignore this aspect, which has been gaining prominence in the recent years.

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