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Migration, Livelihood and Well-being: Evidence from Indian City Slums

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Abstract

What helps workers from low-income households to access urban job market information and whether migrants are able to experience upward mobility at the place of destination are the two pertinent issues in urban development which this paper tries to examine. Results based on a slum survey in four Indian cities highlight the importance of various informal channels through which urban jobs are accessed. However, these networks reduce the probability of upward mobility, as network extension leads to excess supplies of labour relative to demand. The issue of upward mobility has also been examined by constructing a well-being (deprivation) index based on the factor analysis of a large number of social, economic, demographic, education and health-specific variables. Although findings are indicative of improvements in the well-being of migrant workers over time, several of the long-duration migrants and natives in the cities still lead a low quality life. The paper, therefore, argues in favour of urban employment programmes.

1. Introduction

How the urban labour markets in developing countries function and how individuals access jobs are pertinent questions, particularly in the context of low-income households in cities. The concept of 'social capital' provides a substantive basis to the understanding of how the urban labour markets in developing countries function. The caste/kinship bonds and contacts through co-villagers and co-residents of the cluster in which they reside have been quite dominant among low-income households in India in pursuing a rural-based search for urban jobs and, finally, for migrating to urban areas to get employed (see Sovani, 1964; Banerjee, 1986, Banerjee, 1991; Banerjee and Bucci, 1994; and Mitra, 1994). The concept of 'social capital' tends to offer a formal definition to these channels and highlights their relevance in the context of development and policy planning. Social capital, as defined by Putnam (1993), comprises those features of

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social organisations such as trust, norms and networks that can improve the efficiency of society by facilitating co-ordinated actions. It is the networking that helps to create linkages, which in turn forge rules, conventions and norms governing the development process (Chopra, 2002).

Based on a primary survey of slum households (sponsored by the UNDP and the government of India), this paper focuses on the role of networks in accessing jobs in the urban labour market and experiencing upward mobility subsequent to the entry to the job market. The other issue of interest is whether rural to urban migration has been beneficial to low-income migrants, as assessed in terms of living standards. We, however, argue that the standard of living must not be measured merely in terms of consumption expenditure. Rather, several aspects of well-being which combine demographic, social, economic and cultural variables need to be considered. From this point of view, the paper deals with the multiple dimensions of poverty and makes an attempt to construct a household-specific index of well-being. The study is organised as follows. Section 2 describes the explanatory framework. Sections 3 and 4 discuss the survey data and the general characteristics of four cities in India: Jaipur, Ludhiana, Mathura and Ujjain. Section 5 deals with the issue of upward mobility. Section 6 constructs the well-being index and examines the relationship between the duration of migration and well-being. Finally, section 7 summarises the main findings and the policy issues.

2. Framework

The literature on social capital and livelihood issues is quite rich and we may begin with a discussion of some of the studies. This not only helps us to formulate the hypothesis in a meaningful way, but also to understand the links more deeply. The notion of social capital as suggested by Putnam (1993) has been used extensively to account for a wide variety of outcomes (Dasgupta and Serageldin, 2000). The two key elements of social capital include the resource endowments of one's associates and the social relationship itself through which associates' resources can be accessed (Portes, 1998 and Ioannides and Datcher Loury, 2004). Although job search through informal channels, such as friends and relatives, is generally said to be productive (Ioannides and Datcher Loury, 2004), there are, however, reservations relating to Putnam's (1993) work (Dasgupta, 2000).

Irrespective of their nature,[1] the informal contacts, as some of the studies have noted, are indeed important for accessing means of livelihood, particularly among low-income households. Elliott (1999) noted that workers from high-poverty neighbourhoods were substantially more likely to use informal job-search methods than those from low-poverty neighbourhoods. Through the informal networks, mutual benefits are ensured (Stark, 1995; and Mitra, 2004a). Job-search theory, as Mortensen (1986) writes, portrays the decision-maker's acquisition and use of information to take rational action in an environment that is ever-changing and uncertain. The 'social capital' concept supplies this link between the decision-maker's willingness to pursue rational action and the information required to do so.

The other dimension of a social network relates to its variations across activities. Even within a set of informal networks, differences across activities can be located: depending upon the kind of network that one has, his/her occupational choice gets determined accordingly. Networks which operate through purely familial ties, are less likely to provide skilled jobs (Ioannides and Datcher Loury, 2004). Those employed in own-account enterprises operating in sales and trading activities help their relatives and friends to access similar kinds of activities as the requirements in terms of skill and

financial capital and other barriers to entry in these occupations are nominal. On the other hand, as job aspirants look beyond the familial ties and access the private contractors, for example, wage employment in manufacturing and commercial services becomes accessible. Similarly, neighbours and co-villagers may provide more diversified information on the job market than close relatives.

We may now turn to the other class of literature in this area, which highlights the negative aspect of networks. First, the existence of networks—given the specialisation of activities in different parts of the city leading to heterogeneity in the city's economic structure—leads to market information asymmetry resulting in physical segmentation of the labour market (Mitra, 2004a). Further, excess supplies of labour in certain activities reduce the possibility of upward movement in incomes. Also, in the long run, the scope of experiencing upward income mobility remains quite modest as the contact persons and the new migrants both pursue their jobs in similar activities and in the same neighbourhoods. The surplus resources, which could be utilised in productive ways, are often spent on social commitments, which may be reducing each other's uncertainties relating to housing, income, consumption and health. However, the lack of direct investment on productivity-enhancing projects and human capital formation restricts the scope for upward mobility to a much larger extent than what the indirect gains may usher in. Also, the social ties do not often release them from the close cohorts they have formed and do not allow them to diversify their job search across space. Hence, the trade-offs between social intermingling and economic gains may turn out to be substantive: Elliott (1999), for example, noted that, for less educated workers, the use of informal contacts results in significantly lower wages.

The paper by Kono (2006) demonstrates that hiring workers through employee referrals reduces the new applicants' pay, while a diversification of networks can raise their pay. In a market with information asymmetry, the 'lemon effect'—that is, the decrease in the market equilibrium wage induced by the increase in network density (Montogomery, 1991)—is caused by network extension or pursuance of similar networks, while network diversification raises referral wages through a bargaining effect (Kono, 2006). Empirically, Munshi and Rosenzweig (2006) noted that male 'working-class/lower-caste networks' in Bombay continue to channel boys into local language schools that lead to traditional occupations, although returns to non-traditional white-collar occupations rose substantially in the 1990s. On the whole, the benefits of the network come with social obligations (Luke and Munshi, 2006) and thus may result in sluggish or no upward mobility of both the contact persons and the new entrants. Munshi (2003) observed that there is an externality associated with the individual's migration decision: the members of the Mexican migrant group in the US face a strong pressure to remain in the low-skill jobs that have traditionally been chosen to maintain the stability of the network. In other words, stability of the network has implications in terms of low levels of education and low-skill occupations.

On the whole, the debate in the area of social capital and urban job market accessibility relates, on the one hand, to the importance of networks in seeking a livelihood and, on the other, to the negative role of social capital in experiencing upward mobility. In the context of migration, the most pertinent issue revolves around the possible economic gains associated with population mobility.[2] From an empirical stand-point, the present paper therefore proposes to examine two specific questions. First, how important the informal networks are in accessing jobs; secondly, whether the informal networks tend

to restrict upward mobility in the long run: a related question is whether migrants tend to improve their well-being at the place of destination.

3. Survey Data

The survey of slum households was carried out in 2006–07 in four cities in India, based on a three-stage stratified random sampling technique. It was sponsored by UNDP and the Government of India under the JNNURM (Jawaharlal Nehru National Urban Renewal Mission) programme to alleviate urban poverty. Four cities (with a sample size of 500 households from 30 clusters in each city) were selected, keeping in view the variability of the cities in terms of population size and other demographic and economic characteristics. The sample population size is 2979 in Jaipur, 2425 in Ludhiana, 2980 in Mathura and 2545 in Ujjain.

Characteristics of the Four Cities

Before turning to the details of the sampling procedure, it may be useful to provide a brief description of the four cities included in our analysis.

These four cities are different not only in terms of population size, but also in terms of activities. While Jaipur, the state capital of Rajasthan, is a million-plus city (population size: 2.33 million) dominated by tourism and other service-related activities, Ludhian is an industrial city with a population size of 1.4 million. Although Mathura has one or two big industries in and around the city, it is a religious centre with a population base of 0.32 million. Ujjain is of both historical and religious importance with a comparable population size of 0.43 millilon. All the four cities belong to a group of 63 cities identified for the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The list of these JNNURM cities has been prepared by the government of India based on several criteria such as population size, importance in terms of industrial and other economic activities and cultural and historical heritage. Under the urban renewal mission, massive investment is being carried out over a period of seven years beginning from the year 2005/06, in urban infrastructure and basic amenities for the urban poor. Since the survey could not be conducted in all these 63 cities involved in the UNDP–GOI project, we selected only four cities in order to capture the variability, if any.

Other than the population size, as evident from Table 1, considerable variations exist in terms of sex ratio (number of females per thousand males) across cities. The female literacy level also shows wide differences, although the figures for Ludhiana and Ujjain are very similar. The variations in terms of occupational structure could not be noted because the detailed listing from the 2001 Census is not available at the city level. Manufacturing (other than household) and all the components of the services sector (wholesale and retail trade and hotels etc., transport, storage and communication, finance real estate and business services and community, social and personal services) which are indeed more specifically urban in nature have been grouped together and recorded as 'all other activities'. However, the migration rate—defined as the gross decadal (1991–2001) inflow of population from the rural areas to the city as a percentage of total city population in 2001—shows large differences across cities. The interstate migration rates are usually low and lower than the intrastate rates, primarily because of the intercultural, social and linguistic differences that exist across Indian states. However, in the case of Ludhiana, the interstate rates are substantially higher than the intrastate rates. Ludhiana being an industrial city, many migrant job-seekers from neighbouring states have possibly moved in. Secondly, among the intrastate migrants, the female rates across

Table 1. Cities at a glance in 2001 (percentages unless stated otherwise)

Socioeconomic characteristics	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
Social composition				
0–6 age group	15.18	12.1	15.12	12.92
Scheduled caste	12.62	13.09	13.07	17.64
Scheduled tribe	3.74	—	0.01	1.93
Sex ratio (female per 1000 males)				
Juvenile	882	819	861	912
Adult	876	763	869	922
Scheduled caste	892	832	868	927
Scheduled tribe	841	—	928	841
Literacy level				
Person	66.21	70.18	60.22	71.5
Male	73.44	72.36	66.24	77.46
Female	57.97	67.32	53.3	65.03
Work participation rate				
Person	28.34	34.81	23.66	27.52
Male	46.55	55.8	40.48	44.35
Female	9.31	8.88	6.29	11.76
Total population (millions)	2.33	1.4	0.32	0.43
Rural–urban migration rate				
Intrastate (male)	4.04	2.25	2.72	3.09
Intrastate (female)	4.71	3.46	4.72	4.56
Interstate (male)	1.64	11.63	1.05	0.64
Interstate (female)	1.22	5.23	1.74	0.85
Cultivators	2.62	0.51	0.9	1.54
Agricultural labourers	0.48	1.37	0.6	1.46
Household manufacturing	5.09	5.78	7.01	4.16
All other activities	91.81	92.34	91.48	92.84

Notes: The rural–urban migration rate is defined in terms of the gross decadal (1991–2001) flow of population from rural to urban areas as a percentage of total urban population in 2001. Since the city-specific rates are not available, these are district level rates.
Source: Population census, 2001.

the cities are sizeably larger than their male counterparts, mainly because of the influence of social factors including marriage.

The work participation rate, defined as the ratio of the number of working persons to the total population, brings out substantial differences, sex-wise. These differences are indeed a reflection of gender inequality in the labour market, which is an outcome of social and cultural factors and, more importantly, differences in human capital formation. Even among the males, differences exist across cities. Ludhiana being an industrial city, recorded the highest male participation rate. On the other hand, Ujjain, being a religious and cultural centre, does not show much economic dynamism and, therefore, in the face of poor levels of living women are possibly forced to participate in the labour market: the female work participation rate is around 12 per cent which is higher than that in other three cities, including even the largest one (Jaipur). These indicators are suggestive of significant differences in the labour market across cities.

Sampling Framework

As a first step in the sampling framework, each city was divided into several administrative districts or zones and the slum clusters—the list of which was obtained from the city municipality[3]—were distributed across these zones: $Z(i)$s, $i = 1, 2, ...$ Secondly, 30 clusters were selected from these zones on the basis of random sampling, using the proportion of the number of clusters in each zone to the total clusters as a weight

$$30 * C(i)/ \Sigma C(i)$$

where, $C(i)$ is the number of clusters in zone Z(i).

Finally, 500 households from each of the four cities were selected from these clusters on the basis of random sampling, using the ratio of the number of households in each cluster to the total number of households in the 30 clusters as a weight

$$500 * N(j)/ \Sigma N(j)$$

where, $N(j)$ is the number of households in cluster $j = 1, 2, ..., 30$.[4]

In the questionnaire, social capital has been conceptualised in terms of social networks from an empirical stand-point. Different channels through which job market information is accessed provide clues to the social capital that an individual possesses. The migration status of the household head and each of the members of the household has been recorded by entering the date of entry of the individual to the place of destination. Finally, information on the past and present income and occupation of the workers has been recorded to delineate the intertemporal changes, if any.

4. Broad Patterns

The occupational distribution of slum workers has been prepared on the basis of the survey data which included a detailed list of activities along with the nature of employment. Table 2 gives a cross-classification of workers in the four cities by their occupational categories and the nature of employment such as regular wage/salaried employment, casual employment and self-employment. Results for four cities are presented in four parts in Table 2. The findings show that a sizeable percentage of workers have been engaged as daily-wage earners, particularly in the cities of Jaipur and Ujjain[5]. On the other hand, Ludhiana, which is an industrialised city, shows only one-fifth of the workers in this category, while nearly half of the workers are employed in regular wage or salaried jobs. This tends to suggest that the city's economic structure is a major determinant of the occupations that the low-income households are engaged in. Secondly, there are significant variations in the nature of employment across occupation categories. While some of the occupations are largely characterised by regular wage or salaried jobs, certain others comprise self-employed or daily-wage workers to a large extent.

The occupational distribution from Table 2 also shows that sales and trade account for the largest percentage (27–30 per cent) of the total slum workers, except in Ujjain. This category of labour comprises nearly 34 per cent in Ujjain. On the other hand, as expected, Ludhiana shows a higher share of manufacturing than Jaipur and Mathura. However, Ujjain, which is not an industrialised town, too, shows a figure comparable to that of Ludhiana. It is important to mention here that similarity in terms of broad occupation category does not mean similarity in terms of economic activity carried out at the individual level. For example, in Ujjain a large percentage of the workers are engaged in the production of incense sticks, which raised the percentage share of manufacturing in total workers, whereas in Ludhiana many of them are actually employed in the industrial sector. On the whole, both in terms of nature of employment and the occupational distribution, a very large

Table 2. Percentage distribution of workers, by occupations and nature of employment

	Distribution of each category of workers across occupations				*Workers in each occupation by nature of employment*			
Present occupation	*Daily wage*	*Regular wage/salaried*	*Self-employed*	*All workers*	*Daily wage*	*Regular wage/salaried*	*Self-employed*	*All workers*
Jaipur (n = 960)								
Semi-professional	0	22.02	1.72	8.09	0.00	94.87	5.13	100
Sales and trade	11.14	33.33	53.65	29.15	15.66	39.86	44.48	100
Personal services	4.56	21.73	8.15	11.41	16.36	66.36	17.27	100
Manufacturing and repair	15.44	3.87	3.86	8.61	73.49	15.66	10.84	100
Communications and security	3.04	4.76	0.43	3.01	41.38	55.17	3.45	100
Transport	18.48	4.17	13.30	12.24	61.86	11.86	26.27	100
Tailoring	9.37	5.36	8.58	7.78	49.33	24.00	26.67	100
Construction	29.62	2.68	1.29	13.38	90.70	6.98	2.33	100
Labour	6.33	1.19	0.00	3.01	86.21	13.79	0.00	100
Others	2.03	0.89	9.01	3.32	25.00	9.38	65.63	100
Total	100	100	100	100	40.98	34.85	24.17	100
Ludhiana (n = 813)								
Semi-professional	1.72	17.99	3.73	9.88	3.70	83.95	12.35	100
Sales and trade	9.20	21.96	47.01	27.44	7.11	36.89	56.00	100
Personal services	2.30	6.61	3.73	4.76	10.26	64.10	25.64	100
Manufacturing and repair	17.24	22.49	13.81	18.54	19.74	55.92	24.34	100
Communications and security	4.02	4.50	3.73	4.15	20.59	50.00	29.41	100
Transport	6.32	6.61	4.85	5.98	22.45	51.02	26.53	100
Tailoring	31.61	10.58	8.96	14.51	46.22	33.61	20.17	100
Construction	9.20	3.17	2.61	4.27	45.71	34.29	20.00	100
Labour	16.67	2.12	0.37	4.63	76.32	21.05	2.63	100
Others	1.72	3.97	11.19	5.85	6.25	31.25	62.50	100
Total	100	100	100	100	21.22	46.10	32.68	100

(Continued)

Table 2. (Continued)

Present occupation	Distribution of each category of workers across occupations				Workers in each occupation by nature of employment			
	Daily wage	*Regular wage/salaried*	*Self-employed*	*All workers*	*Daily wage*	*Regular wage/salaried*	*Self-employed*	*All workers*
Mathura (n = 787)								
Semi-professional	0.00	30.74	3.01	10.85	0.00	90.36	9.64	100
Sales and trade	12.94	137.70	59.77	29.80	14.47	15.79	69.74	100
Personal services	3.14	11.07	4.51	6.14	17.02	57.45	25.53	100
Manufacturing and repair	11.76	18.85	10.15	13.46	29.13	44.66	26.21	100
Communications and security	0.39	4.92	0.38	1.83	7.14	85.71	7.14	100
Transport	10.98	6.97	10.15	9.41	38.89	23.61	37.50	100
Tailoring	3.14	3.28	2.26	2.88	36.36	36.36	27.27	100
Construction	12.16	3.69	1.88	5.88	68.89	20.00	11.11	100
Labour	39.61	1.64	0.00	13.73	96.19	3.81	0.00	100
Others	5.88	4.10	7.89	6.01	32.61	21.74	45.65	100
Total	100	100	100	100	33.33	31.90	34.77	100
Ujjain (n = 945)								
Semi-professional	0	23.43	0.00	5.77	0.00	100.00	0.00	100
Sales and trade	4.95	23.85	56.15	19.46	14.29	30.16	55.56	100
Personal services	1.65	21.34	2.14	6.59	14.06	79.69	6.25	100
Manufacturing and repair	21.28	13.39	19.25	18.95	63.04	17.39	19.57	100
Communications and security	0.18	10.04	0.53	2.68	3.85	92.31	3.85	100
Transport	2.02	4.60	3.21	2.88	39.29	39.29	21.43	100
Tailoring	1.65	0.42	4.81	1.96	47.37	5.26	47.37	100
Construction	6.79	2.09	1.07	4.53	84.09	11.36	4.55	100
Labour	60.18	0.84	0.53	34.09	99.09	0.60	0.30	100
Others	1.28	0.00	12.30	3.09	23.33	0.00	76.67	100
Total	100	100	100	100	56.13	24.61	19.26	100

Note: The first four columns of figures represent the percentages relative to column total, and the rest are relative to row total.
Source: Based on survey data (2006/07).

percentage of workers seem to be engaged in low-productivity tertiary activities conducted in the lower rungs of the informal sector. There are, however, certain exceptions to this—for example, workers employed informally in the formal sector.[6]

The distribution of workers by level of education further corroborates these patterns, indicating that workers across cities have been either illiterate or studied only up to primary level (table not given in the paper). Other vocational training, which we have tried to capture in terms of non-formal education, was acquired only by a limited few (except in Jaipur). Turning to the migration status of the households, Table 3 shows that non-migrants account for a very significant percentage of the total. This does not come as a surprise because the survey was carried out in the registered slums in the cities, implying that the clusters have existed for a considerably long period of time. Also, it is evident from Table 3 that more than 10 per cent of the households had lived in the city for more than 15 years. On the other hand, the extremely short-duration migrants (those who had migrated in the past 1 year only) accounted for at most 4 per cent of total households. Another factor which explains a high incidence of non-migrants is that the cities considered in our survey are very old in nature and hence it is possible that a large percentage of the population might have been second- or third-generation migrants who are treated as natives. All this, however, brings out the inadequacy of rural development programmes in tackling the phenomenon of urban poverty. For a long time in the Indian context, the policy planners interpreted urban poverty as a spill-over of rural poverty and hence, argued only in favour of rural development programmes (Dandekar and Rath, 1971). The realisation of the fact that urban poverty and urban slums are persistent in nature came only in the past 20 years.

The next issue relates to the importance of networks. Table 4 categorises individuals into those who used their own initiative in accessing jobs and those who used a network (based on caste/kinship bonds, friendship, etc.). Of course, networks also include some of the formal channels of information flow such as NGOs and employment exchanges, although these networks were only of nominal benefit. Most of the networks used by job-seekers are informal in nature and the percentage of workers using networks in accessing jobs also tends to vary considerably across cities (Table 4). In Jaipur around half, in Ludhiana and Mathura one-third and in

Table 3. Percentage distribution of sample population by migration status

Time since migration	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
Up to one year	0.77	4.29	3.96	2
More than 1 and up to 3 years	1.88	5.15	4.97	3.14
More than 3 and up to 5 years	2.69	5.07	4.3	2.71
More than 5 and up to 7 years	1.31	3.88	2.75	2.28
More than 7 and up to 10 years	2.95	5.44	6.78	3.18
More than 10 and up to 15 years	3.59	6.56	4.8	3.58
More than 15 years	10.37	16.29	11.85	10.96
Non-migrants	76.44	53.32	60.6	72.14
Total	100	100	100	100

Notes: The sample population size is 2979 in Jaipur, 2425 in Ludhiana, 2980 in Mathura and 2545 in Ujjain.
Source: see Table 1.

Table 4. Percentage distribution of workers by migration status and network use

	Jaipur		*Ludhiana*		*Mathura*		*Ujjain*	
Migration	*Self-Initiative*	*Network*	*Self-initiative*	*Network*	*Self-initiative*	*Network*	*Self-initiative*	*Network*
Up to 1 year	0	100	48.84	51.16	70.00	30.00	72.73	27.27
More than 1 and up to 3 years	56.25	43.75	57.41	42.59	74.29	25.71	80.95	19.05
More than 3 and up to 5 years	53.57	46.43	56.00	44.00	60.71	39.29	83.87	16.13
More than 5 and up to 7 years	55.56	44.44	66.67	33.33	62.96	37.04	85.71	14.29
More than 7 and up to 10 years	54.55	45.45	64.41	35.59	77.78	22.22	81.25	18.75
More than 10 and up to 15 years	50.00	50.00	74.03	25.97	70.00	30.00	76.09	23.91
Above 15 years	55.03	44.97	80.71	19.29	78.57	21.43	69.29	30.71
Non-migrants	45.81	54.19	64.13	35.87	62.56	37.44	78.31	21.69
Total	48.31	51.69	67.34	32.66	67.33	32.67	77.43	22.57

Notes: 'Self-initiative' represents the percentage of workers who accessed jobs through their own initiative and 'Network' represents the percentage of workers who used networks. The total number of workers is 960 in Jaipur, 813 in Ludhiana, 787 in Mathura and 945 in Ujjain.
Source: See Table 1.

Ujjain one-fourth of the workers accessed jobs through networks. Secondly, there is a somewhat mild, although increasing, tendency to use networks among the very recent migrants, which tends to decline with a rise in the duration of migration, particularly in the cities of Jaipur and Ludhiana. However, the importance of networks is slightly lower among the migrants than the non-migrants in these cities, except in Ujjain. This goes against the prevalent notion that migrants are the ones who use networks to a larger extent.

The percentage of workers accessing networks varies considerably across occupations (Table 5). Tailoring and manufacturing are some of the activities in which the percentage of workers using networks is larger than that in other activities. Similarly, based on the percentage figures, those working as construction workers and other labourers seem to be using networks relatively less,[7] possibly because the role of labour contractors in these activities has become dominant (Table 5). While information on jobs in some activities flows through networks, in some others individual efforts are more important. For example, self-employment in sales and trade does not require any information from others, while accessing a job in the industrial sector has to be based on information flow.

5. Occupational and Income Mobility

Methodology

In order to understand the extent of mobility in terms of occupation and income, we have followed the following methodology. First, workers for whom the occupational and income details were available for the current year (at the time of the survey) and for the past (at the time of first entry into the job market in the city) have been cross-classified in terms of various occupation and income categories as

Table 5. Percentage distribution of workers by occupation and network use

	Jaipur		*Ludhiana*		*Mathura*		*Ujjain*	
Occupation	*Self-Initiative*	*Network*	*Self-initiative*	*Network*	*Self-initiative*	*Network*	*Self-initiative*	*Network*
Semi-professional	45.57	54.43	70.37	29.63	74.12	25.88	70.59	29.41
Sales and trade	44.17	55.83	62.78	37.22	56.65	43.35	71.74	28.26
Personal services	47.22	52.78	72.50	27.50	59.18	40.82	72.58	27.42
Manufacturing and repair	40.24	59.76	66.45	33.55	44.04	55.96	67.03	32.97
Communications and security	41.38	58.62	70.59	29.41	60.00	40.00	75.00	25.00
Transport	58.62	41.38	81.63	18.37	76.71	23.29	78.57	21.43
Tailoring	41.89	58.11	64.41	35.59	50.00	50.00	47.37	52.63
Construction	63.57	36.43	65.71	34.29	76.09	23.91	90.24	9.76
Labour	34.48	65.52	79.49	20.51	75.00	25.00	88.89	11.11
Others	51.61	48.39	71.43	28.57	61.70	38.30	76.19	23.81
Total	48.33	51.67	67.77	32.23	62.64	37.36	77.57	22.43

Note: The total number of workers is 960 in Jaipur, 813 in Ludhiana, 787 in Mathura and 945 in Ujjain.
Source: See Table 1.

per present and past status. In the second step, to identify the determinants of upward mobility, a binomial logit framework has been used. Those who experienced an upward change have been distinguished from the reference category formed by those whose income either remained unchanged or did not undergo any improvement over time. Both these categories are represented by $Y = 1$ and $Y = 0$ respectively so that

$$\text{Prob}\,[Y = 1] = \text{F}\,(\mathbf{X}, \mathbf{b})$$

$$\text{Prob}\,[Y = 0] = 1 - \text{F}\,(\mathbf{X}, \mathbf{b})$$

The set of parameters **b** reflect the impact of changes in the set of explanatory variables (represented by vector **X**) on the probability. The logistic distribution is given by

$$\text{Prob}\,[Y = 1] = \exp\,(\mathbf{b}'\mathbf{X})/1 + \exp\,(\mathbf{b}'\mathbf{X})$$

Broad Findings

The distribution of workers in terms of their present and past (entry-point) occupation categories shows that, while a large percentage of workers in each of the categories has remained in the same occupation over time, interoccupational mobility has also taken place. For example, of the total workers in Jaipur engaged presently as semi-professionals, around 19 per cent worked earlier in sales and trade. Similarly, among those who are working in sales and trade presently, nearly 30 per cent shifted from manufacturing and repair. In other cities, this pattern is also evident. However, what is interesting to note is that intraoccupational mobility is a significant phenomenon in comparison with interoccupational mobility. Only in the case of construction and labour categories, is interchangeability prominent. Intraoccupational mobility is more prevalent because individuals feel that the experience and resources acquired from a particular job can be utilised optimally by continuing in the same occupation for a long period. On the other hand, the possibility of interoccupational mobility is indicative of the dynamic nature of the city's economic structure and, hence, the dominance of intraoccupational mobility over interoccupational mobility can

be interpreted as a lack of dynamism in the labour market manifested in an increasing demand for labour.

Quite consistent with this fact is the phenomenon of income mobility. The distribution of workers across various income size classes formed on the basis of present and past income shows that downward income mobility has also taken place over time. Even in terms of current prices—i.e. without adjusting the incomes for price changes—workers seem to have shifted from higher income classes as per the past incomes to lower income classes as per the present incomes.[8] While, without networks or social capital, access to job market information is almost inconceivable, the informal networks have the disadvantage of creating excess supplies of labour thus restricting the possibility of upward mobility. In what follows, we have pursued this point further.

Econometric Analysis of Upward Mobility

In order to identify the determinants and the possibilities of upward mobility among the low-income households, we have used a binomial logit framework, as already mentioned. The variables included in the model to identify those which raise (or reduce) the probability of experiencing upward mobility are: household size, gender (taken in the form of a dummy with 0 for males and 1 for females), age of the worker as a proxy for job market experience, levels of education of the worker taken in terms of three dummies with illiteracy as the comparison category (EDU1 takes a value of 1 for those who studied up to primary level and 0 otherwise; EDU2, 1 for those who studied above primary level but up to secondary and 0 otherwise; EDU3, 1 for those who studied above secondary and 0 otherwise), migration status taken in terms of four dummies with non-migrants as the comparison category (MIGD1 takes a value of 1 for those who migrated in the past 5 years, MIGD2, 1 for those who migrated in the past 5–10 years, MIGD3, 1 for those who migrated in the past 10–15 years, and MIGD4, 1 for those who migrated more than 15 years ago), occupation categories based on dummies and, finally, the types of network that the workers used in accessing the job market information. Nine dummies (OCCPi = 1 ... 9) have been used for the nine occupation categories taking other workers (or unspecified workers) as the comparison group. The nine occupations are: semi-professionals, sales and trade, personal services, manufacturing, commercial service and security workers, transport, tailoring, construction and labour. Four network dummies (NETi = 1 ... 4) have been used, taking those who depended on their own initiative as the comparison category. NET1 takes a value of 1 for those who used the connections with family members to access the job market information. NET2 refers to those who accessed jobs through general relatives (other than family members or close relatives). NET3 represents friends, neighbours, members of the same caste group, co-villagers, etc. NET4 corresponds to formal institutions like employment exchanges or any welfare organisation run by NGOs, employers of the previous or current jobs, etc. Recalling the hypothesis, our major objective is to examine if the traditional or informal networks tend to reduce the probability of upward mobility although offering survival strategies.

The empirical results suggest that networks operating through close relatives neither enhance nor reduce the probability of upward mobility (Table 6). On the other hand, networks, which include general relatives (other than close relatives), reduce the probability of upward mobility in Jaipur. Mathura also shows a similar effect, although not significant at the 10 per cent level. In the other two cities, the networks of general relatives turn out to be highly insignificant. Networks, which represent friends,

Table 6. Network and Upward Income Mobility: Binomial Logit Model (Maximum Likelihood Estimates)

Explanatory Variables	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
Age of worker	0.018	0.022	0.019	0.032
	(2.79)**	(2.30)**	(2.22)**	(4.01)**
Household size	–0.010	0.530	–0.059	0.023
	(–0.48)	(1.15)	(–1.40)	(0.52)
Gender dummy	–0.068	–1.167	–0.047	–0.493
	(–.0.32)	(–2.29)**	(–0.11)	(–1.70)*
Primary education	0.104	–0.479	–0.933	–0.112
	(0.57)	(–1.56)	(–2.39)**	(–0.42)
Secondary education	0.003	–0.336	–0.160	–0.299
	(0.02)	(–1.35)	(–0.59)	(–1.02)
Above secondary	0.261	–0.233	–0.407	0.257
	(0.84)	(–0.65)	(–1.21)	(0.65)
Migration in past	–0.412	–0.384	–1.014	–0.051
5 years	(–1.30)	(–1.02)	(–2.41)**	(–0.13)
Migration: >5 to	0.212	–0.230	–0.353	–0.439
10 years	(0.70)	(–0.61)	(–0.90)	(–0.93)
Migration: >10 to	0.322	0.345	0.058	–0.235
15 years	(1.01)	(1.03)	(0.14)	(–0.46)
Migration: >15 years	0.314	0.147	0.064	–0.336
	(1.56)	(0.54)	(0.21)	(–1.05)
NET1 (family	0.061	–0.160	–0.064	–0.426
members)	(0.31)	(–0.47)	(–0.21)	(–0.83)
NET2 (General	–0.645	0.193	–1.343	0.314
Relatives)	(–2.78)**	(0.43)	(–1.3)	(0.54)
NET3 (friends,	–0.372	–0.424	0.408	–0.605
neighbours etc.)	(–1.84)*	(–1.29)	(0.98)	(–1.53)
NET4 (Formal	–0.298	2.35	0.589	1.528
institutions)	(–0.46)	(1.47)	(1.29)	(2.95)**
OCCP1 (Semi–	–.0708	–0.540	0.341	0.143
professionals)	(–1.50)	(–1.10)	(0.58)	(0.19)
OCCP2 (Sales and trade)	–0.158	–0.336	0.560	–0.012
	(–0.38)	(–0.85)	(1.06)	(–0.02)
OCCP3 (Personal	–0.577	–0.265	–0.193	–1.379
services)	(–1.29)	(–0.47)	(–0.29)	(–1.51)
OCCP4	–0.170	–0.572	–0.149	–0.311
(Manufacturing)	(–0.37)	(–1.32)	(–0.24)	(–0.41)
OCCP5 (Commercial	–0.743	–0.932	1.279	0.454
services)	(–0.79)	(–1.31)	(1.66)*	(0.55)
OCCP6 (Transport)	–0.218	–0.790	0.349	–0.039
	(–0.49)	(–0.16)	(0.59)	(–0.05)
OCCP7 (Tailoring)	–0.753	–0.614	–0.195	–0.568
	(–1.60)	(–1.29)	(–0.21)	(–0.54)
OCCP8 (Construction)	–0.436	–0.729	1.004	0.263
	(–1.00)	(–1.12)	(1.65)*	(0.33)

(Continued)

Table 6. (Continued)

Explanatory Variables	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
OCCP9 (Labour)	−0.503	0.529	−0.695	−0.339
	(−0.91)	(1.06)	(−1.12)	(−0.48)
Constant	0.077	−1.951	−1.874	−2.715
	(0.16)	(−3.35)**	(−2.68)**	(−3.10)**
χ^2	40.85	52.05	48.72	53.78
Number of observations	903	796	722	887

Notes: ** and * represent significance at the 5 and 10 per cent levels respectively. Given the large sets of observations in each of the four cities, we have considered significance at the 10 per cent level also instead of judging it at the 5 per cent level only. The chi-squared values are significant at the 1 per cent level.
Source: Based on survey data (2006/07).

neighbours, members of the same caste group, co-villagers, etc., reduce the probability of upward mobility in Jaipur. Although a similar effect is also evident in Ludhiana and Ujjain, it is not significant at the 10 per cent level. On the other hand, NET4, representing formal institutions, raises the probability of upward mobility in all the cities except Jaipur. Strictly speaking, although it is statistically significant only in Ujjain, the effect is not completely negligible in Ludhiana and Mathura. On the whole, these findings tend to suggest that informal networks do not show any strong effect on upward mobility while formal networks do reveal such a tendency. This is despite the fact that the informal networks are indeed inevitable in providing an access to the urban job market in the initial stages.

Among the other variables, the age of the worker is an important determinant of upward mobility. Household size (although not significant at the 10 per cent level) shows a negative effect in Mathura. Education does not show any positive effect on upward mobility. Migrants who moved to the city in the past five years were less likely to improve their income compared with other long-duration migrants and non-migrants. The very-long-duration migrants (more than 15 years) show a higher probability of experiencing upward income mobility only in Jaipur—although it is hardly significant at the 10 per cent level.

6. Well-being of the Slum Households

In order to pursue the issue of upward mobility further, we intend to examine if the well-being of migrant households tends to improve at the place of destination with a rise in the duration of migration. For this, we first need to construct a well-being index at the household level for which various dimensions of poverty rather than only income or consumption poverty have to be considered. However, the other aspects include only those which are quantifiable.

The following variables have been combined to construct the household-specific well-being index: household size, child–woman ratio, per capita consumption expenditure,[9] proportion of persons in the household who reported illness, percentage of household members who acquired at least primary level education, percentage of members in the age group 15–59 (which is a proxy for adult potential earners), percentage of working individuals, age of the household head/principal earner taken as a proxy for experience in the job market, health expenditure per capita and per capita household income. Variables such as household size, child–woman ratio and the percentage

Table 7. Factor loadings from the significant factor

Variables	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
Household size	–0.24249	–0.2870	–0.23875	–0.21306
Per capita consumption expenditure	0.31847	0.36047	0.39325	0.36662
Percentage of members with primary education	–0.09208	0.17426	0.14379	0.14023
Per capita household income	0.34237	0.30792	0.28774	0.34142
Health expenditure per capita	0.04937	0.10	0.15056	0.10359
Child–woman ratio	–0.65278	–0.84593	–0.81161	–0.79265
Percentage of ill population	0.06632	0.0145	0.06734	0.03419
Percentage of members in the age group 15–59	0.77230	0.78747	0.78868	0.77967
Age of the household head or the principal earner	0.16166	0.09205	0.20811	0.15901
Percentage of working individuals	0.61494	0.43949	0.39971	0.32805
Eigen–value	2.255 (22.55)	2.8278 (22.28)	2.484 (24.84)	2.4205 (24.205)

Note: Figures in parentheses represent the percentage of total variation explained by the significant factor.

of ill members in the household, are likely to reduce the well-being of the household. Health expenditure per capita on an *a priori* basis may raise the well-being of the household if it tends to enhance productivity; however, it may reduce well-being if it is incurred at the expense of consumption of essential items. On the other hand, other variables would be expected to enhance well-being. Since these variables are heterogeneous, it is difficult to combine them to indicate an overall living standard of the households. Factor analysis has been conducted and, using factor loadings as weights from the rotated matrix (using the varimax rotation technique in order to obtain statistically independent factors), variables have been combined to generate a composite index of well-being, denoted as WELLINDEX(i). This needs to be repeated for each of the significant factors (factors with eigenvalues greater than one)

$$\text{WELLINDEX}\ (i) = \sum_{j=1}^{n} FL_j\,(i)\ X_j$$

where, FL is the factor loading; $j = 1, \ldots n$ corresponding to the number of variables, and i represents the ith significant factor.

In the second stage, the composite indices generated on the basis of factor loadings for each of the significant factors have to be combined using the proportion of eigenvalues as weights

$$\text{WELLINDEX} = \sum_{i=1}^{k} \left[\frac{EV(i)}{\sum EV(i)} \right]$$

for: WELLINDEX (i) k < n

where, i ranges from 1 to k, the number of significant factors.

Results of the factor analysis suggest the presence of only one significant factor in each of the four cities (Table 7). The factor loading

Table 8. Percentage distribution of households as per the well-being index

Size class	*Jaipur*	*Ludhiana*	*Mathura*	*Size Class*	*Ujjain*
Upto 200	1.2	3.6	7.6	Upto 200	8
201–400	24.6	28.2	49.2	201–400	53
401–600	37.4	29.8	24	401–600	27.4
601–1000	27.8	25	14.2	601–800	8.8
1001–1500	6.6	9.2	3.6	800 and above	2.8
1501 and above	2.4	4.2	1.4		

Source: Based on survey data (2006-07).

of household size takes a negative sign, which suggests that it reduces the well-being of the households. Household income per capita and consumption expenditure per capita both take positive factor loadings, although in terms of magnitude they are moderate like household size. On the higher side are the child–woman ratio, the percentage of household members in the 15–59 age group and the proportion of the number of working members to the total household size. While the child–woman ratio reduces well-being, the other two variables show a positive effect. Education, although highly moderate in terms of magnitude, shows a positive effect except in Jaipur. Health expenditure per capita also shows a positive effect, although magnitude of the factor loadings is quite low.

The well-being index constructed on the basis of the factor loadings indicates that in Jaipur and Ludhiana 26 and 32 per cent of the households respectively are located in the bottom two size classes (Table 8). However, in Mathura and Ujjain, the corresponding figures are 57 and 61 per cent respectively. It is interesting to note that these figures are substantially lower than the incidence of consumption poverty, which is 66.8 per cent in Jaipur, 43.6 per cent in Ludhiana, 75 per cent in Mathura and 88.2 per cent in Ujjain.[10]

The next issue is whether the well-being index improves with a rise in the duration of migration and whether the non-migrants or natives are better off compared with the migrants. In Jaipur, Ludhiana and Mathura migrants of up to three years' duration registered a high index of well-being—in fact, it is highest in Ludhiana and Mathura (Table 9). Excluding this group, the index tends to improve with the duration of migration in Jaipur, Ludhiana and Ujjain, whereas in Mathura it shows a declining tendency after reaching a peak for those who have been staying for 7–10 years.[11] Thirdly, the well-being index of migrants of very long duration (15 years and above) is close to that of the non-migrants in Jaipur, Ludhiana and Mathura. It is only in Ujjain that the non-migrants show a lower index value compared with the migrants of 15 or more years' duration. On the whole, we may note that, over time, migrants tend to improve their well-being at the place of destination. And hence, any attempt to stop migration to cities may turn out to be counter-productive, as well as being undemocratic. On the other hand, several of the long-duration migrants and the natives show a similar low level of well-being and a high incidence of poverty. Implementation of urban employment programmes is, therefore, essential for reducing urban poverty. Since many of the urban poor are not fresh migrants from the rural areas, this issue cannot be tackled merely in terms of rural development programmes.

Table 9. Well-being index and migration status

Migration	*Jaipur*	*Ludhiana*	*Mathura*	*Ujjain*
Up to 3 years	616.23	1028.30	671.36	239.58
	(400.72)	(456.20)	(335.79)	(10.19)
> 3 and up to 5 years	476.04	593.56	487.40	336.70
	(115.03)	(354.30)	(381.04)	(121.08)
> 5 years and up to 7 years	733.80	469.30	342.80	358.24
		(257.52)	(70.56)	(202.53)
> 7 years and up to 10 years	585.35	522.02	548.13	382.86
	(585.35)	(285.25)	(424.32)	(205.65)
> 10 years and up to 15 years	561.10	576.04	324.34	401.33
	(283.28)	(345.14)	(136.68)	(240.97)
Above 15 years	624.11	624.05	457.63	405.57
	(300.81)	(414.63)	(280.03)	(174.65)
Non-migrants	598.19	622.01	449.92	364.47
	(339.22)	(384.98)	(357.94)	(157.36)
Total	603.27	616.90	450.84	387.59
	(323.72)	(395.27)	(306.64)	(173.89)

Note: Figures in parentheses are standard deviations.
Source: Based on survey data (2006/07).

Finally, we turn to the activities which largely engage workers from households with a low well-being index. In Jaipur, personal services and sales and services and labourers account for a sizeable proportion of workers who belong to such households. In Ludhiana, workers from sales and trade and manufacturing account for a significant percentage of workers located in the lower rungs of well-being. This tends to suggest that, even in an industrialised city like Ludhiana, there is a possibility of locating low-income workers in the manufacturing sector. Mathura and Ujjain also follow more or less the same pattern: other than sales and trade, manufacturing and labouring are the two categories which account for a large percentage of workers at the bottom.

7. Conclusion and Policy

Relating to social capital (conceptualised in terms of various social networks), the study notes its significant role in providing job market information to low-income households in urban areas. In accessing the minimum sources of livelihood, social contacts are indeed helpful to the bulk of the workers engaged in the lower rungs of the informal sector, largely falling into the domain of low-productivity tertiary activities. Differences in types of network are found across activities, although most of them are informal in nature. On the whole, social capital operates as a survival strategy among the low-income households and from this point of view Putnam's work does provide a useful explanatory framework in understanding the intricacies of labour market functioning at least within the lower strata.

However, in the context of the upward mobility, there is no strong evidence to confirm possibilities of improving earnings through networks. On the contrary, traditional networks tend to reduce the possibility of upward mobility by creating information asymmetry and excess supplies

of labour in certain pockets and activities. Hence, government intervention is important from the long-term developmental point of view. Areas in which social capital plays a dominant role need to be identified first and then government initiatives can be made complementary to the individual initiatives so that the measures remain cost efficient. On the other hand, government measures which ignore the prevailing role of social capital may indeed turn out to be ineffective. On the whole, slum rehabilitation and livelihood issues cannot be treated separately and they need to be integrated with the survival strategies that the low-income households have developed on the basis of social capital.

The well-being index constructed on the basis of economic, social, cultural and demographic variables indicates that a sizeable percentage of the slum households are located in the bottom size classes. Certain activities are more vulnerable than others and these activities are concentrated primarily in the occupational categories of sales and trade, labour and personal services. However, the intercity variations in this respect are quite important. The relatively dynamic cities (Jaipur and Ludhiana) are better off compared with the other two (Mathura and Ujjain), indicating the possibility of interconnections between the economic structure of the city and the well-being of the residents.

In reference to the question of whether well-being improves with a rise in the duration of migration, findings tend to suggest that rural-to-urban migration has been somewhat beneficial for the workers and that any attempt to stop migration may turn out to be counter-productive. On the other hand, several of the long-duration migrants and the natives still have a low level of well-being and a high incidence of poverty. Therefore, implementation of urban employment programmes is indeed important for reducing urban poverty. Since many of the urban poor are not new migrants, rural development programmes alone will not be adequate to reduce urban poverty. The other policy dimension relates to education and health because these variables play an important role in determining the well-being of the households.

Urban poverty policy in India, however, has ignored many of these aspects. For a long time, it focused only on basic amenities and the public distribution system. Even under the recent urban renewal mission (JNNURM), infrastructure and the provision of basic amenities to the urban poor get the top priority in a handful of 63 cities. While investment in these areas is necessary, issues relating to livelihood, micro-credit, provision for training and skills upgrading, institutional support and health benefits to the workers from the low-income households need immediate attention.

Notes

1. The channels of information flow and support mechanisms at times are given exogenously in the sense that the contacts that job-seekers have with close relatives, members of the same caste groups and friends are an outcome of long-term interactions and familial ties carried over generations. However, in due course, some of the contacts are developed gradually and they are endogenous from the individual point of view. Channels operating through previous/present employers/colleagues are possibly some examples of such endogenously determined contacts.
2. In explaining migration across space, income differentials are taken as a motivating factor in moving people from low-income areas to relatively high-income areas (Harris and Todaro, 1970). Lall *et al.* (2006) synthesise the current state of knowledge concerning internal migration in developing countries.
3. The list of registered or recognised slum clusters is available with the local governments. Information on the unrecognised or unregistered slum clusters

is not available as a result of which these had to be left out.
4. On average, 17 households were taken from each of the 30 clusters in each of the four cities. The sample is representative of the slum population in each city.
5. Nearly half of the workers were employed in this category.
6. Although in our sample their number is quite small, this category of workers, as the macro data show, is on the rise in response to contractualisation pursued explicitly in recent years.
7. The exception is Jaipur.
8. Also, there are some who did not experience any change in real income.
9. It excludes health expenditure.
10. In India, the head count measure of poverty is estimated in relation to the poverty line which is expressed in terms of monthly per capita consumption expenditure. The poverty line is estimated at Rs 636 for Jaipur, Rs 533 for Ludhiana, Rs 585 for Mathura and Rs 599 for Ujjain for January 2007.
11. The regression of well-being index on the duration of migration of the household head, carried out only for the migrant households excluding the non-migrants, shows that only in Ujjain is there a statistically significant and positive relationship between the two.

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