Migration and Wellbeing at the Lower Echelons of the Economy: A Study of Delhi Slums

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Abstract

This paper based on a primary survey of households (2004-05) in the slum clusters of Delhi examines whether migrants are likely to experience upward mobility in their place of destination or alternatively, if they merely transfer their poverty from rural areas to large cities. First, a simple bifurcation of population in terms of poor and non-poor sub-groups is examined along with the incidence of poverty across different categories of occupations and non-workers. Then, an explanation of the variations in per capita expenditure across households is provided, and a binomial logit model (poor/non-poor) is developed identifying the variables which raise (or reduce) the probability of being non-poor (or poor). Next, an estimate of the wellbeing (deprivation) index is derived from factor analysis of a large

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number of variables including demographic and economic aspects of households. Empirical findings suggest that while duration of migration and the wellbeing index do not have a definite relationship, migrant households who have been in the city for a very long time have a higher wellbeing index on average than those who migrated in the last ten years. This tends to support the view that migrants do not merely transfer rural poverty to urban areas, and further that population mobility yields improvement in the living standard, if only in the very long term. Implementation of "employment-cum-shelter" support schemes in the urban areas may contribute to their wellbeing.

Keywords: wellbeing, migrant worker, slum
JEL classification: I31, I32, J61, R23

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1. Introduction

The voluminous literature on rural-urban migration and its causes encompasses a vast spectrum of social, cultural, and economic factors. One class of studies that long dominated policy planning in developing economies viewed migration in terms of the increasing pressure of population on farmland. A deficiency of reproducible tangible capital, as seen in the Harris-Todaro (1970) framework, exacerbates the problem of rural unemployment, underemployment, and poverty, thus pushing landless labor into cities (see Dasgupta, 1987). Another class of literature has assessed the impact of economic forces on migration in terms of domestic terms of trade squeezing agriculture, diffusion of technology from the developed world, and the flow of foreign capital into the urban infrastructure and into housing, power, transportation, and large scale manufacturing (Becker, Mills and Williamson, 1986).

In relation to job market information flow, past studies highlighted the role of informal channels operating though caste-kinship bonds, co-villagers, and other forms of "social capital" held by low-income households (Banerjee, 1986 and 1991, Kanapan,

1983 and Mitra, 2003). Strak (1995) showed ways in which the preferences and actions of one family member can impinge upon and modify the choice set, behavior, and wellbeing of another. On the whole, the issue of upward mobility (Kuznets, 1966) and the inter-play of various factors that qualify a migrant to experience upward mobility is complex, and rich quantitative information is required to lend support to theoretical underpinnings.

Though the overall rural-urban migration rates have been much lower compared to the historical experience of present day developed nations, migration from rural areas to million-plus cities in India has been rapid in spite of the lack of an adequate rural-urban continuum perceived in terms of both economic and cultural factors (Sundaram, 1989, Mitra, 1992 and Williamson, 1988). This may be due to a concentration of activities in large cities that gives rise to agglomeration economies (see Fujita and Thisse, 2003), particularly in the manufacturing industry in Asia, where industrial zones together with a combination of infrastructure and institutions play crucial roles in the development of industrial agglomerations (Kuchiki, 2005). On the whole, the pull factors in large cities in the face of push factors in rural areas have propelling effects on the rural population. Further, social networks, as mentioned above, help population mobility across space by supplying information to potential rural

migrants about job availability at the destination. Also, as Fujita and Weber (2004) point out at the international level, a higher degree of labor complementarities and a lower degree of cultural friction between natives and migrants, yield higher immigration flows. In fact, except for politically motivated violence along religious or caste lines and conflicts such as those in highly populated cities like Mumbai that have been instigated by builders in cooperation with political parties to grab land, there is little evidence of friction between natives and migrants in Indian cities, despite the limited and overused infrastructure that they must share.

For a long time, policy planners perceived migration to be a flow of rural poor and destitute in search of employment. Due to their absorption in low productivity informal sector jobs, urban poverty was seen as merely a "spill-over" effect of rural poverty (Dandekar and Rath, 1971). Even in the theoretical literature, the relationship between urban and rural poverty is perceived to be dominant. For example, Bhagwati and Srinivasan (1974) argue that a production subsidy policy should be extended to agriculture. Other studies suggest that the sluggish employment growth in the industrial sector, resulting from its limited spread and adoption of capital intensive technology, has led to a residual absorption of labor (both native and migrant) in the informal urban sector. From this point of view, there seem to be overlaps among informal sector

employment, slum dwelling, and poverty (Mitra, 1994). However, the elasticity of urban poverty with respect to rural poverty has been found to be negligible, and this suggests the inadequacy of rural development programmes to tackle urban poverty (Mitra, 1992). Further, an almost equal incidence of informal sector employment has been seen among both natives and migrants (Banerjee, 1986).

Determination of urban poverty extends far beyond labor market outcome. It cannot be captured only in terms of the head count ratio of poverty. Multiple dimensions of deprivation have been discussed in the past (Sen, 1981; 1985; Haq, 1995; World Bank, 2001). These dimensions include education, health, shelter, drinking water and sanitation, freedom, security, opportunity, asset, and vulnerability among others. In this context the present study examines the wellbeing of slum dwellers based on a micro survey carried out in Delhi (2004-05). The organization of the paper is as follows: Section 2 includes an examination of the employment characteristics of slum households and their living standard. Section 3 provides an explanation of inter-household variations in expenditure per capita in terms of employment characteristics and other household attributes. Based on a binomial logit framework, it examines if the probability of falling into poor households declines with a rise in duration of migration. Recognizing the limitations of the uni-dimensional headcount

measure, Section 4 includes the development of a deprivation (wellbeing) index based on factor analysis of a large number of diverse characteristics of households. A summary of major findings is presented in Section 5.

This study is based on data collected from a slum survey carried out by the first author in 2004-05 in Delhi[1]. A three-stage stratified random sampling technique was used. In the first stage, using the '*Jhuggi-Jhompdi*' list prepared by the Delhi Development Authority (DDA), slum clusters with 200 and more households were considered, and they were distributed across nine administrative zones. Given the fact that the sample was to be confined to a total of 30 clusters, the proportion of the number of clusters in each zone to the total (each with 200 and more households) was used as the weight in deciding the number of clusters to be picked up from each zone. Once the number of clusters to be picked up from a particular zone was estimated, the specific clusters were randomly selected. The proportion of the number of households in each of the sample clusters to the total households in 30 clusters was then calculated to assign weights in distributing about 200 sample households across the city. Finally, households were randomly selected for interviews.

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[1] This Survey is in line with earlier surveys conducted by the first author (See Gupta and Mitra, 2002 and Mitra 2003). We are grateful to Satendra Kumar and Vikas who worked as field investigators.

2. Incidence of Poverty among Migrants and Others

Based on Census data, those whose duration of migration extends up to one year are treated as seasonal migrants, those from one to three years as short duration migrants, those from three to five years as medium duration migrants, and those from five to ten years as long duration migrants (Mitra, 1994). Those whose duration of migration exceeds 10 years are seen to be as good as non-migrants since differentials in terms of job-market accessibility and other characteristics between fresh migrants and non-migrants are expected to subside over time. Hence, dividing the total number of population into migrants (duration being up to 10 years) and "others" (migrants of duration more than 10 years and non-migrants) we present certain descriptive characteristics below.[2] The incidence of poverty defined as the percentage of population below the poverty line in terms of minimum per capita consumption expenditure,[3] turns out to be 57.1 and 61.9 percent among migrants and "others" respectively (see Table 1). Such is quite surprising, as one would expect the incidence to be lower among the

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[2] In order to divide the individuals into migrant and "other" categories the migration status and duration of migration at the individual level are considered. At the household level this distinction is made in reference to household head/principle earner.

[3] The official poverty line of Rs. 56.6 per capita per month (in 1973-74 prices) has been adjusted for price changes using the consumer price index for Delhi to update it for the year 2004-05. The per capita consumption expenditure used in estimating poverty among the slum dwellers includes largely food along with some minor non-food items like fuel, washing soap, transport, etc.

non-migrants or migrants of very long duration.

Table 1: Percentage of Population below Poverty Line and Mean Monthly Household Income

	Migrant	Other
Percentage of Individuals below Poverty Line	57.08	61.85
No. of Total Individuals	226	899
Mean Household Monthly Income (Rs)	4,223	4,239
Household Size (persons)	4.85	5.53
	BPL Household	APL Household
Mean Household Monthly Income (Rs)	3,671.0	5,011.7
Household Size (persons)	5.76	5.06

Note 1: BPL (APL) stands for below (above) poverty line. Migrant and "other" households are defined on the basis of the migration status and duration of migration of the household head/principal earner. At the individual level to identify a person as migrant or "other" the migration status and duration of migration of the individuals are considered.

2: Migrant and "other" households are defined on the basis of the migration status and duration of migration of the household head/principal earner.

3: At the individual level to identify a person as migrant or "other" the migration status and duration of migration of the individuals are considered.

Source: Filed Survey 2004-05.

Next, we analyze each worker's poverty (non-poverty) status and income cross-classified by migration status. In other words we try to identify workers in different occupation groups who were poor (or non-poor) and migrant (or "other"). Based on a very detailed listing of specific occupations that each slum worker was engaged in (see Appendix), eight broad occupation categories were developed: semi-professional (OCCP1), sales and trade (OCCP2), personal services (OCCP3), manufacturing and repairing (OCCP4), commercial and security (OCCP5), transport

(OCCP6), tailoring (OCCP7) and construction (OCCP8) (again, see Appendix for details)[4]. The total numbers of workers and non-workers (including infants and very old persons) were 376 and 749 respectively. Corresponding to each of the occupation categories, the incidence of poverty was calculated among workers and non-workers, cross-classifying them as per their migration status (Table 2). Workers in the occupation categories of tailoring and knitting, transport, and construction, reported a higher incidence of poverty if they were migrants (up to 10 years of migration) compared to the category of "other" (representing those whose migration is more than 10 years in duration and non-migrants). However, in the rest of the occupation classes, workers belonging to the category of "other" seemed to have a higher incidence of poverty than those who were migrants of up to ten years duration. Among non-workers, both migrants and the category of "other" reported more than 60 per cent incidence of poverty, though the former was slightly (3 percentage points) lower than the latter. That migrants seemed to be relatively better off than others can be explained by the fact that they have strong informal channels of information flow. It is possible that in the sample, poor migrants of very long duration (more than 10 years) belonged to the

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[4] Some occupations like manufacturing and repairing were put together as the latter had few respondents. Similarly commercial services and security workers both were combined.

landless destitute class and hence decided not to return to rural areas even when they did

not manage to escape poverty in the place of destination. However, this is based on the

assumption that the intensity of urban poverty is possibly lower than its rural

counterpart. Before any final conclusion, it is important to make a more thorough

assessment in order to determine whether or not migrants of very long duration actually

did not fare well over time.

Table 2: Percentage of Workers below Poverty Line and Average Income by Occupation

	Percentage of Individuals below Poverty Line		Average Income (Rupees)			
	Migrant	Other	Migrant		Other	
Occupation			Poor	Non-Poor	Poor	Non-Poor
Semi-Professional	-	36.36	-	-	2,075	3,736
Sales and Trade	44.44	61.29	1,294	2,418	1,929	2,526
Personal Service	40.00	60.90	1,350	1,208	1,250	3,239
Manufacturing and Repairing	25.00	65.70	2,150	1,967	2,337	2,176
Commercial Services and Security	25.00	47.60	3,150	2,375	2,428	2,791
Transport	80.00	50.00	1,862	3,500	2,700	3,715
Tailoring and Knitting	80.00	70.00	1,950	5,000	2,569	1,450
Construction	62.50	46.10	1,510	2,617	2,314	2,864
Non-Workers	60.74	64.99	-	-	-	-

Note: Migrant and "other" workers are defined on the basis of the migration status and duration of
migration of the individuals. Migrant and other workers are 63 and 313 respectively. Migrant and
other non-workers are 163 and 586 respectively.

Source: Same as Table 1.

Comparing the average income of workers from below-poverty-line (BPL) and above-poverty-line (APL) households, workers from APL households are seen to have a higher income than those from BPL. Exceptions include the following: the average income of migrant workers from BPL households in personal services and commercial services is higher than the income of migrant workers from the APL households; in manufacturing, both migrant and "other" workers from BPL households have a higher average income than their APL counterparts; in tailoring and knitting, "other" workers from BPL households have a higher mean income than their APL counterparts.

Based on Table 3, a rough comparison shows that migrant workers from non-poor households have a relatively better income profile than migrant workers from poor households. More than 9 per cent of migrant workers from non-poor households earn above Rs 3,500 per month whereas only 6 per cent of those from poor households earn more than Rs 3,000 per month. Similarly, in the lowest income size class, the percentage of migrant workers in non-poor households is lower than that of their counterparts in the poor households.

Among "other" workers (migrants of more than 10 years duration and non-migrants), the poor and non-poor distinction is very sharp (see Table 3). While more than 10 per cent of workers from non-poor households are in the top size class (Rs

4,500 and above), only two per cent of those from poor households are in this size class.

Table 3: Percentage Distribution of Workers as per Monthly Income Classes (Rs)

Migrant Workers		Other Workers	
Monthly Income	Poor	Monthly Income	Poor
		Below 500	3.98
Below 1,000	22.58	500-1,000	10.23
1,000-1,500	22.58	1,000-1,500	18.75
1,500-2,000	32.26	1,500-2,500	41.48
2,000-2500	9.68	2,500-3,500	17.05
2,500-3,000	6.45	3,500-4,500	6.25
3,000 and above	6.45	4,500 and above	2.27
Monthly Income	Non-Poor	Monthly Income	Non-Poor
		Below 500	3.76
Below 1,000	18.18	500-1,000	6.77
1,000-1,500	12.12	1,000-1,500	16.54
1,500-2,500	36.36	1,500-2,500	31.58
2,500-3,500	24.24	2,500-3,500	17.29
3,500-4,500	6.06	3,500-4,500	12.78
4,500 and above	3.03	4,500 and above	11.28

Note: See Note below Table 2

Source: Same as Table 1.

Migrant poor workers appear to be worse off than "other" poor workers. Nearly 23 per cent of migrant poor workers earn an income of less than Rs 1,000 per month whereas the corresponding figure for "other" is only 14 per cent. Similarly, more than eight percent of "other" poor workers earn above Rs 3,000 per month, and this is higher than the percentage of migrant poor. The distinction between the migrant and "other" workers from non-poor households is also evident. About 11 per cent of "other" workers earn an income of more than Rs 4,500 per month whereas the corresponding figure for

migrant workers is only three per cent. This seems to mean that "other" workers are better off than those who migrated in last 10 years or so though in terms of poverty incidence measured on the basis of consumption expenditure, the opposite appears to be true. This suggests looking into factors that may explain variations in per capita consumption expenditure at the household level, which is pursued in the next section.

3. Determinants of Per Capita Consumption Expenditure and Poverty

In poverty estimates, expenditures largely on food (and few non-food items like fuel, transport, etc.) have been considered. However, it may also be useful to consider the total per capita consumption expenditure inclusive of other items like clothing and non-clothing expenditures made during festivals as well as expenditures on footwear, medicines, and other durable goods such as radios, televisions, sewing machines, and bicycles. Five sets of per capita monthly consumption expenditure figures have been generated: (a) FPCE - total food expenditure per capita, (b) NFPCE - nutritious food expenditure per capita[5], (c) PCE1- food and non-food1[6] expenditure per capita, (d) PCE2 - food and non-food1 and non-food2[7] expenditure per capita and (e) PCE3 - food

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[5] Only a subset of expenditures on food items is considered: pulses, milk, fish, meat and eggs, and vegetables.

[6] Non-food1 includes expenditures for fuel, transport, washing soap, etc.

[7] Non-food2 includes clothing, footwear, medical, religious, and social expenditures.

and non-food1, non-food2 and non-food3[8]. Table 4 includes average estimates of these

five variables for migrant and "other" households[9] as well as poor and non-poor

households.

Viewing Table 4, it is evident that per capita expenditure figures are larger

among "other" households than migrant households of duration up to 10 years. However,

poverty estimates seen in section 2 (Table 1 and 2) reflect the opposite. This can be

explained in part by differences in household size as seen from Table 4. Thus, it would

be interesting to explain household level per capita consumption expenditure variations

in terms of certain important factors, including household size.

To explain variations in total monthly per capita expenditure (PCE) exclusive

of medical expenses across households, the following variables have been considered:

household size (HHSZ), access to political contact (PD) in terms of basic amenities

(treated as a dummy variable), child-woman ratio (CWR), proportion of working

members in the household (WM), occupational categories of the head of household (the

same sequence as listed in Table 2 and captured in terms of eight occupation dummy

variables (OCCPi=1..8) with non-workers as the comparison group, two migration

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[8] Non-food3 covers expenditure on durable goods, jewelry, modern kitchenware, etc.
[9] migrant and "other" households are defined on the basis of the migration status and the
duration of migration of the household head/principal earner.

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dummy variables (MIGi=1,2) representing migration up to 10 years (MIG1) and 10 years and above (MIG2) respectively with non-migrants as the comparison group, education level of the head of household or principal earner in terms of three dummy variables (EDUi=1,2.3) with illiterates as the comparison group[10], a gender dummy variable (GD) representing the sex of the head of household or principal earner (0 for males and 1 for females), age of the head of household or principal earner taken as a proxy for job market/work experience (AG), and the monthly health expenditure per capita (HPC). Though the amount of medical expenditures does not make up a significant percentage of total expenditures, two alternate views may be taken in this context. One suggests a direct relationship between health expenditure per capita and overall expenditure per capita by envisaging the positive effect of health investment on the capability of household members to pursue productive activity, which results in higher incomes and higher levels of consumption expenditure (see Gupta and Mitra, 2004). A more conventional view suggests an inverse relationship between them. Higher medical expenses mean increased illness and larger numbers of days for which the

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[10] With illiterates as the reference category, EDU1 represents those who are literate and those who have studied up to class 9, EDU2 encompasses those who have studied above class 9 and completed secondary education but not graduation, and EDU3 represents graduates or those who have acquired a higher level of education including technical and non-technical, professional, and vocational courses.

workers may be absent from work, which in turn reduces household income as well as consumption expenditure per capita.

Table 4: Monthly Per Capita Household Consumption Expenditure (Rs.)

Variables	Migration Status		Poverty Status	
	Migrant HH	Other HH	Poor HH	Non-Poor HH
FPCE	362.79	427.59	290.87	599.71
NFPCE	144.13	200.69	123.99	292.60
PCE1	480.06	578.30	393.18	808.94
PCE2	597.77	737.00	461.94	1,081.23
PCE3	618.55	761.41	466.83	1,131.50
HH Size	4.85	5.53	5.76	5.06

Note: Variables are defined in the text and corresponding footnotes. For the definition of
migrant and "other" household see note 2 below Table 1.
Source: Same as Table 1.

The results given in Table 5 show that household size, health expenditure per capita, proportion of working members in the household, and levels of education are statistically significant determinants of per capita consumption expenditure. Household size tends to reduce PCE, while other variables show a positive effect. The dummy variables used for duration of migration are not statistically significant. Neither are the occupational dummy variables, except for OCCP5 which has a positive coefficient. Further, variations across male and female headed households are not statistically significant. However, this result does not mean that both kinds of households have equal

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access to job market opportunities and hence to equal income and consequent consumption expenditure.

Table 5: Regression Results: Dependent Variable: Household Specific PCE

Variable	Coefficient	Coefficient
HHSZ	-50.11	-40.36
	(-2.21)*	(-1.97)*
PD	85.06	119.98
	(1.00)	(1.59)
HPC	1.07	0.92
	(3.27)*	(3.11)*
CWR	-10.8	7.1
	(-0.19)	(0.13)
WM	592.69	-255.24
	(2.54)*	(-1.04)
AG	3.11	3.15
	(0.69)	(0.83)
OCCP1	111.49	-
	(0.51)	
OCCP2	-74.03	-
	(-0.49)	
OCCP3	-223.35	-
	(-1.21)	
OCCP4	-64.4	-
	(-0.42)	
OCCP5	267.29	-
	(1.66)**	
OCCP6	-32.81	-
	(-0.20)	
OCCP7	-196.65	-
	(-0.90)	

OCCP8	-44.05	-
	(-0.25)	
MIG1	-25.13	23.85
	(-0.13)	(0.13)
MIG2	87.13	179.71
	(0.52)	(1.2)
GD	91.9	9.64
	(0.51)	(0.06)
EDU1	141.64	111.61
	(1.70)**	(1.47)
EDU2	274.42	194.47
	(2.58)*	(2.02)*
EDU3	387.35	241.15
	(2.05)*	(1.66)*
HHPCI	-	0.5
		(6.25)*
Constant	385.84	129.81
	(1.18)	(0.54)

Note: Adjusted R^2 is 0.20 and 0.31 for equation 1 and 2 respectively. The number of observations is 199. * and ** denote significance at 5 percent and 10 percent levels respectively. The equations are estimated by OLS.

Occupational dummies have been replaced by household per capita income (HHPCI) in an alternative specification, and this is statistically significant with a positive coefficient. Occupation dummies are not statistically significant possibly because occupation categories encompass both low and high income yielding jobs. However, inter-household variations in income are substantial and have a positive effect on per capita consumption expenditure

Dividing the households into poor and non-poor categories on the basis of the

poverty line that was calculated in reference to the per capita food consumption expenditure plus non-food consumption expenditure1 (PCE1), we have estimated a binomial logit model (0 for poor and 1 for non-poor). Results are reported in Table 6 and support the hypothesis that an increase in household size reduces the probability of being non-poor. Further, health expenditure per capita and the percentage of working members in a household each raise the probability of escaping poverty. Migrants of duration more than 10 years show a higher probability of being non-poor than do non-migrants, though there is no statistically significant difference between migrants up to 10 years duration and non-migrants in this respect. All education specific dummy variables have positive coefficients, indicating a higher probability of the educated escaping poverty compared to illiterates. It is interesting to note that households headed by females have a lower probability of falling below the poverty line than do those headed by males. This may be due to the fact that alcohol consumption is much higher in households headed by males and often occurs at the loss of food and other essential items. When occupation dummy variables are replaced by household income per capita, there is statistical significance, but the percentage of workers in the household does not become statistically significant. It is possible that its effect gets captured in the income variable.

Viewing marginal effect calculated from the equation with occupation dummies, very long duration migrants (more than 10 years duration) show an almost 0.35 points rise in the probability of being not poor compared with non-migrants (Table 6). The three categories of education (a) literates but below secondary, (b) secondary and (c) graduates and above show a rise of 0.35, 0.40 and 0.41 points respectively in the probability of escaping poverty relative to illiterates. Compared to male counterparts, households headed by females show a rise of 0.36 points in the probability of being above the poverty line. In the equations without occupation dummies but including household income, similar patterns are also indicated though with differences in magnitude of marginal effects.

In section 2, the average incidence of poverty is seen to be lower among households representing migrants of duration up to 10 years than those representing migrants of more than 10 years duration and non-migrants. However, the binomial logit model suggests that the very long duration migrants show a higher (lower) probability of being non-poor (poor) compared to non-migrants whereas migrants up to 10 years duration are at par with the non-migrants. These findings are consistent with the view that over time, migrants tend to improve their living-conditions. Otherwise, the whole enterprise of migration would seem to be futile and irrational. Why would migrants

continue to reside in urban areas if in due course they are unable to experience upward

mobility? Of course this question can be answered by asserting that migrants do not

return to rural areas because as mentioned in Section 2, the intensity of poverty in the

rural areas may be higher than that in the urban areas. Findings in the present section,

however, suggest that for very long duration migrants the probability of falling below

the poverty line tends to decline. These findings may still be criticized on the grounds

that assessment of living standard based only on consumption poverty is too narrow.

Thus, there is still room for improving the quantification of the wellbeing of households,

and this will be addressed in the next section.

Table 6: Bionomial Logit Model with Marginal Effects (Dep. Var.: POOR: 0 for poor households and 1 for non-poor households, Maximum Likelihood Estimate)

Variable	Equation 1		Equation 2	
	Coefficients	Marginal Effects	Coefficients	Marginal Effects
HHSZ	-0.27	-0.07	-0.23	-0.06
	(-2.02)*	(-2.02)*	(-1.77)**	(-1.77)**
PD	0.04	0.009	0.08	0.02
	(0.08)	(0.08)	(0.18)	(0.18)
HPC	0.03	0.007	0.03	0.008
	(4.39)*	(4.41)*	(4.54)*	(4.48)*
CWR	-0.35	-0.09	-0.3	-0.07
	(-1.01)	(-1.01)	(-0.83)	(-0.83)
WM	4.09	1.02	1.45	0.36
	(2.77)*	(2.77)*	(0.9)	(0.9)
AG	0.008	0.002	0.007	0.002
	(0.33)	(0.33)	(0.3)	(0.3)

OCCP1	-0.32	-0.08	-	-
	(-0.27)	(-0.27)		
OCCP2	-0.3	-0.75	-	-
	(-0.34)	(-0.34)		
OCCP3	-0.53	-0.13	-	-
	(-0.48)	(-0.49)		
OCCP4	-0.42	-0.105	-	-
	(-0.47)	(-0.47)		
OCCP5	0.3	0.075	-	-
	(0.31)	(0.31)		
OCCP6	-0.11	-0.03	-	-
	(-0.11)	(-0.11)		
OCCP8	-0.04	-0.009	-	-
	(-0.03)	(-0.03)		
MIG1	1.01	0.24	1.61	0.35
	(0.90)	(1.02)	(1.27)	(1.69)**
MIG2	1.56	0.35	2.55	0.48
	(1.66)**	(1.97)*	(2.20)*	(3.63)*
GD	1.79	0.36	1.15	0.27
	(1.66)**	(2.37)*	(1.13)	(1.34)
EDU1	1.47	0.35	1.37	0.33
	(2.94)*	(3.24)*	(2.68)*	(2.88)*
EDU2	1.8	0.40	1.44	0.34
	(2.94)*	(3.70)*	(2.33)*	(2.71)*
EDU3	2.18	0.41	1.82	0.38
	(2.20)*	(3.67)*	(1.97)*	(2.84)*
HHPCI	-	-	0.002	0.0005
			(3.63)*	(3.63)*
Constant	-3.73	-	-5.71	-
	(-1.96)*		(-3.21)*	

Note: Pseudo-R^2 for equations 1 and 2 are 0.27 and 0.33 respectively. Number of Observations is 192 and 199 for equations 1 and 2 respectively. Chi-square values are 70.79 and 89.30 respectively. These are highly significant at 1percent level. * and ** represent significance at 5 percent and 1 percent levels respectively. OOCP7 was dropped in Equation 1, and 7 observations were not used as the non-poor households in this category were predicted perfectly.

4. Wellbeing Index and Migration

The following variables have been considered in constructing the household specific wellbeing index: household size, child-woman ratio, per capita total expenditure (PCE3NH, food and all categories of non-food excluding health expenditure), proportion of persons in the household who reported illness one year preceding the date of survey (ILL), percentage of household members who acquired at least primary level education (PRIM), percentage of members in the age group 15 to 59, proxy for adult potential earners (PER15-59), percentage of working individuals (WM), age of the household head/principal earner, proxy for experience particularly in the job market (AG), health expenditure per capita (HPC), and per capita household income (HHPCI). Variables such as household size, child-woman ratio, and percentage of ill members in the household, are likely to reduce the wellbeing of the household. Health expenditure per capita on an *a priori* basis may reduce or raise the wellbeing of the household though regressions reported in the preceding section indicate that such expenditure has a positive effect on PCE. On the other hand, other variables would be expected to enhance wellbeing. Since these variables are heterogeneous, it is difficult to combine them to indicate an overall living standard of households. Hence, factor

analysis was conducted, and using factor loadings as weights, variables were combined

to generate a composite index of wellbeing or deprivation, denoted as WELLINDEX(i).

This was repeated for each of the significant factors (factors with eigenvalues greater

than one), and using the eigenvalues as weights, WELLINDEX(i)s were combined to

form a WELLINDEX:

$$WELLINDEX \ \ (i) = \sum_{j=1}^{n} FLj \ (i) \ Xj$$

where, FL is the factor loading, j= 1…n corresponding to the number of variables, and i

represents the ith significant factor.

In the second stage, as mentioned above, the composite indices generated on

the basis of factor loadings for each of the significant factors were combined using the

proportion of eigenvalues as weights:

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

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

Using varimax rotation (in order to obtain statistically independent factors),

results of the factor analysis suggest the presence of two significant factors (Table 7).

For Factor one (the most dominant, explaining around 69 per cent of the total variation),

household income per capita and the number of working members relative to household

size had the highest loadings. Variables with moderate loadings on this factor included

proportion of persons in the age group 15-59 to total household size, child-woman ratio,

household size and per capita consumption expenditure. Loadings for household size,

number of ill population relative to household size, health expenditure per capita, and

child-woman ratio take negative factor loadings while other variables correspond to

positive values. For Factor 2 (which had an eigenvalue of a little over one), household

size and the age of the household head/principal earner have the highest loadings.

Proportion of ill population per household corresponds to a moderate value with a

negative sign. Child-woman ratio, household income per capita, and consumption

expenditure per capita have low but not negligible factor loadings.

Table 7: Results of Factor Analysis Based on Household Data

Variables	Factor 1	Factor2
HHSZ	-0.29	0.56
PCE3NH	0.29	-0.10
HPC	-0.004	0.08
ILL	-0.063	-0.35
PRIM	0.008	0.04
PER15-59	0.46	0.05
CWR	-0.33	-0.16
WM	0.74	0.01
AG	0.14	0.57
HHPCI	0.63	-0.11
Eigenvalue	2.19	1.01

Note: Factor loadings were determined using Varimax Rotation.

Table 8 shows that almost 15 per cent of the sample households correspond to the lowest size class formed on the basis of composite wellbeing index. On the other hand, around 12 per cent are located in the top two size classes. The second size class from the bottom constitutes the largest percentage of households (39.3).

Table 8: Distribution of Households as per Wellbeing Index

Wellbeing Size Class	No. of Household	Percentage Share	Coefficient of Variation in Wellbeing Index
≤270	30	14.56	16.95
271-420	81	39.32	12.67
421-570	50	24.27	9.36
571-720	21	10.19	7.61
721-1020	12	5.83	8.61
>1,021	12	5.83	35.18
Total	206	100	13.05

Source: Same as Table 1.

The composite wellbeing index shows that there is a non-linear relationship between the average wellbeing index and duration of migration (Table 9). Those who have migrated in the last 1 to 10 years and those who have been residing in the city for the last 21 to 25 years had virtually the same level on the wellbeing index, and this is considerably higher than the wellbeing index for migrants of 11 to 15 years duration.

Conversely, migrants who have duration of 16 to 20 years have the lowest index value, and this is again quite close to the index value of migrants whose duration is 26 to 30 years. Those whose duration of migration is more than 30 years (including natives or non-migrants) had the highest value for the wellbeing index though the coefficient of variation for this category was relatively higher than for others. The regression of the composite wellbeing index on the duration of migration (excluding the non-migrant households) reveals a statistically insignificant t-ratio, which supports of the absence of any stable relationship between duration of migration and the wellbeing index.[11] On the whole, though there is no strong evidence of gains associated with migration per se, those who have been residing for a very long time in the urban areas have definitely benefited from migration. This would explain why migrants do not return to rural areas, even when mobility does not seem to have improved their living standard in the short or medium term. With a high intensity of poverty and lack of employment opportunities in rural areas, the hope that they will be able to experience upward mobility in urban areas seems to motivate migrants to stay on, particularly recalling the experiences of their neighbors, relatives, friends, co-villagers, and kith and kin who have resided in urban areas for more than a quarter century or so. If not within their own lifetime, they may at

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[11] Wellbeing Index $= 445.56 + 0.90$ Duration of Migration; $R^2 = 0.0012$
$$(9.94)^* \quad (0.48)$$

least see promising gains for the next generation.

Table 9: Household Specific Wellbeing Index and Duration of Migration

Duration of Migration (years)	Percentage of Household	Average Wellbeing Index
1-10	9.71	508.85
		(53.87)
11-15	14.56	437.38
		(59.18)
16-20	21.84	407.86
		(45.44)
21-25	24.76	509.66
		(411.66)
26-30	9.22	411.66
		(35.47)
Above 30 + non-migrants	19.90	574.84
		(80.65)
Above 26 + non-migrants	29.13	523.16
		(76.00)

Note: Figures in parentheses are Coefficients of Variation. Duration of migration of the household is defined on the basis of the duration status of the household head or the principal earner.

Source: Same as Table 1.

5. Conclusion

This paper presents an assessment of whether or not migration results in economic gains, specifically whether or not migrants benefit significantly from the place of their destination. Since information is lacking on income levels at the place of origin prior to migration, it is difficult to obtain conclusive answers to this question. On the other hand, the determination of whether or not a positive relation exists between

duration of migration and living standards could be examined. Such a positive relation

would indicate that at the place of destination, as migrants continue to reside, there is

room for upward mobility. In terms of incidence of poverty (head count ratio), there

does not seem to be such a pattern, but income levels of workers and the duration of

migration seem to be related.

Duration of migration does not turn out to be a significant determinant of

variations in per capita consumption expenditure. However, a binomial logit model

estimated to identify factors that explain the probability of being poor (or non-poor),

shows that there is a positive association between migrants with very long duration of

more than 10 years and the probability of being non-poor. Since the concept of poverty

is uni-dimensional in nature, there was a need to construct a more comprehensive index

of wellbeing (or deprivation) based on demographic and economic characteristics. This

was done using factor analysis of certain household level characteristics. The composite

wellbeing index, generated by using the factor loadings and the eigenvalues as weights,

suggests that migrants of very long duration are better off than the rest. Thus, it may be

concluded that population mobility is not an irrational decision. In the long term, there

are prospects for upward mobility at the place of destination. An important policy

implication of this finding is that while rural development programs may reduce

migration to urban areas, urban employment, shelter, and basic amenities programs are still important for empowering the urban low income households, many of whom have been residing in the urban areas for a very long time with limited ties to the rural sector. From the analysis presented in this paper, it can be seen that these households are able to improve their wellbeing index in the very long term, and it would, therefore, be inappropriate to stop their entry to urban areas. Instead, urban specific employment and shelter support measures can help migrants to improve their living standard at a faster pace.

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Appendix

1. OCCP1=Semi-Professional (Category 1)
2. OCCP2=Sales and Trade (Categories 2 and 3 have been merged)
3. OCCP3=Personal Services (Category 4)
4. OCCP4=Manufacturing and Repairing (Categories 5 and 11 have been merged).
5. OCCP5=Commercial and Security (Categories 6 and 10 have been merged).
6. OCCP6=Transport (Category 7)
7. OCCP7=Tailoring (Category 8)
8. OCCP8=Construction (Category 9)

Category 1: clerk, computer operator, engaged in field work, government service as typist, owner of a health clinic, supervisor in a company, supervisor in NGOs, teaching and giving tuition, technical assistant in Air India.

Category 2: selling books, magazines and news papers, egg seller, working in a garment-exporting agent, washing clothes in a garment exporting agent, stock checking, fish vender, flower vender, fruit packing in wholesale market (*mandi*), working in a general store, helper in a store, helper in an export agent, helper in a foot-wear shop, helper in a chemical store, helper in a shop, helper in an export company's shop, helper in a garment-export shop, helper in a fruit *mandi*, helper in a garment shop, helper in a general store, helper in a hardware shop, helper in Indian Airlines, helper in a shop selling jeep batter, helper in a juice shop, helper in a medicine shop, helper in a company selling snacks (*namkeen*), helper in a shop selling sauce, helper in a shop selling TV's, helper in a shop selling wood work, ice cream vender, collecting garbage and waste (*kabariwala*), peanut seller, pan seller, seller of '*bidi*' and cigarettes on the road, salesman (medicine, cold-drinks, etc), selling vegetables, selling wood, dealing with sale and purchase of cars, sweet vender, working in the "go-down" of waste and garbage collection.

Category 3: trading in cloth, fisherman and trading in fish, trading in hosiery, helper in an iron/steel shop, helper in a sweet shop, helper in a workshop, working in a hotel, providing room service in hotels, working in shops, suitcase fitting, working in a tea shop, owning a tea-stall, working in a hotel, working in readymade garment shop, working in a canteen.

Category 4: barber, '*basti sewika*' (paid social worker), cleaning utensils and washing, cook, traditional mid-wife, domestic maid or servant, helper in a kitchen, gardener in a farm house, serving drinking water in '*mandi*', sweeper and working in small eating places (*dhaba)* or tea stalls as a cleaner or sweeper.

Category 5: bamboo work, box making, bricks making unit, bulb factory, candle making, manufacturing decorative items made of paper, factory worker, foreman, furniture work, glass work, helper in a plastic factory, helper in a factory, helper in a mineral water factory, helper in an iron factory, helper in a plastic factory, helper with a printing press, helper in a rubber factory, helper in a leather factory, labor in an iron factory, lamination work, operator, printing job, printing press, working in readymade cloth manufacturing units, screen printing, steel almira work, supervisor in a steel factory, tube light and bulb factory, utensil polish work, wood work, woolen work, working in a '*bidi* company', working in a foot-wear factory, working in an electric shop, manufacturing of food products and working in a radio and TV parts company.

Category 6: bill collection, cable TV operator, courier service, helper in an Embassy, loading goods, Municipal Corporation of Delhi (MCD) worker, packaging, peon in commercial units, class four employees/peon (at airport, private hospital and MCD worker), working in a video library and working in Delhi Electricity Supply Undertaking (DESU).

Category 7: auto-rickshaw and tempo driver, conductor, driver (car, bus, truck etc.), helper in the transport sector, helper in transporting goods, rickshaw puller and truck supervision.

Category 8: embroidery, stitching and tailoring (tailor master and worker both), coloring thread and cutting thread.

Category 9: construction workers (*beldar, dehari*) carpenter (daily wage carpenter), labor in construction work, mason (*mistri*), polishing, supervisor in building construction and whitewashing.

Category 10: security guard and watchman.

Category 11: car mechanic, cycle repairing, electrician, fitter, auto mechanic, learning electric work, machine repairing work, mechanic, mechanic of electronic items, motor fitter, and other repairing work.