The Curse of Location: Investigating Links between Income Mobility, Migration and Location Premium[1]

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Abstract

Mobility serves as an indicator of the relationship between short and long run inequality. Understanding mobility is crucial for deriving policies that affect household's incomes. Since long run income is more equally distributed than short run income it is important to understand the mechanics of income mobility. In this paper we have used a unique household dataset spanning more than 3 decades from rural India to derive what may be broadly classified as the triggers of income mobility. We believe and wish to show that location and outcome of location place a crucial role in determining the magnitude of income mobility. Given that in low income countries migration is a significant cause for income mobility, we show that its magnitude is influenced by the relationship between income premium (benefits accruing to the household due to location) and migration. There is thus a three way relationship between income premium, migration and income mobility. We find that increases in household income premium will reduce the likely hood of a given household (members of that household migrating). Consequently we are more likely to observe a reduction in overall income mobility. A policy implication of this finding is that if development is not uniform across the economic space. Income mobility will decline in the long run.

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1. Introduction

Mobility serves as an indicator of the relationship between short and long run inequality. Understanding mobility is crucial for deriving policies that affect household's incomes. Since long run income is more equally distributed than short run income it is important to understand the mechanics of income mobility. In this paper we have used a unique household dataset spanning more than 3 decades from rural India to derive what may be broadly classified as the triggers of income mobility. We believe and wish to show that location and outcome of location place a crucial role in determining the magnitude of income mobility. Given that in low income countries migration is a significant cause for income mobility, we show that its magnitude is influenced by the relationship between income premium (benefits accruing to the household due to location) and migration. There is thus a three way relationship between income premium, migration and income mobility. We find that increases in household income premium will reduce the likely hood of a given household (members of that household migrating). Consequently we are more likely to observe a reduction in overall income mobility. A policy implication of this finding is that if development is not uniform across the economic space. Income mobility will decline in the long run.

Long run income is likely to be more equally distributed than short run income since in the long run the household have the ability to change their position in the short run distribution of income. The ratio of long run inequality and short run inequality consequently will be determined by mobility and in particular income mobility (Fields and Ok (1996, 1999), Gottschalk and Spolaore (2002) and Masoumi and Trede (2001)). Examination of mobility allows us to have insights into the working of the economic process over time and perhaps to understand the causes of poverty, and interpret the different aspects of economic status. The magnitude in change in household income mobility is an indicator of the change in the economic status of the household and will also set light on the rate of entry and exit into and out of the poverty. Income mobility assumes importance in the context of the measurement of the income inequality since a simultaneous increase in these two measures may not lead to adverse consequences due to the fact that long run income inequality could actually be lower. However an increase in the income inequality that is accompanied by a decline in income mobility will lead to adverse outcomes in the long run.

Mobility in low income countries is on an average of low magnitude. The cause for persistent low mobility is often attributed to a range of factors such as infrastructure, relative wage rate, discrimination etc. What is ofte n and overlooked is the presence and the importance of social insurance in communities. In low income countries much of the idiosyncratic nature of consumption in households is often smoothened by the provision of adequate insurance from social networks. The cost of migration is the loss of the ability to smooth consumption. Consequently migrations rates are low with accompanying low rates of mobility. Migration in low income and transition countries is often a significant explanation for upward income mobility. The cause of migration can be attributed to the failure of mechanisms pertaining to the provision social insurance to households with the subsequent benefit of migration being greater than the cost of migration. Using this construct, Munshi and Rosenzweig (2007) have shown that low rates of migration and mobility in low income and transition countries is often the result of households not willing to give up the benefits of social insurance arising out of identification with a particular caste, or community. They are able to therefore prove the low rates of migration and mobility in rural India.

This paper offers an empirical refinement of the analysis of the links between migration and mobility. We show that income premium, migration, and income mobility represent a three way link where the trigger for mobility is income premium. We accordingly, first explain the links between migration and income premium. The migration probabilities so derived will be used for explaining income mobility.

The paper is organised as follows. Section 2 provides a quick glimpse of the extant literature, section 3 describes the data. Section 4 provides a description of the empirical procedure and section 5 illustrates the results and concludes.

2. Background and Literature

Mobility is typically examined using two sources of literature. The first based on demography, attributes income mobility to events such as change in composition of the family. The second strand relates mobility to developments in the labor market, specifically, to factors such as increased participation by women and rising return to education (Diebold, Neumark and Polsky (1996), (1997)), Farber(1995)), Gittleman and Joyce(1996), Gottschalk

(1993) show that there have been relatively small changes in income mobility in the recent years. This is attributed to change in share of male income in the family income.

Gittleman and Joyce (1999) pose two key questions. i) To what extent can mobility be attributed to changes in family composition or to events in the labor market? ii) Has the determinants of mobility changed over time? Mobility is measured as a relative construct instead of an absolute measure where it is used to imply a change in absolute levels of income. They find that the determinants of mobility have changed. There is generally, for example, less scope for a family to experience greater income mobility by allowing an extra family member to participate in the labor market. They also find that shocks that change the composition of the family such as divorce etc. have a tendency to retard upward mobility. One way of looking at mobility is to understand it as a consequence of changes in the variance in income. If the rise in variance in income is attributable to an increase in the variance of permanent income then it is possible to infer that mobility will be low. On the other hand if the increase in income variance is to a rise in the variance of transitory income (such as these caused by shocks) then mobility could go up.

Mobility is typically thought to be affected by i) impact of the presence of a labor market (i.e., the degree to which any given member can participate), ii) Changes in the composition of the family (i.e., change in the marital status of participants or potential participants), iii) Presence of non earning members (specifically children) and iv) Change in the characteristics of the head (specifically ageing of the head of the household). Presence of young children reduces mobility. Higher levels of education raise mobility. It also matters as to who heads the household. Elsewhere it has been found that families that are headed by blacks exhibit lower income mobility (Duncan et al (1993)).

Kearl and Pope (1984) examine evidence of a panel of households that have a relatively stable distribution however with increasing wealth inequality. The motivation for this is given that we know a great deal about dispersion of earning or income or even wealth at different points in time, we have less knowledge about movement of individuals through these disperse distributions. The estimation of mobility is done through the use of transition matrices. The boundaries are maximum Likelihood Estimates of the probabilities of moving up or down in successive distributions. Two separate matrices are constructed for the linked and the entire population of households. They find that location of households in the economic space

matters. Households nearer to urbanised locations have shown greater mobility. They also conclude that any observed mobility could be associated with life cycle changes and may not be a reflection of changes in the lifetime position of a household. Linked households show greater mobility.

Income mobility implies a transition that links an initial distribution to a final distribution. A mobility index then typically describes this transition process (Atkinson and Bourguignon (1992)). Such indices can be developed in several ways. In many instances, such indices have been developed independent of the properties associated with inequality and equity (primarily by using the properties of transition matrices).

Yitzhaki and Wodon (2003) believe that it is important to develop an index that can prohibit inequality over time using a series of 'snapshots'. Towards this end they develop a Gini mobility and inequality index that enables the identification of growth, inequality and mobility (Transition matrices also contain mobility. However, deficiencies include the inability to capture movements within income quintiles and inability to incorporate the fact that quintile boundaries themselves may be changing).

Gini mobility index allows the identification of all possible factors at work when there is change between income distributions. Such changes can be brought about through growth, inequality and mobility. Since mobility is not defined as an independent concept, there is as such no need to derive an independent identification for it. Bartholomew (1982) developed an index of mobility based on the expected value of the absolute differences in the values attributed to an initial and, final distributions. Glewwe (2005) points out that much of the magnitudes presented in mobility estimates could be due to measurement error in income and derives a method to measure mobility while correcting for bias due to measurement error. After applying this method to the Vietnamese data he shows that mobility is perhaps over estimated by nearly 15 %.

Economic mobility in India has been examined variously by Choudhury and Ravallion (1991), Gaiha (1988), Gaiha and Deolalikar (1990) and Swaminathan (1988) finds limited wealth mobility in a set of Tamil Nadu villages during the period 1977 to 1985. Epstein (1973) and, Gough (1987) find little evidence of occupational mobility in these villages. Dreze et al., (1992) show that agricultural labor households with semi regular or regular

employment have higher per capita income. They have used transition matrices to show that position of a given household in a specific decile in a particular year does not always depend on its position in the previous year. They point out that using income to measure mobility is fraught with difficulty due to the fact that this ignores immobility of expenditures, and, the possibility of existence of consumption smoothing.

Gaiha (1988) used data for the 1968-70 to examine the pattern of income mobility of the rural poor. He is able to show that much of the mobility was caused by non-random factors and in fact was influenced mostly by the spread of technology. Mobility is examined with respect to a poverty line that represents the ability of a household to purchase a nutritionally adequate diet as opposed to using the expenditure for a nutritionally adequate diet. Five categories are considered for understanding mobility. These include, i) those that remain poor (without becoming poorer), ii) households that became poorer, iii) households that were poor but are now non poor, iv) household that remained non poor, iv) households that are newly poor. There are two broad patterns of interdecile movements during this period i) Increase in the decile averages over the years. ii) The averages across deciles in successive years have increased. There is evidence of downward income mobility. While considering income mobility of these households that became non-poor, it was found that a bulk of these was in the interval in which per capita nominal income rose by more than 50%. It was also found that a significant number of households that ceased to be poor raised their household income through significant increases in farm incomes. Income transfers played a significant role in raising incomes rather than wage income. In fact transfers were a significant complement to the farm income. Households that had access to such transfers were less likely to be poor compared to those that had access to wage incomes as the complement. Finally, an increase in the overall cropped area (made possible due to advances in technologies) has contributed significantly to increase in income.

Pal and Kynch (2000) examine occupational change in rural India. They claim that there are problems associated with using income changes to measure mobility. These include i) problem with choice of the time period, ii) reliability of income as measure of standard of living (Bhattacharya and Chattopadhyay (1989) Jodhan (1989)), c) Inability to take into account the presence of income smoothing (due to the presence of transfers) due to shocks (Dreze et al 1992). Occupational mobility is therefore a better indicator of economic mobility.

3. Methodology

We begin by examining mobility of households with respect to time-independence, positional movement, and directional income movement using transition matrices. Transition matrices are most intuitive tools to comprehend mobility and are based on Shorrocks (1978) measures of mobility. These matrices classify the income units into fixed categories in each time period. In this paper, income units are defined as quintiles. Cross-tabulations of the frequency distribution of households in each quintile with the base-year quintile determine the row. A similar cross tabulation with final-year quintile determines the column. Using these we can determine whether or not there is movement of a family along the income distribution over time. We say that there is a perfect immobility if all households remain in the same quintile in each of these accessible years, i.e., on the diagonal of the transition matrix. If a significant majority of entries are above the diagonal rather than below we expect upward mobility to be greater downward mobility between the two years examined.

However, transition matrices have their limitations in that they provide information across two time periods, ignore changes within-quintile, ignore off-diagonal movements and provide a little information on the distance moved. In addition these transition matrices are not useful because (i) incomes are measured with measurement error and (ii) income mobility is not treated as an outcome of persistent inequality. Therefore we propose two measures of income mobility that (i) control for measurement error and (ii) relate measure of inequality with mobility.

To control measurement error this paper uses Glewwe's (2005) measure of income mobility, which is based on measurement error. Let y_1 be the distribution of income in time period 1 and let y_2 be the distribution of income for same households in time period 2. The simplest mobility measure can be defined as $1-\rho(y_1, y_2)$, where $\rho(y_1, y_2)$ is the correlation coefficient of y_1 and y_2. Mobility measures based on the correlation coefficient range from 0 (no mobility) to 1 (full mobility). All mobility measures suffer from a serious problem in that they exaggerate the extent of income mobility when the income variable is measured with error. According to Glewwe (2005), virtually any measure of mobility will overestimate true mobility because fluctuations in measured income that are purely due to measurement error are mistakenly interpreted as actual income fluctuations.

There is a simple way to estimate $\rho(y_1, y_2)$ that avoids measurement error bias. We use instrumental variables that are correlated with y_1 and y_2 but uncorrelated with their error terms. To estimate the correlation coefficient ρ between y_1 and y_2 we first regress y_1 on y_2 and, y_2 on y_1 and then take square root of the products of the associated coefficients. If there were data on y_1 and y_2 without measurement error then the estimate of mobility $\rho(y_1, y_2)$ is the square root of the product of β_1 and β_2 from the following two regressions.

$$y_1 = a_1 + b_1 y_2 + e_1 \quad (1)$$

$$y_2 = a_2 + b_2 y_1 + e_2 \quad (2)$$

Where y_1 and y_2 denote observed values and e_1 and e_2 are measurement errors.

If there is measurement error, we estimate (1) and (2) using instrumental variables. In this paper we have identified the following instruments or household income. These include dependency ratio, land ownership and land reform. Land reform is a dummy that captures the effect of implementation of land reforms in the village. The equations for y_1^* and y_2^* are:

$$y_1^* = g_1 + d_1 z_2^* + v_1 \quad (3)$$

$$y_2^* = g_2 + d_2 z_1^* + n_2 \quad (4)$$

The Glewwe Index still does not account relationship between measure of inequality and mobility. To arrive at this we first estimated the mean reversion model as follows:

$$Y_{it+1} = a + b y_{it} + e_{it+1} \quad (5)$$

If $0 < b < 1$ there is "beta convergence" or mean reversion in Y so that there is upward mobility among low-income individuals and downward mobility among high-income individuals. Equation (5) is estimated using Ordinary Least Squares. Alternatively, the following model can be estimated:

$$Y_{it+1} = a + b^* R_{it} + e_{it+1} \quad (6)$$

Where, R is the rank of the observation in time t. This coefficient can be expressed as:

$$b^* = \frac{\text{cov}(Y_{t+1} R_t)}{\text{cov}(Y_t R_t)} = \Gamma_{t+1,t} \frac{G_{t+1}}{G_t} \cdot \frac{\overline{Y}_{t+1}}{\overline{Y}_t} \quad (7)$$

Where G is the Gini and $\Gamma_{t+1,t} = \frac{\text{cov}(Y_{t+1}, R_t)}{\text{cov}(Y_{t+1}, R_{t+1})}$ is the backward Gini correlation coefficient.

The Yitzhaki and Wodon (2003) Gini mobility index is as defined as follows:

$$S = \frac{(1-\Gamma_{t,t+1})G_t + (1-\Gamma_{t+1,t})G_{t+1}}{G_t + G_{t+1}} \quad (8)$$

The Gini mobility index is superior to transition matrix analysis as it is sensitive to mobility within quintiles and off-diagonal. This inequality index possesses four properties viz., anonymity, income homogeneity, population homogeneity, and the transfer principle.

The purpose of this paper is to provide a refinement of the extant explanations for the links between migration and income mobility. Much of the income mobility can be explained by household migration. Migration in turn is an outcome of willingness to forgo social insurance at the village level. The presence of significant social insurance and other gains to remaining within a given community or village is explained by income premium. To estimate income premium we use household income regression model. The household income regression is estimated in the semi-logarithmic form with household endowments of labour and land as explanatory variables along with geographical location controls that capture the effects of the local village economy (including the returns to labour and land) on household income. The semi-logarithmic specification is chosen in keeping with the standard Mincer earnings equation and also as the distribution of household incomes in our sample follows approximately a log-normal distribution. The household income regression models can be expressed as follows:

$$y_i = a + x_i' b + v_i' d + m_i \quad (9)$$

Where y_i is the natural log of the real annual household income, a is the intercept term, x_i comprise exogenous explanatory variables, v_i is a vector of 241 village residence dummy variables (one village is omitted being the reference village), the i subscripts for individuals (suppressing the time subscript for 1982, 1999, 2006), and m_i is a random error.

The vector of explanatory variables, x_i, include the age and gender of the household head, household size, number of earning members, household land, caste categories and 8 occupation categories. The village dummies, v_i, capture the effects of location, infrastructure, geographic conditions and resources, and local culture.

We adapt the methodology introduced by Krueger and Summers (1988) in the context of industry wage premium and apply it to transform the estimated village coefficients in our household earnings function into deviations from the size-weighted mean income differential. Thus the household village income premium represents the income differential of a household in a particular village relative to the average household in the entire sample. The weights can relate to either village size in terms of area or population. We choose to use weights capturing village size using village population.

The coefficients on the village dummies are then normalised as deviations from a size-weighted mean differential as follows:

$$\hat{d}^* = (I - e \times s')\hat{d} \qquad (10)$$

Where, $\hat{d}^*$ is a (K+1x1) column vector of village income premium, I is (K+1xK+1) identity matrix, e is a (K+1x1) vector of ones, $\hat{d}$ is the (K+1x1) vector constructed by stacking the (Kx1) vector of village coefficients estimated from the income regression models above a (1x1) matrix with zero as the single element, and s is a (K+1x1) vector of village population weights with each element $s_k = n_k \Big/ \sum_{k=1}^{K} n_k$ where n_k is the population of village k for k=1,..,K+1 villages.

Explaining the relationship between factors that governing the mobility and actual migration, while ignoring the impact of village income premium will provide us with a biased of link

between actual migration and mobility. To arrive at the correct estimate, we first estimate the probability of migration using the standard Heckman 2-stage procedure where the selection bias is introduced through income premium and the migration equation that estimates the probability of migration conditioned on premium can be formally specified as follows.

$$p_i = ß_0 + ß_i \boldsymbol{M}_i + ?PH_i + ?_i \qquad (11)$$

Where, p_i is dummy for migration that equals 1 if village have income premium less than the sample average income premium and 0 otherwise, $\boldsymbol{M}_i$, is a vector of household level characteristics and village level characteristics that affect income premium, PH_i is the inverse Mill's ratio $?_i$, is an *iid* error term, and $ß_i$ and ? are coefficient vectors to be estimated. The income premium equation is then defined as

$$VIP_i = a + a_i \boldsymbol{M}_i + e_i \qquad (12)$$

Where VIP_i is the income premium, $\boldsymbol{M}_i$ is defined as above, e_i is an eerror term, and a_i are coefficients or vectors of coefficients to be estimated.

The link between mobility and migration is established after estimating the predicted probability of migration from the Heckman two-stage and using the mobility indices derived earlier, in the following manner.

$$Mob_i = l + \hat{P}_i' f + x_i \qquad i = 1,\ldots 241. \qquad (13)$$

Where *Mob* is the mobility of household, and, $\hat{P}_i$ is the predicted probability of migration.

4. Data

The primary source of data is the ARIS-REDS data collected by the National Council of Applied Economic Research (NCAER). These data have been collected for rural households at six points in time: 1968-69, 1969-70. 1970-71. 1981-82, 1998-99 and 2005-06. The objective of the original rounds in 1968-71 was to determine the performance of cultivators of high-yielding varieties relative to cultivators of traditional varieties of crops and the consequences for income inequality. Approximately two-thirds of the entire samples were selected from villages covered by the Intensive Agricultural Development Programme (IADP) or the Intensive Agricultural Area Programme (IAAP). In order to maintain the panel dimension, the same villages were tracked in subsequent survey rounds in 1981-82, 1998-99 and 2005-06.

Each round has three parts. The first part is the "listing sheet", where information on household income and a few demographic variables is collected. The second part is the "village questionnaire". This is the source of information on village-level characteristics such as agricultural production and land use, irrigation facilities, agricultural wage rates, access to markets, social and political structure, land tenure systems and the level of development (including infrastructure, distance from markets etc). The third part is the "household questionnaire" which is used for collecting data on a range of variables relating to household behaviour.

The listing sheets are typically used to select the households to be surveyed. The income data in these listing sheets is based on a single question on total household income from all sources. This data represents a valuable resource in estimating the distribution of household incomes at the village level. In the initial round, we can identify the true income distribution for almost 50% of the villages in which all or at least 80% of resident households (as reported in the Census) have been listed. For some of the larger villages, only a random sample was listed. By 1999 the proportion of villages with over 80% of resident households listed has fallen to about 40%. However, in all the rounds, at least half the resident households are listed in about three-quarters of the villages. The nominal annual household income is converted to real income by deflating to 1971 prices.

The variables used to explain household income are available in the listing sheets. It also includes household demographic information such as head schooling, the number of migrants, the number of households that have taken advantages of affirmative actions, household size, and the number of earners, household land, occupation categories[4] and caste compositions for each of the 241 villages. The data for schooling of the head of household, the number of schooling going children and caste groups have been used only in 2006. The data for impact of affirmative action program is considered for 1999 and 2006.

The various summary statistics are stated in Table 1. The mean household incomes have significantly increased. Land ownership has declined during this period. This is consistent with the finding elsewhere (Deininger, Jin and Nagarajan (2008)) that shows that land is no longer a significant source of income and that there are income gains from rental. Connectivity has improved as shown by the declines in distances to metalled roads, bus stands etc. However the inequality levels continue to remain high. The number schools within the immediate vicinity of the villages have increased.

Table 1 here

5. Results

Using the data on incomes from the last three rounds of survey namely 1982, 1999 and, 2006 we construct transition matrices to arrive at the Shorrocks measure of mobility. We find that the Shorrocks measure indicates relatively high degree of income mobility.

Table 2, 3 here

However this measure of income mobility masks the degree of upward and downward mobility. Using the same transition matrices we derive the extent of income immobility and consequently the magnitudes of upward and downward income mobility. We find that there is

[4] These include four cultivator categories (marginal, small, medium and large farmers), agricultural labour (there is omitted reference category), fishing, animal husbandry, non-agricultural white-collar labour, non-agricultural blue-collar labour, non-agricultural business and transfer income. Marginal farmers cultivate land up to two acres, small farmers between two to four acres, medium farmers between four and ten acres and large farmers cultivate ten or more acres of land.

a significant degree of downward mobility for both time periods i.e., a decline in magnitude of income mobility.

Table 3 here

This paper attempts to provide a link between income premium (an outcome of location), probability of migration and income mobility. The hypothesis being that if village income premium declines then migration of households or members of households will increase leading to increases in household income mobility. That is it will increase the probability of a household in a given village that has low income premium or household with low income premium to migrate (or have members of the household migrating). Migration therefore leads to increases in income mobility. Hence if we can predict a long run decline in income premium we are likely to predict that there will be an increase in migration and a consequent increase in income mobility.

In this paper we have shown the relationship between migration and mobility for both Glewwe and, Yitzhaki & Wodon (2003) indices. We find that for both indices the relationship between income premium and migration is negative i.e., with an increase in income premium, migration will decrease.

Table 4, 5 ,6 here

In order for us to test the hypothesis, we first need to show that household with migrants are more likely to be located in low income premium village. This will then form the basis for argument that a change in income premium is a trigger for migration. We find that the probability of households with migrants is greater in villages with low income premium.

Table 7a, 7b, 7c here

We next show and estimate the impact of change in income premium on migration. We already have stated that ignoring the impact of income premium in estimation of the magnitude of can lead to significantly biased estimate. Consequently we use the Heckman 2-stage for estimating this relationship. We find that the inverse mills ratio is negative and significant suggesting a long run predicted decline in income premium followed by an increase in the probability of migration.

Table 8a, 8b, 8c here

Finally we use the estimated probability of migration from the Heckman 2-stage and relate this to this to various measures of income mobility. We find that increase in probability of migration will lead to increase in income mobility thus verifying our stated hypothesis.

Table 9 here

6. Conclusion

We have shown that income mobility will be low if corrected for measurement error. However to explain changes in income mobility along with its low magnitudes, we resort to using the principles of mutual insurance of households. A sign of the presence high rates of insurance is the high income premium that households derive due to location that might be uncorrelated to factors such as local development. We show that increases in income premium will lower the probability of out migration. Since there is a significant degree of correlation of migration and income mobility, we are able conclusively show that the reason for low magnitudes of income mobility is due to outcome of income premium.

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Table 1: Economic indicators

	1982	1999	2006
Income and wealth:			
Mean Household Income (Rs)	5017.166 (6343.590)	30089.760 (42360.270)	55631.950 (102500.000)
Land (Acres)	3.015 (6.767)	0.991 (34.813)	1.180 (30.435)
Activity specialization:			
Prop. of Landless	0.453	0.679	0.542
Prop. of Marginal Farmers	0.177	0.228	0.322
Prop. of Small Farmers	0.116	0.050	0.073
Prop. of Medium Farmers	0.144	0.034	0.050
Prop. of Large Farmers	0.109	0.010	0.013
Prop. of Agricultural Labour	0.330	0.307	0.214
Prop. of Cultivators	0.461	0.441	0.336
Fishing	0.004	0.004	0.003
Animal Husbandry	0.006	0.002	0.000
Non-Agricultural White collar Labour	0.020	0.013	0.106
Non-Agricultural Blue collar Labour	0.118	0.136	0.242
Non-Agricultural Business	0.042	0.047	0.007
Transfer Income	0.020	0.051	0.091
Inequality:			
Village Income Inequality (Gini)	0.685	0.749	0.589
Prop. of Scheduled Caste Households	0.213	0.199	0.204
Prop. of Scheduled Tribe Households	0.054	0.077	0.060
Prop. of Other Backward Class Households	0.431	0.450	0.460
Prop. of Forward Caste Households	0.302	0.274	0.276
Infrastructure:			
Prop. Villages with School within 2 km.	0.042	0.843	0.206
Prop. Villages with Health Facilities within 2 km.	0.091	0.766	0.969
Demography:			
Mean Age of Household Head (Years)	44.754 (15.625)	47.153 (14.967)	47.328 (15.226)
Mean Household Size	5.689 (3.386)	5.541 (3.168)	5.245 (2.846)
Mean No. of earners	1.709 (1.149)	1.613 (1.016)	1.655 (0.971)
Prop. Male Headed Households	0.893 (0.309)	0.914 (0.280)	0.903 (0.296)
Proximity of urban centre:			
Distance to District HQ	54.781 (37.182)	49.794 (36.567)	52.962 (46.537)
Distance to Bus Stop	63.456 (78.874)	3.510 (5.579)	2.702 (4.261)
Distance to Railway Station	28.404 (33.942)	27.430 (28.569)	25.651 (26.848)
Distance to Post Office	31.210 (51.570)	1.961 (2.994)	1.619 (2.214)
Distance to Nearest Town	17.021 (17.263)	14.469 (11.901)	13.197 (10.757)
Distance to Pucca Road	7.463 (8.535)	2.419 (4.766)	9.508 (9.416)

Table 2: Income Transitions in Rural India

1982 against 1999

	1	2	3	4	5	6	7	8	9	10	Total
1	0.15	0.12	0.12	0.21	0.06	0.10	0.11	0.04	0.06	0.03	**4,459**
2	0.11	0.12	0.11	0.21	0.07	0.10	0.12	0.06	0.06	0.04	**4,173**
3	0.13	0.11	0.10	0.19	0.08	0.08	0.12	0.07	0.07	0.05	**3,352**
4	0.09	0.10	0.10	0.19	0.07	0.08	0.14	0.09	0.09	0.06	**4,228**
5	0.11	0.11	0.08	0.19	0.06	0.07	0.13	0.08	0.10	0.07	**3,428**
6	0.07	0.12	0.09	0.17	0.06	0.07	0.12	0.09	0.12	0.09	**4,123**
7	0.07	0.10	0.07	0.14	0.05	0.08	0.14	0.08	0.13	0.13	**6,037**
8	0.07	0.09	0.06	0.12	0.04	0.08	0.14	0.11	0.15	0.15	**2,319**
9	0.05	0.07	0.06	0.13	0.05	0.07	0.14	0.09	0.17	0.17	**4,257**
10	0.04	0.04	0.05	0.10	0.04	0.07	0.14	0.10	0.17	0.25	**4,376**
Total	**3,575**	**3,927**	**3,361**	**6,714**	**2,383**	**3,260**	**5,261**	**3,325**	**4,655**	**4,291**	**40,752**

Shorrock's Measure: M(P)=0.96

1999 against 2006

	1	2	3	4	5	6	7	8	9	10	Total
1	0.13	0.13	0.12	0.13	0.12	0.11	0.09	0.08	0.06	0.04	**4,784**
2	0.13	0.13	0.12	0.13	0.10	0.10	0.08	0.07	0.07	0.05	**4,296**
3	0.12	0.13	0.11	0.12	0.11	0.11	0.10	0.09	0.07	0.05	**4,218**
4	0.11	0.11	0.10	0.12	0.10	0.11	0.10	0.10	0.09	0.06	**7,632**
5	0.11	0.09	0.10	0.10	0.10	0.13	0.10	0.10	0.10	0.07	**2,678**
6	0.08	0.08	0.09	0.10	0.10	0.12	0.11	0.12	0.10	0.09	**3,520**
7	0.06	0.07	0.08	0.10	0.10	0.12	0.10	0.12	0.13	0.12	**5,576**
8	0.05	0.05	0.07	0.10	0.09	0.11	0.11	0.14	0.14	0.14	**4,076**
9	0.03	0.04	0.06	0.07	0.08	0.11	0.11	0.14	0.17	0.20	**4,957**
10	0.03	0.03	0.04	0.05	0.06	0.10	0.08	0.13	0.19	0.30	**4,685**
Total	**4,009**	**3,999**	**4,000**	**4,648**	**4,451**	**5,126**	**4,629**	**5,061**	**5,255**	**5,244**	**46,422**

Shorrock's Measure: M(P)=0.953

Table 3: Summary Measures of Economic Mobility

	Income	
	1982-99	**1999-2006**
Immobility ratio	0.151	0.158
Upward mobility	0.499	0.509
Downward mobility	0.462	0.446

Table 4: Summary Measures of Income Mobility for households having migrant members and households have no migrant member

	1982-99		1999-2006	
	Migrant	**Non-migrant**	**Migrant**	**Non-migrant**
Immobility ratio	0.167	0.147	0.158	0.139
Upward mobility	0.484	0.476	0.513	0.466
Downward mobility	0.438	0.464	0.430	0.303

Table 5: Household Income Regression Models

Dependent variable: Natural log of real household income

	Income regression models			Summary statistics			Chi (2)- test		
	1982	1999	2006	1982	1999	2006	1982-99	1999-06	1982-06
Household Characteristics									
Household head age (Years)	0.002 (0.014)	0.184*** (0.0156)	0.334*** (0.016)	44.754 (15.625)	47.153 (14.967)	47.328 (15.226)	5200***	15000***	830***
Head education			0.221*** (0.008)			4.691 (4.615)			
Household Size	0.178*** (0.013)	0.320*** (0.0125)	0.254*** (0.011)	5.689 (3.386)	5.541 (3.168)	5.245 (2.846)	8600***	57000***	5800***
No. of earning members	0.194*** (0.013)	0.333*** (0.0130)	0.301*** (0.011)	1.709 (1.149)	1.613 (1.016)	1.655 (0.971)	2600***	29000***	9900***
Male headed household	0.007 (0.029)	0.052** (0.0218)	-0.002 (0.020)	0.893 (0.309)	0.914 (0.280)	0.903 (0.296)	3900***	4000***	1100***
Transfer income	-0.256 (0.2306)	0.419*** (0.0346)	0.490*** (0.025)	0.020 (0.140)	0.051 (0.221)	0.091 (0.288)	2000***	18000***	389***
Government compensation			0.650* (0.395)			0.0002 (0.008)			
Rental income			0.419*** (0.129)			0.0001 (0.019)			
Household assets									
Land (acres)	0.440*** (0.008)	0.032*** (0.0029)	0.061*** (0.002)	3.015 (6.767)	0.991 (34.813)	1.180 (30.435)	1400***	35000***	2700***
Caste Category									
SC	-0.074*** (0.018)	-0.252*** (0.0175)	-0.240*** (0.015)	0.213 (0.409)	0.199 (0.400)	0.204 (0.403)	22000***	39000***	12000***
ST	-0.081*** (0.028)	-0.277*** (0.0260)	-0.122*** (0.023)	0.054 (0.225)	0.077 (0.266)	0.060 (0.238)	40000***	76000***	20000***
OBC	-0.022 (0.014)	-0.158*** (0.0151)	-0.084*** (0.012)	0.431 (0.495)	0.450 (0.497)	0.460 (0.498)	19000***	55000***	11000***
Occupation									
Cultivators	0.027 (0.020)	0.391*** (0.0114)	0.291*** (0.017)	0.461 (0.498)	0.441 (0.496)	0.336 (0.472)	1700***	54000***	230***
Fishing	0.113* (0.068)	-0.006 (0.0775)	0.482*** (0.126)	0.004 (0.063)	0.004 (0.065)	0.003 (0.057)	8500***	44000***	5500***
Animal husbandry	-0.028 (0.1001)	0.514*** (0.0937)	0.313 (0.210)	0.006 (0.074)	0.002 (0.042)	0.000 (0.018)	19000***	15000***	3200***
Non-agricultural white-collar labour	0.601*** (0.0607)	0.924*** (0.0498)	0.871*** (0.021)	0.020 (0.138)	0.013 (0.112)	0.106 (0.308)	3900***	93***	751***
Non-agricultural blue-collar labour	0.395*** (0.0287)	0.708*** (0.0202)	0.321*** (0.021)	0.118 (0.322)	0.136 (0.343)	0.242 (0.428)	13000***	12000***	3200***
Non-agricultural business	0.335*** (0.0471)	0.632*** (0.0283)	0.396*** (0.062)	0.042 (0.201)	0.047 (0.212)	0.007 (0.086)	13000***	8500***	1500***
Constant	8.256*** (0.072)	8.940*** (0.101)	9.094*** (0.078)						
Number of observations(N)	26975	39209	114798	26975	39209	114798			
R-squared	0.727	0.577	0.466						
F-test	136.38	158.86	113.99						

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

Table 6: Relationship between income premium and income mobility[3]

	Glewwe index		Yitzhaki & Wodon (2003)	
	1982-1999	**1999-2006**	**1982-1999**	**1999-2006**
Without measurement error				
Income premia	-	-	-0.0628*** (0.0026)	-0.0244*** (0.0016)
Employment establishments with in the village	-	-	-0.0002*** (0.0001)	-0.0001*** (0.0001)
Employment establishments outside the village	-	-	-0.0150*** (0.0014)	-0.0730*** (0.0030)
Affirmative actions	-	-	-0.0220*** (0.0033)	-0.0046*** (0.0011)
Constant	-	-	0.4818*** (0.0015)	0.8210 (0.0032)
No. of observations (N)			31221	30753
F-test			360.46***	883.34***
With measurement error				
Income premia	-0.0953*** (0.0030)	-0.1640*** (0.0082)	-0.0455*** (0.0028)	-0.0035*** (0.0006)
Employment establishments with in the village	-0.0001*** (0.0000)	0.0002*** (0.0000)	-0.0001*** (0.0001)	-0.0001*** (0.0001)
Employment establishments outside the village	0.0507*** (0.0016)	0.0391*** (0.0155)	-0.0153*** (0.0015)	-0.0207*** (0.0012)
Affirmative actions	0.0133*** (0.0038)	-0.0444*** (0.0055)	-0.0217*** (0.0035)	0.0032*** (0.0004)
Constant	0.0199*** (0.0017)	0.2980*** (0.0163)	0.1463*** (0.0016)	0.8382*** (0.0012)
No. of observations (N)	31221	30753	31221	30753
F-test	440.75***	323.18***	161.78***	271.08***

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

[3] Instruments used include distance of households from bus stand, distance from railway station, distance from post office, distance from nearest town, distance from pucca(metalled) road, distance from the school ,and, distance from financial institution

Table 7: Triggers for migration

7a. 1982

	Entire Sample	Land owner	SC	ST	OBC
Household size	0.030**	0.02	0.053	0.189***	0.018
	(0.013)	(0.016)	(0.036)	(0.063)	(0.021)
No. of earners	-0.013	0.045	-0.081	0.029	-0.015
	(0.027)	(0.032)	(0.065)	(0.161)	(0.047)
Land(acres)	0.034***	0.032***	0.024*	0.039	0.038***
	(0.005)	(0.005)	(0.014)	(0.026)	(0.007)
SC	0.401***	0.461***			
	(0.070)	(0.085)			
ST	0.331***	0.264***			
	(0.082)	(0.093)			
OBC	0.393***	0.405***			
	(0.041)	(0.046)			
Agricultural labour	0.404***	0.419***	0.252	-0.357	0.558***
	(0.078)	(0.092)	(0.163)	(0.400)	(0.115)
Fishing	0.200***	0.178**	0.341***	-0.532**	0.371***
	(0.060)	(0.069)	(0.121)	(0.244)	(0.074)
Non-agricultural labour	1.408***	0.797**	1.487*	4.303	0.972*
	(0.293)	(0.381)	(0.885)	(2.758)	(0.517)
Animal husbandry	0.252	0.034	0.403	0.502	0.525
	(0.179)	(0.224)	(0.273)	(0.285)	(0.350)
Non-agricultural blue-collar labour	-0.038	-0.183	-0.802***	1.612*	0.021
	(0.105)	(0.129)	(0.259)	(0.953)	(0.165)
Non-agricultural business	0.546***	0.545**	0.782***	-4.304*	0.627*
	(0.182)	(0.217)	(0.302)	(2.556)	(0.322)
Transfer income	-0.928**	-0.422	0.38	0.489	-0.095
	(0.386)	(0.600)	(1.170)	(2.921)	(0.615)
Constant	-2.820***	-2.848***	-2.278***	-2.409***	-2.437***
	(0.079)	(0.090)	(0.205)	(0.329)	(0.123)
LR Chi(2)	504.86***	323.32***	46.61***	38.09***	100.49***
Log likelihood	-6263.22	-4420.49	-1090.06	-262.47	-2450.94
Predicted probability (mean)	0.976	0.977	0.959	0.922	0.955

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

Table 7: Triggers for migration

7b. 1999

	Entire Sample	Land owner	SC	ST	OBC
Household size	-0.099***	-0.152***	-0.046***	-0.166***	-0.065
	(0.004)	(0.006)	(0.011)	(0.036)	(0.007)
No. of earners	0.284***	0.214***	-0.178***	1.099***	-0.017***
	(0.011)	(0.020)	(0.027)	(0.066)	(0.020)
Land(acres)	0.012***	-0.012***	-0.010***	0.109***	0.047*
	(0.002)	(0.004)	(0.003)	(0.017)	(0.004)
SC	-0.047***	-0.066***			
	(0.002)	(0.010)			
ST	0.027***	-0.063***			
	(0.009)	(0.025)			
OBC	-0.080***	-0.147***			
	(0.004)	(0.008)			
Agricultural labour	1.577***	1.642***	3.170***	0.602***	0.106***
	(0.044)	(0.073)	(0.153)	(0.232)	(0.067)
Fishing	1.464***	1.329***	2.891***	0.473***	0.772***
	(0.043)	(0.068)	(0.150)	(0.215)	(0.066)
Non-agricultural labour	-5.894***	-14.959***	-30.779***	16.471	-81.210***
	(0.633)	(1.215)	(2.544)	(1.302)	(2.893)
Animal husbandry	8.488***	6.530***	11.176***	77.691***	7.145***
	(0.167)	(0.407)	(0.354)	(14.964)	(0.253)
Non-agricultural blue-collar labour	0.860***	0.004	3.475***	0.138	-0.105*
	(0.044)	(0.068)	(0.177)	(0.259)	(0.067)
Non-agricultural business	-0.316***	-0.088	-3.748***	-2.832***	-2.158***
	(0.094)	(0.172)	(0.272)	(0.522)	(0.194)
Transfer income	-3.274***	-3.465***	-0.315	-15.412***	-3.818***
	(0.099)	(0.193)	(0.273)	(0.676)	(0.143
Constant	-1.770***	-0.724***	-2.846***	-1.399***	-0.158***
	(0.048)	(0.079)	(0.163)	(0.304)	(0.075)
LR Chi(2)	14045.59***	4470.87***	4593.64***	2354.75***	6362.87***
Log likelihood	-68464.343	-21830.699	-14007.504	-2979.6191	-21374.033
Predicted probability (mean)	0.76	0.649	0.747	0.648	0.674

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

Table 7: Triggers for migration

7c. 2006

	Entire Sample	Land owner	SC	ST	OBC
Literacy	0.728*** (0.027)	0.145*** (0.41)	1.098*** (0.066)	0.650*** (0.103)	0.142*** (0.039)
Household size	0.115*** (0.006)	0.075*** (0.008)	0.276*** (0.013)	-0.508*** (0.029)	0.020*** (0.008)
No. of earners	-0.297*** (0.014)	-0.259*** (0.017)	-0.607*** (0.033)	1.889*** (0.066)	-0.297*** (0.019)
Land(acres)	-0.146*** (0.004)	-0.165*** (0.006)	-0.194*** (0.010)	0.124*** (0.019)	-0.116*** (0.007)
SC	1.865*** (0.033)	1.445*** (0.050)	-	-	-
ST	1.537*** (0.029)	0.919*** (0.038)	-	-	-
OBC	0.612*** (0.018)	0.338*** (0.027)	-	-	-
Agricultural labour	-0.095*** (0.056)	-1.998*** (0.097)	1.699*** (0.156)	-1.009*** (0.194)	-0.634*** (0.072)
Fishing	1.284*** (0.056)	-0.875*** (0.097)	2.360*** (0.151)	-2.087*** (0.218)	0.684*** (0.075)
Non-agricultural labour	166.583*** (4.212)	70.112*** (6.408)	124.692*** (0.32)	-31.658*** (14.922)	172.250*** (7.058)
Animal husbandry	48.233*** (1.204)	33.679*** (1.832)	32.904*** (2.557)	94.087*** (7.646)	64.404*** (1.703)
Non-agricultural blue-collar labour	-0.403*** (0.064)	-2.696*** (0.114)	0.267 (0.173	0.288 (0.239)	-1.140*** (0.088)
Non-agricultural business	2.680*** (0.555)	-5.898*** (0.846)	13.320*** (1.303)	-32.400*** (2.679)	-3.042*** (0.795)
Transfer income	0.356*** (0.076)	-2.777*** (0.133)	-0.608*** (0.199)	2.544*** (0.380)	2.607*** (0.108)
Constant	-1.738*** (0.070)	1.208*** (0.113)	-2.252*** (0.192)	-0.131 (0.245)	0.231*** (0.096)
LR Chi(2)	15072.00***	4170.61***	3957.69***	1396.68***	6143.91***
Log likelihood	-72514.419	-34679.776	-14330.133	-4009.970	-33903.44
Predicted probability (mean)	0.531	0.497	0.483	0.473	0.507

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

Table 8: Estimating impact of outcomes pertaining to location on migration
8a. 1982

	Entire sample	Landowner	SC	ST	OBC
Dependent Variable: Income premia					
Household size	0.0051**	0.0206***	0.0020	-0.0585***	0.0378***
	(0.0025)	(0.0030)	(0.0078)	(0.0193)	(0.0050)
School within 2 Km	0.1447***	0.1363***	-0.0885***	0.3876***	0.1638***
	(0.0101)	(0.0126)	(0.0403)	(0.0881)	(0.0186)
Health facility within 2 Km	-0.3595***	-0.3231***	-0.9535***	-0.0260	0.0691***
	(0.0126)	(0.0143)	(0.0435)	(0.0850)	(0.0266)
Agricultural labour	0.2132***	0.1460***	0.4575***	-0.8794***	-0.1327***
	(0.0156)	(0.0195)	(0.0387)	(0.0779)	(0.0330)
Fishing	0.0686***	0.0197*	0.2583***	-0.4279***	-0.2769***
	(0.0116)	(0.0137)	(0.0394)	(0.0643)	(0.0221)
Non-agricultural labour	0.3409***	0.2837***	0.9825***	-2.9487***	-1.0495***
	(0.0627)	(0.0748)	(0.2746)	(0.6975)	(0.1328)
Animal husbandry	0.6117***	0.5481***	0.8760***	-7.6842**	-0.0166
	(0.0315)	(0.0378)	(0.0944)	(3.4388)	(0.0818)
blue-collar labour	0.3588***	0.2780***	0.2562***	0.5951***	0.1913***
	(0.0187)	(0.0227)	(0.0479)	(0.2016)	(0.0393)
Non-agricultural blue-collar labour	0.7779***	0.7965***	0.9072***	1.6570**	0.2371***
	(0.0335)	(0.0416)	(0.0875)	(0.4979)	(0.0724)
Cultivators	-0.0028**	0.0015	-0.0098***	0.0282***	-0.0100***
	(0.0014)	(0.0019)	(0.0022)	(0.0137)	(0.0030)
Transfer income	2.5087***	2.8009***	2.0565***	2.4218***	4.1780***
	(0.0924)	(0.1285)	(0.2481)	(0.6646)	(0.2111)
Head Age	-0.0186***	-0.0253***	-0.0172***	-0.0520***	-0.0285***
	(0.0008)	(0.0010)	(0.0016)	(0.0054)	(0.0015)
Constant	-0.0114	0.2535***	-0.3147***	2.6754***	0.9068***
	(0.0421)	(0.0509)	(0.1140)	(0.2589)	(0.0785)
Selection equation (determinants of mobility) 2nd Stage					
Household size	0.0257***	0.0151*	0.0567**	1.0580***	0.0353***
	(0.0070)	(0.0084)	(0.0241)	(0.0701)	(0.0144)
No. of earners	0.2959***	0.4252***	0.1019**	0.0983	0.0893***
	(0.0138)	(0.0170)	(0.0412)	(0.1430)	(0.0342)
Land(acres)	0.0884***	0.0765***	0.0638***	0.1417***	0.1907***
	(0.0031)	(0.0035)	(0.0088)	(0.0233)	(0.0077)
SC	0.6718***	0.8502***			
	(0.0376)	(0.0479)			
ST	1.3067***	1.0385***			
	(0.0406)	(0.0443)			
OBC	1.5226***	1.4820***			
	(0.0232)	(0.0268)			
Agricultural labour	1.1723***	1.1996***	1.1226***	-1.1219***	2.7145***
	(0.0391)	(0.0465)	(0.1020)	(0.4198)	(0.0935)
Fishing	0.1342***	0.1212***	1.2142***	-2.2818***	1.2206***
	(0.0303)	(0.0345)	(0.0834)	(0.2055)	(0.0590)
Non-agricultural labour	13.6048***	13.6799***	13.7683***	236.1535***	11.2363***
	(0.4598)	(0.5736)	(1.2409)	(61.3702)	(0.8945)
Animal husbandry	4.1866***	5.5990***	6.3064***	213.5416	10.5431***
	(0.3321)	(0.7825)	(1.2120)	(156.3776)	(1.0097)
Non-agricultural blue-collar labour	-0.2137***	-0.5906***	-0.2069	0.0338	0.3648***
	(0.0518)	(0.0632)	(0.1531)	(1.0597)	(0.1066)
Non-agricultural business	2.4524***	3.7622***	3.2548***	-5.4672***	3.3229***
	(0.1243)	(0.1733)	(0.3146)	(2.0006)	(0.2907)
Transfer income	-2.9986***	-1.6307***	-0.3366	-5.2495***	-2.7656***
	(0.1673)	(0.2592)	(0.6677)	(2.5121)	(0.3969)
Constant	-2.1953***	-2.3056***	-2.0077***	-3.1321***	-2.7280***
	(0.0389)	(0.0457)	(0.1415)	(0.5182)	0.1015)
Inverse mills ratio	0.1772***	0.1781***	0.3656***	-0.3551***	-0.2852***
	(0.0087)	(0.0107)	(0.0492)	(0.0634)	0.0216)
Wald chi(2)	8086.88***	5765.87***	1690.58***	724.81***	2839.83***

8b. 1999

	Entire Sample	Land owner	SC	ST	OBC
Dependent Variable : Income premia					
Household size	0.042***	0.039***	0.018***	0.016***	-0.052***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.010)
School within 2 Km	0.01***	-0.001	0.168***	0.178***	-0.175***
	(0.004)	(0.006)	(0.006)	(0.006)	(0.015)
Health facility within 2 Km	-0.09***	-0.108***	-0.034***	-0.058***	-0.121***
	(0.002)	(0.005)	(0.004)	(0.004)	(0.016)
Agricultural labour	0.29***	0.333***	0.389***	0.471***	-0.599***
	(0.02)	(0.039)	(0.024)	(0.027)	(0.104)
Fishing	-0.04***	-0.061*	0.385***	0.506***	-1.641***
	(0.016)	(0.037)	(0.024)	(0.027)	(0.097)
Non-agricultural labour	1.27***	3.013***	19.317***	14.469***	-0.548
	(0.18)	(0.658)	(0.727)	(1.030)	(0.416)
Animal husbandry	-0.61***	-0.136	-0.603***	-0.079	-21.035***
	(0.06)	(0.194)	(0.069)	(0.078)	(3.631)
blue-collar labour	-0.46***	-0.399***	-0.308***	-0.213***	-1.464***
	(0.02)	(0.036)	(0.027)	(0.032)	(0.12)
Non-agricultural blue-collar labour	0.59***	0.603***	1.018***	1.470***	1.083***
	(0.03)	(0.069)	(0.046)	(0.047)	(0.250)
Cultivators	-0.09***	-0.075***	-0.075***	-0.096***	0.135***
	(0.001)	(0.002)	(0.004)	(0.004)	(0.018)
Transfer income	1.56***	1.146***	2.972***	2.419***	-0.937***
	(0.05)	(0.105)	(0.084)	(0.119)	(0.320)
Head Age	-0.001***	-0.006***	-0.007	0.001*	0.002***
	(0.0004)	(0.001)	(0.001)	(0.001)	(0.002)
Constant	-0.493***	-0.272***	-0.852***	-1.052***	0.948***
	(0.02)	(0.053)	(0.041)	(0.044)	(0.172)
Selection equation (determinants of mobility) 2nd Stage					
Household size	-0.03***	-0.093***	0.177***	0.141***	0.051
	(0.004)	(0.006)	(0.012)	(0.013)	(0.044)
No. of earners	0.49***	0.154***	-0.403***	-0.243***	1.461***
	(0.01)	(0.021)	(0.030)	(0.030)	(0.090)
Land(acres)	0.026***	0.067***	-0.016***	-0.004***	0.089***
	(0.002)	(0.004)	(0.003)	(0.003)	(0.019)
SC	0.13***	0.057***	0.159***		
	(0.002)	(0.009)	(0.003)		
ST	0.25***	-0.154***	0.750***		
	(0.009)	(0.025)	(0.073)		
OBC	-0.03***	-0.062***	-0.076***		
	(0.004)	(0.008)	(0.023)		
Agricultural labour	1.64***	1.856***	0.429***	-1.316	2.124***
	(0.05)	(0.076)	(0.157)	(0.143)	(0.250)
Fishing	1.2***	1.588***	-0.07	-1.675***	-0.639***
	(0.04)	(0.069)	(0.152)	(0.141)	(0.229)
Non-agricultural labour	-22.8***	-27.632***	-65.299***	-78.082***	57.080***
	(0.59)	(1.152)	(2.533)	(2.411)	(5.422)
Animal husbandry	20.11***	21.724***	50.857***	39.179***	83.897***
	(0.36)	(1.790)	(5.565)	(5.648)	(18.917)
Non-agricultural blue-collar labour	-0.14***	-0.524***	-1.524***	-3.309***	-0.319
	(0.047)	(0.073)	(0.177)	(0.167)	(0.278)
Non-agricultural business	-0.52***	-0.226	-6.513***	-1.282***	-2.033***
	(0.08)	(0.163)	(0.299)	(0.23)	(0.460)
Transfer income	-7.21***	-4.84***	-12.934***	-22.403***	-20.054***
	(0.11)	(0.192)	(0.396)	(0.366	(0.768)
Constant	-1.54***	-0.688***	0.469***	2.486***	-2.273***
	(0.048)	(0.081)	(0.165)	(0.150)	(0.344)
Inverse mills ratio	-0.111***	-0.084***	-0.153***	-0.082***	-0.292***
	(0.005)	(0.025)	(0.006)	(0.011)	(0.026)
Wald chi(2)	52112.05***	16898.46***	13924.65***	6134.30***	14648.32

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

8c. 2006

	Entire Sample	Land owner	SC	ST	OBC
Dependent Variable: Income premia					
Literacy	-0.340***	-0.218***	-0.342***	0.197***	-0.313***
	(0.008)	(0.012)	(0.017)	(0.034)	(0.012)
Household size	0.028***	0.033***	0.031***	-0.086***	0.071***
	(0.001)	(0.002)	(0.003)	(0.012)	(0.002)
School within 2 Km	-0.048***	-0.057***	-0.048***	-0.121***	-0.007***
	(0.002)	(0.004)	(0.005)	(0.019)	(0.004)
Health facility within 2 Km	-0.121***	-0.095***	-0.094***	-0.023***	-0.229***
	(0.012)	(0.018)	(0.018)	(0.077)	(0.020)
Agricultural labour	0.496***	0.689***	0.738***	1.050***	0.793***
	(0.024)	(0.043)	(0.062)	(0.111)	(0.038)
Fishing	0.967***	1.251***	1.127***	1.853***	1.406***
	(0.023)	(0.042)	(0.056)	(0.120)	(0.040)
Non-agricultural labour	-19.033***	-18.221***	-25.719***	-15.281***	-22.668***
	(0.908)	(1.629)	(1.770)	(7.465)	(1.690)
Animal husbandry	-1.179***	-1.394***	-0.885***	-31.588***	-0.493***
	(0.061)	(0.107)	(0.130)	(2.510)	(0.088)
blue-collar labour	1.120***	1.436***	1.318***	2.027***	1.391***
	(0.025)	(0.047)	(0.065)	(0.126)	(0.042)
Non-agricultural blue-collar labour	-2.410***	-3.703***	-2.674***	9.060***	-1.218***
	(0.145)	(0.230)	(0.328)	(1.393)	(0.230)
Cultivators	-0.662***	-0.740***	-0.628***	-1.210***	-0.910***
	(0.009)	(0.014)	(0.023)	(0.042)	(0.017)
Transfer income	1.179***	1.723***	1.308***	2.531***	1.231***
	(0.031)	(0.059)	(0.070)	(0.200)	(0.052)
Head Age	0.009***	0.007***	0.009***	0.0005***	0.003***
	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)
Constant	-0.985***	-1.195***	-1.194***	-0.629***	-0.991***
	(0.038)	(0.064)	(0.089)	(0.204)	(0.064)
Selection equation (determinants of mobility) 2nd Stage					
Household size	0.057***	0.139***	0.192***	-0.57***	-0.009
	(0.005)	(0.008)	(0.012)	(0.029)	(0.007)
No. of earners	-0.515***	-0.353***	-0.703***	1.846	-0.498***
	(0.014)	(0.018)	(0.034)	(0.066)	(0.019)
Land(acres)	-0.209***	-0.225***	-0.232***	0.114***	-0.175***
	(0.004)	(0.006)	(0.010)	(0.019)	(0.007)
SC	0.994***	1.121***	-	-	-
	(0.033)	(0.051)			
ST	0.847***	0.579***	-	-	-
	(0.029)	(0.038)			
OBC	0.129***	0.183***	-	-	-
	(0.018)	(0.027)			
Agricultural labour	0.963***	-1.564***	1.718***	-1.313***	0.108*
	(0.051)	(0.088)	(0.143)	(0.181)	(0.067)
Fishing	2.182***	-0.475***	2.397***	-2.593***	1.696***
	(0.049)	(0.084)	(0.134)	(0.195)	(0.067)
Non-agricultural labour	143.887***	85.256***	110.752***	-38.548***	194.170***
	(4.305)	(6.647)	(9.997)	(14.988)	(7.605)
Animal husbandry	50.430***	38.112***	36.848***	106.495***	64.016***
	(1.479)	(2.065)	(3.098)	(9.084)	(2.234)
Non-agricultural blue-collar labour	1.734***	-1.831***	1.398***	0.002***	0.799***
	(0.057)	(0.100)	(0.157)	(0.213)	(0.079)
Non-agricultural business	9.103***	-5.519***	15.418***	-26.058***	0.635
	(0.553)	(0.854)	(1.306)	(2.603)	(0.793)
Transfer income	0.029***	-3.196***	-1.631***	2.481***	2.275***
	(0.073)	(0.125)	(0.187)	(0.372)	(0.107)
Constant	-1.013***	1.030***	-1.046***	1.019***	0.021
	(0.053)	(0.089)	(0.160)	(0.192)	(0.073)
Inverse mills ratio	-0.0502***	-0.0443***	-0.0411***	-0.481***	-0.095***
	(0.0062)	(0.0101)	(0.0118)	(0.028)	(0.011)
Wald chi(2)	35698.33***	14076.81***	8114.08***	2781.67***	16862.93***

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

Table 9: relationship between migration and income mobility

	Glewwe index									
	1982-1999							1999-2006		
	Entire sample	Land owner	SC	ST	OBC	Entire sample	Land owner	SC	ST	OBC
With measurement error										
Migration	0.201*** (0.002)	0.117*** (0.003)	0.223*** (0.003)	0.132*** (0.004)	0.040*** (0.003)	0.434*** (0.0033)	-0.348*** (0.005)	-0.310*** (0.006)	0.006*** (0.0083)	0.237*** (0.004)
Constant	0.019*** (0.0005)	0.053*** (0.001)	0.0214*** (0.0006)	-0.0310*** (0.001)	0.076*** (0.001)	0.581*** (0.001)	0.515*** (0.003)	0.530*** (0.003)	0.264 (0.005)	0.501*** (0.002)
F-test	7641.4***	1151.5***	3370.1***	961.83***	163.82***	17319.75***	3892.7***	2166.5***	0.61***	2585.3***

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively

	Yitzhaki & Wodon (2003)									
	1982-1999							1999-2006		
	Entire sample	Land owner	SC	ST	OBC	Entire sample	Land owner	SC	ST	OBC
Without measurement error										
Migration	0.008*** (0.002)	-0.236*** (0.004)	0.049*** (0.0045)	-0.187*** (0.007)	0.037*** (0.002)	0.076*** (0.0006)	0.043*** (0.001)	0.058*** (0.001)	-0.005*** (0.002)	0.026*** (0.0009)
Constant	0.500*** (0.0006)	0.621*** (0.002)	0.466*** (0.0011)	0.622*** (0.0037)	0.510*** (0.001)	0.698*** (0.0003)	0.718*** (0.0006)	0.704*** (0.0006)	0.758*** (0.001)	0.722*** (0.0005)
F-test	14.52***	3357.9***	117.31***	654.1***	158.07***	14965.8***	1323.35***	2783.9***	5.44***	717.52***
With measurement error										
Migration	0.072*** (0.0026)	-0.322*** (0.005)	0.024*** (0.005)	-0.26*** (0.008)	0.013*** (0.003)	0.014*** (0.0002)	0.008*** (0.0003)	0.011*** (0.0003)	0.011*** (0.0005)	0.005*** (0.0003)
Constant	0.197*** (0.0007)	0.327*** (0.002)	0.168*** (0.0013)	0.342*** (0.004)	0.194*** (0.001)	0.797*** (0.0001)	0.801*** (0.0002)	0.798*** (0.0002)	0.801*** (0.0003)	0.701*** (0.0001)
F-test	730.31***	4071.76***	20.09***	909.36***	13.69***	4508.9***	496.23***	968.22***	408.8***	245.6***

Note: *, **, *** denote significance at the 10%, 5% and 1% level respectively