Short-term Migration and Consumption Expenditure of Households in Rural India

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Abstract

In 2007-08, short-term migrants constituted 4.35 per cent of the rural workforce. A total of 9.25 million households in rural India had short-term migrants.Using a nationally representative data for rural India, this paper examines differences in consumption expenditure across households with and without a household member who is a short-migrant. We use an instrumental variable approach to control for the presence of a short-term migrant in a household. We find that households with a short-term migrant have lower monthly per capita consumption expenditure and monthly per capita food expenditure compared to households without a short-term migrant. Short-term migrants are not unionised, they work in the unorganised sector, they do not have written job contracts and state governments are yet to ensure that the legislations protecting them are properly enforced. This could be one of the reasons why we do not observe higher levels of expenditure in households with such migrants.

Keywords: Short-term migration, Household consumption, Rural-urban linkages

JEL Code: O1, R23

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1. **Introduction**

India's Economic Survey for the year 2012-13 asks the pointed question "*where will the good jobs come from?*" The fact is that not enough well-paying jobs are being created. A total of 23.33 million jobs were lost in agriculture and 4.02 million jobs in manufacturing over the period 2004-05 and 2009-10. These losses were offset by a gain of 25.89 million jobs in non-manufacturing (primarily in the unorganised construction sector) and 2.7 million jobs in the services sector (Government of India 2011). Over this period the employment elasticity in agriculture and manufacturing was negative in all the major states of India. Hence, the XIIth Five Year Plan (2012-17) was prepared against the backdrop of the phenomenon of jobless growth in the organised sector and an increase in short-term migration. Both these facts were explicitly acknowledged by the Report of the Working Group on Employment, Planning & Policy for the Twelfth Five Year Plan (Government of India 2011). In its report the Working Group notes that in the last decade workers and households did not migrate permanently but only for a short period of time, i.e. temporarily. They did not sever their link to land in rural areas.

A logical question that follows is whether households with an individual who is a short-term migrant are better off or worse off than households without a short-term migrant. This is primarily an empirical question. The nature of economic activities pursued by the short-term migrants would determine how the household's well-being is affected. Since short-term migrants are employed in low productive, non-contractual jobs it is unlikely that their earnings are going to be high. Also if short-term migrants are from the poorer sections of the society they are unlikely to have the necessary financial and social resources to search for and find remunerative jobs. Further, since

these individuals are members of the household there is no role played by remittances. In fact in its Report, the Working Group on Employment, Planning & Policy, characterizes these migrants as follows: "This is not the kind of labour force who are likely to be available to work in manufacturing or modern services, mainly on account of their lack of skills, and often even primary education. Their migration is a reflection of rural distress, driven by the fact that 84% of India's farmers are small and marginal farmers, tilling only less than 2.5 acres of land" (Government of India 2011 p. 87). In light of the above discussion, our objective is to test the conjecture that households with short- term migrants are not necessarily better off than households without a short-term migrant.

Towards this, we use cross section data from a nationally representative survey on employment, unemployment and migration conducted by India's National Sample Survey Organisation in 2007-08 to understand differences in household consumption expenditure across households with and without short-term migrants. In the survey, a short-term migrant is identified as an individual who 'stayed away from the village/town for a period of one month or more but less than six months during the last 365 days preceding the survey for employment or in search of employment'.

Exercising care in identifying who is a migrant is important especially when we compare outcomes across different type of households. The identification of a short-term migrant is not uniform in the literature and we provide two examples from recent studies. In their analysis of food consumption pattern of migrants in Vietnam, Nguyen and Winters (2011) capture "short-term migration as a dummy variable which takes a value of one if the household has at least one individual who stays in the household for a cumulative period of less than or equal to 6 months in the past twelve months prior to the survey, but was gone the remaining part of the year" (p.74). de Brauw (2010) in his work on seasonal migration and agricultural production in Vietnam defines "seasonal migrants as members of the household who left for part of the year to work, but are still considered household

members" (p.116). In the literature it is argued that the following five individual characteristics can help researchers to determine who is a migrant: place of birth, whether or not individual resides in the place of birth, household membership, duration of any stays away from the residence, and time period of reference (Carletto et al. 2011). The data set we use in this paper helps us identify a short-term migrant based on the last three characteristics. Instead of place of birth and whether or not the individual resides in the place of birth we have an indicator for the individual's usual place of residence in the 365 days preceding the survey. Hence it is reasonable to assert that the NSSO survey has a reliable indicator of who is a short-term migrant.

The impact of migration on well-being of the household depends among other things on the individual's and household's socio-economic status. In a recent article Zezza et al. (2011) provide an overview of the literature on how migration affects consumption and nutritional outcomes. Depending on the validity of the variables used as instruments for migration status the results are either given the flavour of causation or at best partial correlation. The evidence on whether migrant households have higher consumption expenditure than non-migrant households is mixed. Karamba et al. (2011) who analyse food consumption pattern of migrants in Ghana found that "migration does not substantially affect total per capita food expenditures, and has a minimally noticeable effect on food expenditure patterns" (p.51). In the context of Albania, households that migrated from rural to peri-urban areas were found to have lower consumption than those who stayed back (Hagen-Zanker and Azzarri 2010). A longitudinal study for Tanzania (1991-2004), found that consumption expenditure of migrant households increased by 36 percent as compared to that of non-migrant households (Beegle et al. 2011). Nguyen and Winters (2011), in the case of Vietnam found that short-term migration had a more pronounced effect on per capita food expenditure, calorie consumption and food diversity than long-term migration. Overall these findings do not

provide a clear relationship between migration and consumption, and more research on this issue needs to be done, before reaching any conclusion.

2. The Indian Context

In a recent article reviewing India's growth performance, Kotwal et al. (2011) point out that one distinct aspect of India's experience is the slow rate of decline in the share of workforce employed in agriculture. The share of agriculture in value added as a percent of gross domestic product decreased from 39 percent in 1983-84 to 20 percent in 2004-05 while the share of agriculture in total employment declined from 68 percent to 58 percent. They argue that "An important component of growth—moving labor from low to high productivity activities—has been conspicuous by its absence in India. Also, as the labor to land ratio grows, it becomes that much more difficult to increase agricultural wages and reduce poverty" (p. 1195). In fact the findings from a survey conducted by National Sample Survey Organisation (NSSO) in 2003 revealed that 27 percent of the farmers did not find farming profitable and given an option 40 percent of farmers would not wish to continue farming and instead pursue other opportunities (Government of India 2005). Pursuing other opportunities is easier said than done in light of the stickiness in the unemployment rate and relatively high level of under employment. In 2004-05, the unemployment rate was 8.2 percent in rural and 8.3 percent in urban India (Government of India 2006). The unemployment rate was much higher among the youth aged 15-29 years as compared to that in the overall population. Overall, the level of underemployment was high with 11 per cent of usually employed rural men and 7 per cent of usually employed rural women aged 15 years and above available for additional work.

In short, the macro picture suggests that one would observe migration driven by push factors at the source.

In the Indian context, seasonal migration is not a new phenomenon and the issue has been researched at length by many scholars either from the viewpoint of migration or non-farm employment (Cali and Menon, 2013; Deshingkar and Start, 2003; Haberfeld et al. 1999). Breman (1996) has written at length about seasonal migration in South Gujarat (India) since 1970. He argues that the main reason for increased seasonal migration is the decline in agricultural employment and landless tribal households in this region. Further, he points out that increased urbanization in Gujarat has attracted these individuals to migrate on a short-term basis to work in the informal sector. This diversification strategy has helped households in sustaining their livelihoods. Mosse (2005) argued that seasonal migration has become an "irreversible part of the livelihoods of rural adivasi communities in western India" (p. 3025). Cali and Menon (2013) argue that migration is a channel through which urbanization and growth of non-farm sector leads to a reduction in rural poverty. They also talk of how seasonal migration is a mechanism of urban-rural linkage and benefit transfers. Haberfeld et al. (1999) based on a micro study in southern Rajasthan, find that seasonal migration is a coping and risk reducing strategy. They also find that seasonal migrant households are characterized by low levels of education and income. In their sample almost 60 percent of the income of households can be attributed to seasonal migration. Reviewing the micro studies on non-farm employment in the Indian context, Basu and Kashyap (1992), document that "temporary migration of labour force from rural to urban area, particularly of commuting variety, account for a sizeable portion of workforce in various economic activities of the urban centres as well as form a major share of off-season employment of agricultural labour and small farmers" (p. A-188). The authors argue that the nature of rural non-farm employment attract casual and seasonal workers with inadequate land holding, who keep on shifting between agricultural and non-agricultural jobs

between crop seasons and off-seasons to supplement their household income. They term this as "distress diversification".

Today, what is new about seasonal migration is its size. The obvious question that arises is why households will not relocate from their current place of residence in rural area rather than resort to short-term migration. First, there is a view that short-term migrants accept lower wages since they believe that these are temporary positions. Further, in the construction sector where many short-term migrants work, migration networks establish matches between demand for jobs and where openings exist. Second, relocating permanently within the district or the state is not necessarily an attractive option since in the aggregate there are not enough jobs in the non-farm sector. Third, cities are not welcoming of migrants as reflected by the following two facts: the population in the core of India's largest cities has shrunk in the period 2001-11 and the rate of population growth in the corresponding urban agglomerations has declined more than can be explained by decrease in fertility rates. These two facts put together imply that in-migration rates have declined and this is consistent with the general observation that individuals do not want to sever their link to the land in the rural areas[1].

Kundu (2009) and Kundu and Saraswati (2012) have described the phenomenon of cities being unwelcoming of migrants, i.e. exclusionary urbanization. Symptoms of exclusionary urbanization include urbanization of poverty; unaffordable accommodation and higher cost of living in the cities; and increase in the number of households living in slum like conditions. All these symptoms are evident in the Indian context. First, the total number of rural poor declined from 252 million in

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[1] There is an active debate on whether the Mahatma Gandhi National Rural Employment Guarantee Scheme under which each rural household is entitled to a maximum of 100 days of employment in a year can impact short term migration. The conjecture is that since employment has to be given if there is demand it would reduce seasonal as well as distress migration. However, the debate is far from conclusive given the absence of appropriate data to address this question with a certain level of robustness. We do not have to control for the impact of this scheme since in the period we consider for analysis the scheme had not been rolled out nationwide. Also the average mandays of employment offered to a beneficiary household was 33 days (Government of India 2008).

1983 to 221 million in 2004-05 while the total number of urban poor increased from 71 million to 81 million during this period (Government of India 2002, 2007). It is estimated that by 2020, the total number of urban poor could be as high as 113.6 million (Mathur 2009). This would represent an increase of 22 million over the period 2004–2020. Second, it is also estimated that 75.26 million individuals accounting for 26.31 percent of India's urban population lived in slums of urban India in 2001. It was projected that this number would have increased to 93.06 million by the year 2011 (Government of India 2010a). So migrating permanently to urban areas is not an attractive option.

More importantly, households migrating from rural to urban areas will have to give up the benefits of the programmes that they are entitled to in rural areas. The Government of India has developed a business plan for rural infrastructure under the programme Bharat Nirman. Under this the focus is on improving coverage of water supply, road connectivity, building housing stock, increasing tele-density, providing electricity and increasing area covered under irrigation. As the name of another scheme suggests, Provision of Urban Amenities in Rural Areas is a scheme launched by the Central Government for providing '*livelihood opportunities and urban amenities to improve the quality of life in rural areas*'.

3. Data and Summary Statistics

The analysis, in this paper, is based on the sixty-fourth round of the NSSO's survey on Employment, Unemployment and Migration conducted from July 2007 to June 2008 across 35 states and union territories of India. The survey covered a sample of 79,091 rural and 46,487 urban households, collecting information on a total of 374,294 rural and 197,960 urban individuals. This survey is nationally representative. The sample frame for the survey is the Census of India 2001. Details of the stratified multistage sampling design are available in the report published by

Government of India (2010b). The lowest geographical unit is known as the first stage unit (FSU), which would be a village in rural India. Households are chosen from the FSU based on the following criteria: two households having at least one out-migrant and received at least one remittance from him/ her during last 365 days; four households among the remaining households having at least one other type of migrant, including temporary out-migrants, for employment purpose; and four other households.

In addition to household characteristics, detailed information on demographic and socio-economic characteristics of the members was also collected. The survey has information on two aspects: whether the entire household migrated and whether any member of the household is a migrant. Among individuals who can be identified as migrants, we can clearly identify who is a short-term migrant[2]. A short-term migrant is an individual who has stayed away from the village/town for a period of one month or more but less than six months during the last 365 days preceding the survey, for or in search of employment. The cut-off of six months is used to determine the usual place of residence.

Due to definitional issues the counting of the number of seasonal migrants is contentious. Deshingkar (2006) has argued that the official estimates are on the lower side. Much of the confusion in the literature on estimation comes from how the current place of residence is defined. The survey manual of NSSO defines a household and its members as follows: "A group of persons normally living together and taking food from a common kitchen will constitute a household. It will include temporary stay-away (those whose total period of absence from the household is expected to be less than 6 months) but exclude temporary visitors and guests (expected total period of stay less

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[2]In Karamba et al. (2011) a migrant is defined as an individual living outside the household. This definition has the following short comings. First, they do not know whether the individual migrated out of the household is part of the household or not. Second, they are unable to distinguish between long-term and short-term migrants in a household.

than 6 months)". There are many instances where an individual who is considered as a member of the household spends over six months away from home and is a resident of the household for less than six months. Some would argue that these individuals should be considered as short-term migrants. However, based on NSSO's criteria this individual is not a member of the household and hence not a short-term migrant. This individual would be enumerated where he or she spent more than six months of the year working. Further, these individuals would be classified as out-migrants by NSSO. So the debate is really over how many out-migrants are likely to be short-term migrants if one did not use the criteria of six months used by NSSO for deciding the place of residence. It is reasonable to argue that since NSSO applies this definition consistently in the survey, the analysis in this paper is not affected by the debate over the count of short-term or seasonal or circular migrants.

It is estimated that in 2007-08, a total of 12.58 million short-term migrants lived in rural India. They constituted 1.7 per cent of rural population. Alternatively, they constituted 4.35 per cent of the rural workforce. In terms of household, 9.25 million households in rural India had a household member who was a short-term migrant. Of the 159 million rural households 5.8 per cent had a short-term migrant. While 76 per cent of rural households had only one short-term migrant, 17 per cent had two short-term migrants.

[Insert Table 1 Here]

In rural India, the average monthly per capita consumption expenditure (MPCE) of households with a short-term migrant was lower at Rs. 601 as compared to Rs 756 for households with no short-term migrant (Table 1). We also observe that the median MPCE was higher among households with no short-term migrant (Rs. 624 and Rs. 519 respectively). The kernel density estimates of MPCE distribution for the two types of household shows that there is no first order dominance in the distribution. We do not find any second order dominance between distribution of MPCE of households with and without short-term migrants.

4. Empirical Model

Our unit of analysis is the household and the equation that we seek to estimate is the following:

$$Y_i = \beta_0 + \beta_1 Mig_i + \beta_2 X_i + \varepsilon_i$$

The dependent variable Y_i is one of the following: logarithm of MPCE, logarithm of monthly per capita expenditure on food and share of food in total monthly expenditure of the ith household. The variable X_i represents household characteristics. The variable Mig_i is a dummy variable, which takes the value one or zero depending on whether the household has a short-term migrant or does not have a short-term migrant.

Among the household variables we include the following as explanatory variables: social group (scheduled caste, scheduled tribe, other backward classes, and others), religion (Hindu, Muslim, Christian, Others), household type[3] (self-employed in non-agriculture, agricultural labour, other labour, self-employed in agriculture, others), and number of household members in the age group 0-6 years, 7-14 years, 15-24 years, 25-59 years and 60 years & above. We also control for the size of land possessed by the households as an explanatory variable. Land possessed (in hectares) is a dummy variable and is coded as follows: less than 0.005, 0.005 - 0.01, 0.02 - 0.20, 0.21 - 0.40, 0.41 - 1.00, 1.01 – 2.0, and greater than 2.0 hectares. Recognising the fact that seasonality is a factor to be reckoned in rural India, the survey was conducted over four sub-rounds (July-September, October-December, January-March and April-June). We control for seasonality by including sub-round

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[3]If any single source from the following five sources - self-employed in non-agriculture, agricultural labour, other labour, self-employed in agriculture, others - contributes at least 50 percent of the income of the household during the 365 days preceding the survey, the household type corresponding to that source is assigned.

dummies. In order to control for regional variation we include geographical dummies to capture variations across national sample survey regions. A national sample survey region is a geographical unit larger than a district but smaller than a state. These regions can also be grouped according to the agro-climatic zones. Each region is relatively homogenous in its characteristics. The summary statistics are given in Table 2. In the results section while interpreting the results we explain the relevance of some of the independent variables we have included in the analysis since they are specific to the Indian context.

[Insert Table 2 Here]

.Unobserved factors like crop failure or lack of jobs, which affect the decision to migrate can affect consumption pattern of households. From cross-section data, one cannot infer "what would happen to non-migrant households if they migrate, just by looking at the experience of migrant households (or vice versa)" (p.5 McKenzie and Sasin 2007). In order to be able to make any causal statement one needs to use instrumental variable for the decision to migrate or in the case of a household the presence of an individual who is a migrant. We need to find valid instruments for the dummy variable Mig_i indicating the presence of a migrant in a household. A good instrument should be correlated with migration variables and affect consumption expenditure only through its effect on migration. Based on a reading of the literature, plausible instruments can be grouped into these types, viz. demographic, previous migration behaviour and regional variables.

As is evident from the existing literature, the challenge is to find valid instruments for the decision to migrate. Choice of instruments varies from regional factors to household level characteristics which can affect the decision to migrate. Relative levels of mobility, literacy rate, change in population, and rate of migration are some of the instruments constructed using Census data in the studies on Ghana and Vietnam (Karamba et al. 2011; Nguyen and Winters 2011). Household characteristics like whether there was an indoor toilet or not and asset ownership were found to be

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valid instruments for migration from rural to peri-urban areas for Albania (Hagen-Zanker and Azzarri 2010). Beegle et al. (2011) used dummy variables for head or spouse of the household head, age rank among those between five and fifteen years, close family members, local marriage norms and son of the household head as instruments. These instruments broadly belong to three different groups: pull factors, push factors and social relationships[4].

In line with the literature, we construct an indicator of migrant network at the district[5] level using Census of India, 2001 by calculating the proportion of migrants who moved in the last four years preceding 2001 into the district in which the household resides. In the literature, similar migrant network variables are used as instruments for migration by an individual in the household (de Brauw and Harigaya 2007; Karamba et al. 2011; Nguyen and Winters 2011). The second instrument is the level of urbanization in each NSS region. The instrument that we use is the estimate of the proportion of the district's population living in urban and peripheral urban areas of the district. While the share of urban population in every district is available as part of Census of India data, the size of population living in peripheral urban areas is not available as part of the official statistics given the dichotomous definition of what is rural and urban. Literally, the term peripheral urban, refers to an area around a city or town. Conceptually, it is rural in nature, with diverse land-use and some or many of its residents commuting to work in the nearby urban area. Estimates of the size of the peripheral urban area have been generated by geographers and for India they are available as part of the India e-geopolis data set[6]. The reason this is a candidate as an instrument for the dummy variable Mig_i is that districts with large peripheral urban areas probably have higher rural-urban connectedness, and hence one is likely to see more of migration or short-term migration. Both these

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[4] Poverty is a push factor but we cannot use the information whether a household is poor or not in the first stage regression since the poverty status is derived based on consumption expenditure.

[5] The three geographical units at the subnational level are state, national sample survey region and the district. In 2007-08, India comprises of 35 states and union territories, 87 NSS regions and 588 districts. The NSS region is comprised of a group of districts within the state.

[6] http://www.ifpindia.org/Built-Up-Areas-in-India-e-GEOPOLIS.html

variables do not directly affect MPCE but are channels through which rural and urban areas interact and hence affect the probability of migration.

We should also point out that in the literature some authors have included the characteristics of the household head as an explanatory variable (Karamba et al. 2011; Nyugen and Winters 2011). However, they do not mention whether the head of the household is a short-term migrant[7]. If this were indeed the case as in the case of India it would imply that in the regression, for some households we are including characteristics of the head of household who is also the short-term migrant and for some households characteristics of household head who is not a short-term migrant. In light of this we do not include the characteristics of the head of the household as an explanatory variable.

5. Results

We first report the results based on the ordinary least square model (Table 3). The coefficient of the dummy variable Mig (indicating presence of short-term migrant in a household) is negative implying that households with short-term migrants have lower MPCE and monthly per capita food expenditure. As outlined in the earlier section, we need to use an instrument for the presence of a short-term migrant.

[Insert Table 3 Here]

In the first stage of the IV model, in line with the literature, we estimate a linear probability model[8] to compute the probability of a short-term migrant being a member of the household (Table 4).

[Insert Table 4 Here]

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[7] In the literature on migration and consumption outcomes for valid reasons the authors do not model who in the household is a short-term migrant.

[8] Angrist (2000) justifies the use of linear probability model, since a probit or logit model can be used for analysis, only if the estimated model is 'exactly correct', which is hardly the case in empirical exercises.

We find that household's with land holdings over two hectares are less likely to have a short-term migrant. Short-term migrants are more likely to be from households whose major portion of income is from working as rural labour. These findings are consistent with the view that households with lower land holdings and rural labour households are more likely to have a member who is a short-term migrant.

Next, we discuss the diagnostic test statistics for the instrument variables used in the model i.e. the share of urban population in the NSS region and the migrant network variable (Table 5). The tests for endogenity for the presence of a short-term migrant in a household rejects the null hypothesis that this variable (whether household has a short-term migrant or not) can be treated as exogenous in the estimating equation[9]. The over identification test (Hansen J-Statistic) indicates that we do not reject the null hypothesis that instruments used are valid and uncorrelated with the error term. This test suggests that the instruments used are correctly excluded from the estimating equation. The under identification test suggests that the model is identified for rural households, and the Kleinbergen-Paap-rK-LM statistic does not accept the null hypothesis that the model is under identified. This test indicates that the excluded instruments are relevant, meaning correlated with the endogenous variable. In our IV models, the explanatory power of instruments used is reasonably strong with F-statistics having a value more than ten.

[Insert Table 5 Here]

Moving on to the second stage results of the IV models, we discuss the relationship between having a short-term migrant in the household and the logarithm of MPCE and logarithm of monthly per capita food expenditure of the household (Table 6). In line with the findings of the OLS model, we find that there is a negative relationship between short-term migration and logarithm of MPCE and

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[9]All tests have been performed following Baum (2003).

logarithm of monthly per capita food expenditure[10]. The magnitude of the effect in the IV model is higher than the OLS estimate. So we can say that households with a short-term migrant do not necessarily have higher per capita consumption expenditure. In addition, and not surprisingly enough, households with a short-term migrant have higher share of food expenditure. This is only to be expected since the share of food expenditure will be higher for households with lower levels of per capita consumption expenditure. Our findings are in contrast to that of Nguyen and Winters (2011) who in the context of Vietnam found that short-term migration has a positive effect on overall per capita food expenditure. However, other small sample studies in the context of India have found that short-term migrants are not necessarily better off (Basu and Kashyap 1992; Deshingkar and Start 2003; Rogaly and Rafique 2003).

[Insert Table 6 Here]

In rural India, if short-term migration is more of a diversification strategy driven by lack of employment opportunities in rural areas, households with a short-term migrant need not necessarily have higher levels of income or consumption. From our data, it is possible to glean further insights on why households with a short-term migrant have lower MPCE. Among the short-term migrants 40 per cent are illiterate while 14 per cent did not complete primary education and 17 per cent completed primary education. As is apparent 71 per cent of the short-term migrants have low levels of educational attainment. Among the short-term migrants the work done by 56 per cent of them is at skill level one[11], while the work done by 43 per cent is at skill level two[12]. Lower educational attainment and undertaking low skill jobs would imply that the labour market returns of short-term

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[10] Finally comparing the actual differences in the MPCE, we find that the mean MPCE, in natural logarithm terms, is 6.57 and 6.35 for households with no short-term migrant and household with short-term migrant respectively. The predicted values from the IV model, show that ln(MPCE) values are 6.79 and 5.14 for non-migrant and migrant household respectively. We can see that predicted differences after controlling for various factors is higher than actual differences. In case of ln(MPCE for food) as well as share of food expenditure, we observe similar pattern.

[11] Elementary occupations consisting of 'simple and routine tasks which mainly require the use of handheld tools and often some physical effort' require skill at the first level.

[12] Clerks, service workers and shop & market sales workers, skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers require skills at the second skill level.

migrants is not necessarily high. While the skill level of the short-term migrant is inferred from the national classification of occupation we can get additional insights from the industry of work. We have information on the industry of work of the individual based on the principal status and the industry of work of the individual when he or she was a short-term migrant. The principal status is determined based on the activity that the individual spent the longest in the 365 days preceding the survey. The industry of work can be grouped into 18 different categories which can further be collapsed into four coarse categories, viz. primary, manufacturing, construction and services.

[Insert Table 7]

We present the transition matrix based on this categorization of industry of work (Table 7). From the table, it is apparent that 35.84 percent of individuals engaged in primary sector move to construction while nearly 38 percent continue to work in the primary sector when they are away from home. Neither the primary nor the construction sectors necessarily offer remunerative jobs. We have already discussed how agriculture is not perceived as a worthwhile profession. The construction sector is largely unorganised, without written job contracts and the sub national governments have been tardy in protecting the rights of the construction workers[13]. Our calculations based on the NSSO's survey of employment and unemployment conducted in 2009-10 reveals that an overwhelming 96 percent of the workers in the construction sector did not have a written contract. Based on case studies the literature on labour market contracts of short-term migrants has also established the following phenomenon - seasonal migrants are not unionised and not covered by effective legislation (Rogaly et al 2001) and they face problems in obtaining timely payment (Rogaly and Rafique 2003). Hence the transitions evident in Table 7 do not reflect upward mobility

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[13] Following the filing of a petition Supreme Court of India has directed the states and union territories to implement the Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996 and The Building and Other Construction Workers Welfare Cess Act 1996

in sector of work and thus can explain the finding that households with a short-term migrant are not necessarily better off than households without a short-term migrant.

Moving on to other factors affecting consumption expenditure, we observe that higher is the land possessed by the household, higher is monthly per capita consumption expenditure and monthly per capita consumption expenditure on food. This result is consistent with findings elsewhere in the literature. The results also indicate that the primary occupation of the household matters. As compared to households self-employed in non-agriculture, households engaged in agricultural labour or self-employed in agriculture have lower MPCE and monthly per capita food expenditure, whereas households engaged in other activities have higher MPCE and monthly per capita consumption expenditure on food. An examination of poverty among households of various types reveals that in 2009-10 nearly 50 percent of agricultural labourers and 40 percent of other labourers were living below the poverty line (Government of India 2012). This pattern was evident in 2004-05 too.

We observe that as compared to scheduled tribe households, all other households have higher MPCE and monthly per capita food expenditure. Further, the coefficient of scheduled tribe households is lower than other backward class households, which is lower than households in the other category. This finding is in line with the fact that poor households are concentrated in scheduled tribe and scheduled caste households. We also find that as compared to Hindu households, households in other category have higher MPCE and monthly per capita food expenditure. Historically, there are variations in incidence of poverty within social groups, religious groups and household types and these variations continue to persist. In 2009-10, in rural India, 47.4 percent of scheduled tribes and 42.3 percent of scheduled castes and 31.9 percent of other backward castes are living below the poverty line. In urban India, 34.1 percent of scheduled castes and 30.4 percent of scheduled tribes were living below the poverty line. The rural and urban poverty rates were 33.8 percent and 20.9 percent respectively. Hence poverty is concentrated among the

scheduled castes and scheduled tribes. The head count ratio of poverty is higher among Muslims as compared to other religious groups (Government of India 2012). Hence social group and religion are important determinants of household consumption.

We find that households having higher composition of non-earning members i.e. kids (0-6 years), children (7-14 years) and elderly (60+ years) have lower MPCE, whereas households with larger number of adult members (25-59 years) have higher MPCE. These findings are in line with Nyugen and Winters (2011).

Next, we discuss the results of the share of food expenditure. In the empirical literature on consumption expenditure, there is a negative relationship between food share and total consumption expenditure also termed as the Engel curve. This relationship indicates that as the consumption expenditure increases share of food expenditure declines because spending on food (which is an essential commodity) is comparatively less elastic and does not change much with an increase in spending. Higher consumption is then allotted to conspicuous goods, luxury goods and other durable goods. Therefore, even though food expenditure increases with higher consumption, it does not increase in the same proportion. So the signs of the coefficients in case of food share should be opposite for explanatory variables in the estimated model. We find the expected signs in the model.

6. Discussion

We find that rural Indian households with short-term migrants have lower MPCE compared to those without a short-term migrant. The reason for this is manifold. Short-term migrants are not unionised, they work in the unorganised sector, they do not have written job contracts and state governments are yet to ensure that the legislations protecting them are properly enforced. Our

finding is at variance with some papers in the literature that establish that households with short-term migrants are better off. This is not surprising since reductions in rural poverty are not driven primarily by migration and related outcomes. Decomposing the reduction in rural poverty over the period 1993-2002 suggests that migration accounted for only 19 percent of the reduction in worldwide rural poverty while 81 percent of the reduction could be ascribed to improved rural livelihoods (p.29, World Bank 2007). This important statistic is typically missed in most discussions on impact of migration on household well-being. It is unlikely that migration is the single most important pathway to reducing rural poverty. Catalysing non-farm employment is important in developing countries including India. Despite maintaining an upward annual growth rate of six per cent per annum in the last decade India has not managed to create substantial number of non-farm jobs. Hence, short-term migration has become an important component of livelihood strategies in rural India. Neither the approach paper to the XIIth Five Year Plan nor India's Economic Survey 2012-13 paints an optimistic scenario on the employment front. For reasons outlined in the paper, it is unlikely that in the short run India will witness large hordes of migrants from rural to urban areas. This will imply that individuals will continue to move for short duration subject to availability of jobs.

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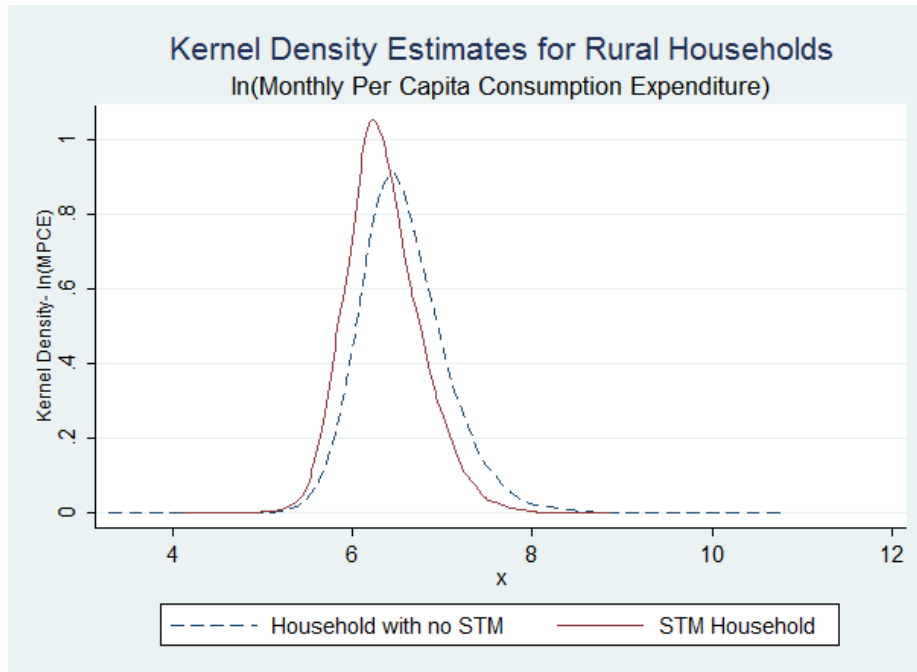
Figure 1: Kernel Density Estimates of Rural Households with and without a Short Term Migrant (STM)

Table 1: Selected Descriptive Statistics for Rural Households						
Type of Household	MPCE (in Rupees)		MPCE Food (in Rupees)		Share of Food Exp. (in percent)	
	Mean	Median	Mean	Median	Mean	Median
Households with no short term migrant	756	624	399	359	57	58
Households with short term migrant	601	519	335	312	59	60

Table 2: Summary Statistics for Rural Households				
Variable	Mean	Standard deviation	Min.	Max.
Short term migrant in the household	0.12	-	0	1
Outcome Variables				
Ln(MPCE)	6.53	0.49	3.30	10.80
Share of Food Expenditure	0.57	0.11	0	0.97
Ln(MPCE Food)	5.95	0.41	3.18	8.30
Instrument Variables				
Share of urban population	23.8	12.8	1.52	89.58
Migrant network (share of migrant stock in past 4 years)	0.17	0.06	0.03	0.66
Number of people in a household by age group				
0-6 years	0.68	0.99	0	10
7-14 years	0.84	1.08	0	9
15-24 years	0.90	1.09	0	9
25-59 years	1.93	1.03	0	15
60+ years	0.38	0.65	0	4
Gender of the household head				
Male	0.85	-	0	1
Female	0.15	-	0	1
Social Group				
Scheduled Tribe	0.17	-	0	1
Scheduled Caste	0.19	-	0	1
Other Backward Class	0.39	-	0	1
Others	0.25	-	0	1
Religion				
Hindu	0.79	-	0	1
Muslim	0.10	-	0	1
Christian	0.07	-	0	1
Others	0.04	-	0	1
Land Possessed (in hectares)				
less than 0.005	0.14	-	0	1
0.005-0.01	0.18	-	0	1
0.02-0.2	0.17	-	0	1
0.21-0.4	0.13	-	0	1
0.41-1.0	0.18	-	0	1
1.01-2.0	0.12	-	0	1
More than 2.0	0.07	-	0	1
Household Type				
Self-employed in non-agriculture	0.14	-	0	1
Agriculture labour	0.23	-	0	1
Other labour	0.11	-	0	1
Self-employed in agriculture	0.37	-	0	1
Others	0.16	-	0	1
Sub Round				
October- December	0.25	-	0	1
July- September	0.25	-	0	1
January- March	0.25	-	0	1
April- June	0.25	-	0	1

	ln(MPCE)	Ln(MPCE food)	Share of food expenditure
Table 3 : Ordinary Least Square (OLS) Estimates for Rural Households			
	Dependent Variable		
Explanatory variable	coefficient (s.e.)	coefficient (s.e.)	coefficient (s.e.)
Household with no short term migrant (ref.)			
Household with short term migrant	-0.051***	-0.045***	0.003**
	(0.004)	(0.004)	(0.001)
Number of people by age group in the household			
0-6	-0.124***	-0.105***	0.010***
	(0.002)	(0.002)	(0.000)
7-14	-0.098***	-0.085***	0.006***
	(0.001)	(0.001)	(0.000)
15-24	-0.053***	-0.048***	0.002***
	(0.001)	(0.001)	(0.000)
25-59	-0.021***	-0.021***	-0.000
	(0.002)	(0.002)	(0.000)
60+	-0.052***	-0.046***	0.003***
	(0.002)	(0.002)	(0.001)
Social Group (Scheduled Tribe)			
Scheduled Caste	0.048***	0.036***	-0.007***
	(0.009)	(0.008)	(0.002)
Other backward Class	0.115***	0.092***	-0.012***
	(0.008)	(0.008)	(0.002)
Others	0.200***	0.146***	-0.027***
	(0.009)	(0.008)	(0.002)
Religion (Hindu)			
Muslim	-0.047***	-0.012*	0.018***
	(0.007)	(0.007)	(0.002)
Christian	0.025	0.008	-0.008**
	(0.018)	(0.017)	(0.004)
Other	0.037**	0.042***	0.004
	(0.015)	(0.013)	(0.004)
Land Possessed (less than 0.005 hectares)			
0.005-0.01	0.006	-0.007	-0.008***
	(0.007)	(0.006)	(0.002)
0.02-0.2	0.009	-0.001	-0.006***
	(0.008)	(0.007)	(0.002)
0.21-0.4	0.042***	0.024***	-0.010***
	(0.008)	(0.007)	(0.002)
0.41-1.00	0.080***	0.054***	-0.014***
	(0.008)	(0.007)	(0.002)
1.01–2.00	0.133***	0.099***	-0.019***
	(0.009)	(0.008)	(0.002)
More than 2	0.280***	0.194***	-0.043***
	(0.011)	(0.009)	(0.003)
Household Type (Self-employed in non-agriculture)			
Agriculture labour	-0.197***	-0.145***	0.027***
	(0.005)	(0.005)	(0.001)
Other labour	-0.121***	-0.087***	0.016***
	(0.006)	(0.006)	(0.002)

Self-employed in agriculture	-0.075***	-0.029***	0.024***
	(0.006)	(0.005)	(0.002)
Others	0.137***	0.084***	-0.025***
	(0.007)	(0.005)	(0.002)
Sub round (October- December)			
July- September	0.034***	0.023***	-0.006***
	(0.007)	(0.007)	(0.002)
January- March	0.057***	0.047***	-0.006***
	(0.007)	(0.007)	(0.002)
April- June	0.085***	0.076***	-0.006***
	(0.007)	(0.007)	(0.002)
Constant	7.009***	6.416***	0.564***
	(0.044)	(0.039)	(0.011)
R-Squared	0.474	0.445	0.217
Observations	79,068	79,061	79,068
Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1			

	Dependent Variable
	Short term migrant in a household
Explanatory variable	coefficient (s.e.)
Share of urban population	-0.00025
	(0.002)
Migrant network	-0.318***
	(0.068)
Number of people by age group in the household	
0-6	0.004***
	(0.002)
7-14	0.001
	(0.001)
15-24	0.039***
	(0.001)
25-59	0.034***
	(0.002)
60+	-0.005***
	(0.002)
Social Group (Scheduled Tribe)	
Scheduled Caste	-0.004
	(0.007)
Other backward Class	-0.012*
	(0.007)
Others	-0.028***
	(0.007)
Religion (Hindu)	
Muslim	0.021***
	(0.006)
Christian	0.000
	(0.010)
Other	0.004
	(0.009)
Land Possessed (less than 0.005 hectares)	
0.005-0.01	0.017***
	(0.005)
0.02-0.2	0.029***
	(0.006)
0.21-0.4	0.042***
	(0.006)
0.41-1.00	0.034***
	(0.006)
1.01–2.00	0.023***
	(0.007)
More than 2	-0.016**
	(0.008)
Household Type (Self-employed in non-agriculture)	
Agriculture labour	0.046***
	(0.005)
Other labour	0.094***
	(0.007)
Self-employed in agriculture	-0.032***

Table 4 : First Stage Estimates of the IV Model for Rural Households

	(0.005)
Others	-0.039***
	(0.005)
Sub round (October- December)	
July- September	-0.004
	(0.005)
January- March	-0.006
	(0.005)
April- June	-0.007
	(0.005)
Constant	0.051
	(0.056)
Regional dummies included	Yes
R-Squared	0.106
Observations	79,068
Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1	

Table 5 : Instrumental Variable (IV) Diagnostic Tests			
	Model (dependent variable)		
	ln(MPCE)	ln(MPCE food)	Share of food expenditure
	Statistic	Statistic	Statistic
Diagnostic Tests	(p-value)	(p-value)	(p-value)
F- Test of Excluded Instruments	10.9	10.89	10.90
	(0.00)	(0.00)	(0.00)
Under identification Test	22.2	22.21	22.21
(Kleibergen-Paap rk LM statistic)	(0.00)	(0.00)	(0.00)
Weak Identification Test	22.535	22.535	22.535
(Cragg-Donald F statistic)	(0.00)	(0.00)	(0.00)
Over identification Test of All Instruments	1.878	0.877	2.916
(Hansen J Statistic)	(0.1706)	(0.3491)	(0.088)
Endogenity Test	22.833	16.331	3.594
	(0.00)	(0.001)	(0.058)

Explanatory variables	ln(MPCE) coefficient (S.E.)	ln(MPCE food) coefficient (S.E.)	Share of food expenditure coefficient (S.E.)
Household with no short term migrant (ref.)			
Household with short term migrant	-1.651***	-1.308***	0.164*
	(0.451)	(0.379)	(0.098)
Number of people by age group in the household			
0-6	-0.117***	-0.1000***	0.009***
	(0.003)	(0.003)	(0.0006)
7-14	-0.096***	-0.084***	0.006***
	(0.003)	(0.002)	(0.0004)
15-24	0.009	0.0007	-0.004
	(0.018)	(0.015)	(0.004)
25-59	0.033**	0.022*	-0.006*
	(0.016)	(0.013)	(0.003)
60+	-0.06***	-0.052***	0.004***
	(0.004)	(0.004)	(0.0008)
Social Group (Scheduled Tribe)			
Scheduled Caste	0.044***	0.033***	-0.007***
	(0.014)	(0.012)	(0.002)
Other backward Class	0.098***	0.079***	-0.01***
	(0.014)	(0.012)	(0.003)
Others	0.158***	0.113***	-0.023***
	(0.018)	(0.015)	(0.004)
Religion (Hindu)			
Muslim	-0.014	0.014	0.014***
	(0.015)	(0.012)	(0.003)
Christian	0.022	0.006	-0.008*
	(0.025)	(0.022)	(0.004)
Other	0.041**	0.045***	0.004
	(0.02)	(0.017)	(0.004)
Land Possessed (less than 0.005 hectares)			
0.005-0.01	0.035**	0.015	-0.011***
	(0.014)	(0.011)	(0.003)
0.02-0.2	0.058***	0.038**	-0.012***
	(0.018)	(0.015)	(0.004)
0.21-0.4	0.112***	0.079***	-0.018***
	(0.023)	(0.019)	(0.005)
0.41-1.00	0.137***	0.099***	-0.02***
	(0.02)	(0.017)	(0.004)
1.01–2.00	0.172***	0.13***	-0.023***
	(0.017)	(0.014)	(0.003)
More than 2	0.256***	0.176***	-0.041***
	(0.018)	(0.014)	(0.003)
Household Type (Self-employed in non-agriculture)			
Agriculture labour	-0.123***	-0.086***	0.020***
	(0.023)	(0.019)	(0.005)

Table 6 : Instrumental Variable Estimates for Rural Households — Dependent Variables

Other labour	0.029	0.031	0.001
	(0.044)	(0.037)	(0.009)
Self-employed in agriculture	-0.127***	-0.07***	0.029***
	(0.018)	(0.015)	(0.004)
Others	0.074***	0.034**	-0.019***
	(0.02)	(0.017)	(0.004)
Sub round (October- December)			
July- September	0.028***	0.019**	-0.006***
	(0.011)	(0.009)	(0.002)
January- March	0.047***	0.039***	-0.005**
	(0.011)	(0.009)	(0.002)
April- June	0.074***	0.067***	-0.005**
	(0.011)	(0.009)	(0.002)
Constant	6.97***	6.385***	0.568***
	(0.05)	(0.046)	(0.011)
Regional dummies Included	Yes	Yes	Yes
Observations	79,068	79,061	79,068
Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1			

Table 7: Transition Matrix of Industry of Work: Rural India

Industry of work (usual status)	Industry of work when working as short term migrant			
	P	S	C	T
Primary (P)	37.92	14.41	35.84	11.83
Secondary (S)	6.36	85.35	5.77	2.51
Construction (C)	3.43	3.13	91.39	2.05
Services (T)	4.65	5.97	9.99	79.39

Note: Each row adds up to 100