Male Migration from Rural India:

Divergent Pathways to Long-Term and Short-Term Migration

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Abstract:

Research on migration in India has been hampered by lack of data as well as clarity regarding the process of migration. Do long-term and short-term circular migrations form a part of the same continuum? Do similar forces affect both? How does a change in the opportunity structure affect these two processes? Using data from the two waves of India Human Development Survey, a nationally representative panel survey of households, this paper examines the factors that affect male migration from rural areas. The results suggest that long-term migration and circular migration are driven by very different factors. Long-term migration forms a part of a household's mobility strategy and is used by educated, higher income and upper caste households. In contrast, short-term circular migration forms a part of a household's survival strategy and is used by less educated, poor households belonging dalit and adivasi communities.

These results suggest that provision of rural employment is likely to have little impact on rural male outmigration for long-term workers but may reduce distress migration associated with low rural wages. As a next step, we will examine the impact of the Indian Government's Mahatma Gandhi National Rural Guarantee Act (MGNREGA) program on long-term and short-term circular migration.

"…. Punjab has always loved its migrant population and welcomed it with arms wide open. For the 'outsiders' - mostly from Bihar - the attraction has been Punjab's booming industry and agricultural sector.

And then, National Rural Employment Guarantee Scheme (NREGA) happened. With at least one person from every household guaranteed 100-day employment in a year, the central scheme has proved a boon for States like Bihar, but a bane for Punjab.

With its heavy reliance on migrant population, the northern State is now reeling under a labour crisis that threatens to cripple production."

--- Simran Virk, Times of India, October 21, 2009

"Millions of footloose and impoverished men, women and children in India, migrate from the countryside each year to cities – in crowded trains, buses, trucks and sometimes on foot – their modest belongings bundled over their heads, in search of the opportunities and means to survive. Some arrive alone; some are accompanied by family or friends. Some stay for a season, some several years, some permanently. Many tend to drift quickly to low-end, low paid, vulnerable occupations – picking waste, pulling rickshaws, constructing buildings and roads, or working in people's homes."

---- Mander and Sahgal, 2012

Introduction

Internal migration has been referred to as "the stepchild of demography"(Kirk, 1960; Goldstein, 1976:424-25) and has been given lesser importance by researchers compared to issues such as population growth, fertility and mortality. Further it has been observed that while policy makers in developing countries give priority to questions relating to internal migration, this concern is not reflected in international forums (Bilsborrow, 1996). In developing countries, internal migration, population redistribution within a country and urbanization are viewed as important aspects of socio-economic growth and development.

Migration refers to the movement of people, across the dimensions of space and time. Thus one way of defining migration involves movement across an administrative or political boundary. A second consideration involves classification of migration based on duration of change of residence, wherein “long term” migration involves a more permanent movement and “short term” migration, refers to temporary movement, such as seasonal, commuting or circular movement between place of residence and work. The trade-offs and costs associated with different types of migration can vary, and this would impact the determinants of migration as well.

India and China have a huge number of internal migrants (Rao and Finoff, 2015). In China the number of internal migrants in 2011 ranged between 150 million and 440 million (Chan 2013), whereas in India the number of internal migrants could total to 400 million (UNESCO, 2013). The total number of internal migrants in India and China may be about three times the number of international migrants around the world, and it is imperative to study these migrant groups who play a critical role in the

socioeconomic changes that are occurring in their countries (Rao and Finoff, 2015; Lall et al, 2006).

In India, the perspectives on migration vary substantially (de Haan 2011). On the one hand, micro level studies based on migrants, particularly those focusing on short-term circular migration highlight the role of economic distress in prompting migration, and suggest that migration is concentrated among the more vulnerable sections of the society, particularly the dalits and the adivasis. In contrast, macro studies based on National Sample Surveys (NSS) seem to suggest that migration is concentrated among more privileged segments of the society. This raises the question of whether, and how, economic growth would impact internal migration.

One of the difficulties in drawing conclusions based on existing studies lies in the analytical strategy. Migration and poverty are closely interlinked. Poverty may well push individuals into looking for jobs outside their localities; but migration may also lead to higher incomes for both migrants and the families they leave behind. A closer examination of the types of migration prevalent in India and an understanding of the drivers of different types of migration could provide better insights for researchers and policy makers. In this paper, we look at prospective data using two rounds of India Human Development Survey (IHDS) conducted in 2004-5 and 2011-12 to examine the relationship between pre-migration household and labour market conditions and migration of men ages 16-40 from rural areas.

Theoretical Perspectives on why people migrate

Early research on migration relied on neoclassical economic models in which differences between incomes in communities of origin and expected incomes in destination communities were assumed to drive migration (Harris and Todaro 1970;

Ravallion and Wodon 1999; Sjaastad 1962). An assumption associated with this framework was that economic growth in rural areas could stem migration. Theoretical approaches in this context have focused on both macro and micro level factors that may impact migration. The macroeconomic approach examines the pressures to migrate. It views migration as a process that helps decrease wage differences between different areas. However, with economic growth, the structure of society and thus the part played by various elements, on migration, can change. Therefore while analyzing rural out migration in developing countries it is important to take into account various factors such as differences in socio-economic development within communities, job opportunities, facilities, rules and policies, past migration records, convenience of the location, and environmental conditions (Zhu,1996; Bilsborrow, Oberai and Standing, 1984; Findley, 1987; Greenwood, Ladman, and Siegel, 1981; Hugo, 1981; Shaw, 1975; Zelinsky, 1971). The microeconomic approach focuses on individual preference (DaVanzo, 1981; Sjaastad, 1962; Todaro, 1969, 1976, 1989). According to this model, individuals would migrate if the anticipated economic benefits from migrating would exceed the costs. These models have looked at the impact of individual traits such as educational level, marital status, age, sex, employment status, type of occupation and previous migration records on the decision to migrate (Greenwood, 1985). These individual level models have been criticized on the grounds that, given the standards of living and culture in developing countries, the decision to migrate is often the family's joint plan for livelihood and betterment rather than being an individual's choice (Hugo, 1993; Root and De Jong, 1991; Lauby and Stark, 1988; Harbison, 1981; De Jong and Gardner, 1981).

Individual level models were expanded in order to take into account the impact of other members in the household and life course variables (cf Zhu 1996: e.g., see Graves and Linneman, 1979). In the 1980s, the new migration literature broadened the discourse to include risk diversification as a household survival strategy (De Haan 2006; De Haan and Rogaly 2002; Lucas 1997; Stark 1991; Stark and Levhari, 1982; Arguello, 1981) wherein migration was viewed as a household rather than an individual decision. Under this framework, households were expected to send some members to work in urban areas to guard against potential income fluctuations associated with drought and other agricultural risks (Hugo, 1982; Massey, 1990). It was anticipated that agricultural development may firstly lead to higher migration since richer regions and households may be better able to finance initial migration expenses, and income diversification through migration may increase their ability to engage in high risk- high reward cropping patterns (Hatton and Williamson 2002). Many of the studies that view migration as a household's decision rather than an individual's choice (Findley, 1987; Stark, 1984) have examined variables such as family structure, socio-economic condition, household size and composition, prior migration, and landholdings or other assets as factors that can impact decisions to migrate.

Other contributions from sociology and geography have highlighted the role of non- economic factors such as social and environmental circumstances of a group of people in determining their decision to migrate (Bilsborrow, 1996; Brown et al., 1970; Goldscheider, 1971). The sociology of migration has emphasized the role of social structure in shaping migration (Massey and Taylor, 2004; Portes, 1997). Social networks create information and opportunities for migration. Once outmigration from

an area begins, it becomes self-perpetuating as early migrants encourage their neighbours and relatives to join them (Banerjee 1983; Banerjee and Bucci,1995).

It is understood today that no one approach can explain why people migrate. Rather a combination of determinants at the individual, household and community level, such as economic conditions, social status, household size and social networks may drive migration (Guilmoto, 1998).

There are four possible types of internal migration: rural to rural, rural to urban, urban to rural and urban to urban; both researchers and policymakers have largely focused on rural to urban migration. Studies on migration that use an economic approach posit that rural to urban migration occurs due to the differentials in job opportunities, standard of living and facilities available between these regions (Brown and Lawson, 1985; Lewis, 1954; Shaw, [1975]; Xu, Liu and Zeng, 1988). Rural to urban circular migrants are largely employed in the informal sector while rural to rural temporary migrants are often employed in the agriculture sector where labour intensive production is dependent on low-wage migrant workers. Studies have also reported that young adults, and individuals with higher levels of education, in both in developed and developing countries, are more likely to opt for rural to urban migration. Interestingly while fewer studies have focused on rural to rural migration, it is reported that the percentage of rural to rural migration is usually higher than that of rural to urban migration (Connell et al., 1976). For example, in India, Skeldon (1986) reported that according to the 1981 census report, of the population that changed residence, only 19.5% moved from rural to urban locations, whereas 57.4% moved from rural to rural destinations.

Past research has revealed that both temporary types of migration such as circular, seasonal and commuting, and long term or permanent migration play an important part in an individual's and household's adaptation tactics to the changes that occur as modernization takes place in developing countries (Chapman and Prothero, 1985; Goldstein and Goldstein, 1992; Hugo, 1982; Zhu, 1996). Circular migration involving seasonal or regular movements is generally resorted to by rural households in order to fulfill short-term income shortages or for obtaining savings without permanently leaving the community of origin. While data is not always available to estimate the extent of circular migration, a few studies indicate that regional differences exist. While permanent migration is more prevalent in Latin America, rural to urban migration in Africa and parts of Asia is largely short term (Nelson, 1976).

A comparison of determinants of short term and permanent migration in some regions of Africa revealed that both types of migration were impacted by similar structural and family characteristics, but they differed on individual dimensions such as sex, age, marital and parenthood status, (Guilmoto, 1998). Another study that compared the characteristics of circular migrants and return migrants among an Albanian sample reported that circular migrants came from less developed rural areas and were usually males with primary education status (Vadean and Piracha, 2010). Again, a study by Görlich and Trebesch (2008) that examined the determinants of seasonal migration in Moldova reported that family size, existence of educated adults within the household and the family's perception of poverty were predictors of the presence of a migrant in a family. They also report that seasonal migration is more likely to be undertaken by low skilled workers.

Studies on Migration in India

Temporary or circular migrants form a large and growing percentage of migrants in India (Breman, 1996; Garikpati, 2008; Deshingkar and Akter, 2009). Permanent economic migrants in India are predominantly men who migrate for work from rural areas to urban areas and between one urban area to another. Rural to rural migration was about 32% of the total male migrant population in 2007-08 (NSSO, 2010). Moreover, people belonging to upper castes and having higher education tend to have a higher likelihood of migrating between or to urban regions.

In examining the features of rural families with at least one seasonal migrant, Haberfeld et al. (1999), reported that households in less developed areas are more likely to participate in temporary forms of migration. On the other hand, families with fewer working members or children, greater number of educated persons, or higher income were less inclined to undertake seasonal migration. The authors report that in India, short-term migration would decline as levels of education increase.

Researchers have also pointed out that families from socially disadvantaged groups such as the scheduled caste and scheduled tribe communities were more likely to engage in short term migration (Agrawal and Chandrashekhar, 2015; Deshingkar, 2008). Moreover muslims are more likely to migrate than hindus. Agrawal and Chandrashekhar (2015) also highlight that short-term migration is more likely in districts where a large number of workers are employed in the construction sector, whereas such forms of migration are less likely in districts where the concentration of jobs is in the service or secondary sector. The researchers argue that individuals working as agricultural labour, and those who possess little or no land holdings would be more likely to participate in temporary migration.

In examining the role of social networks, Mitra and Murayama (2008) report that such networks are important in short distance migration but lose significance with increase in distance from place of origin. According to the researchers the north-south divide is prominent in India with migrants preferring to move to regions closer to their home state where language and cultural barriers will not be too great. Interestingly it was reported that intra State accounts for approximately 82% of migration, and more than 50% of migration occurs within the same district.

According to De Haan (2011, 1994), while most studies on migration try to examine the role of push versus pull factors in determining different types of migration, the drivers of migration in the Indian context are varied and go far beyond the search for economic opportunities. Factors such as family structure and size, age, education, gender, and characteristics of the community and region, play an important role in determining the patterns of migration. In the present study we will examine some of these determinants and try to understand the individual, household and community level factors that may influence permanent and short-term migration in India.

The present paper focuses only on labor migration. There is not much research on women migrants in India principally as most women report that they migrated because of marriage (Premi 1980; Sinha, 1986; Rosenzweig and Stark 1989; Bhattacharya 2000; Fulford 2013; Rao and Finoff, 2015). NSS data suggests that from 1983 to 2007-08, the percentage of women who migrated for economic reasons is low and has reduced from 2.6% to 1.1%. It is often assumed that marriage migration may be attributed to "socio-cultural factors"(Kundu, 2009) and holds lesser importance

when considering economic changes that occur in present day India (Rao and Finoff, 2015). A rise in marriage migration is not necessarily caused by "disguised economic migration of women" (Rao and Finoff, 2015). Thus, since a large proportion of labor migration is male dominated, in the present paper we limit the analysis to male migrants.

Data on Migration in India

Preliminary data on migration based on place of birth (POB) in India was available in the 1881 Census and has been available in all subsequent Censuses. However, POB did not encompass return migration. The Census addressed this limitation and in 1971, migration data was based on place of last residence (POLR). When POB/POLR is different from place of enumeration (POE) an individual is considered a migrant. Villages and towns are the lowest unit for finding the POB/POLR. In the 2001 Census around 1/5th of urban male migrants had not reported duration of movement. Districts are the lowest unit for which Census data on migration is available (593 districts in 2001 census and 640 in 2011). From 1981, the Census of India has added data on reasons for migration.

Other than the Census, the National Sample Survey Office (NSSO) has a question on migration that is based upon POLR in employment and unemployment surveys. However, there are certain limitations of the Census and the NSS data. Migrants could make multiple moves in their lifetime. While data on last move (based on POLR) is available, Census and NSSO cannot capture all the moves made by a migrant. Also movements within villages and rural boundaries are not considered as migration (within municipal area migration or intra-urban migration may be important when municipal areas are large). In addition, Census and NSSO may not completely

capture short -term circular, temporary or seasonal migration (based on just POB and POLR). NSSO partially attempts to capture short term migration by asking households the question as to whether a member had left the household for employment reasons for more than a month, but less than 6 months, in the past year (64th round, NSS 2007-08) (Bhagat, 2015).

As discussed above, in India most data on migration has come from the National Sample Survey (NSS) and the Census. However, the previous rounds of data are largely unable to capture temporary or circular migration of 6 months or less. Therefore past studies on India have mainly focused on long-term migration (Rao and Finoff, 2015). The present study based on data from the India Human Development Survey (IHDS) has the advantage of being able to study both short-term (circular or return) and long-term migration.

In order to explore the linkages between economic conditions in the location as well as in the household of origin, and the probability of migration, it is important to look at out-migration from the household. National Sample Survey (NSS) forms the only source of macro data for out-migration, although it is rife with measurement error. The 64th round of NSS asked, "whether any former member of the household migrated out any time in the past". This question neither defines the household, nor does it specify a reference period. Since household structures often change in the context of migration (e.g. wife may move in with her parents or parents-in-law when her husband migrates), respondents may find it difficult to identify who should be included and who should not be included in their response. Moreover, it is not clear how far back the respondents need to look.

For the present paper we are fortunate to be able to gain a more precise handle on out-migrations and return migrations using prospective data from the IHDS. India Human Development Surveys I (2004-5) and II (2011-12) are part of a collaborative research program between researchers from the National Council of Applied Economic Research and University of Maryland.

Data for the Present Study

The IHDS is a multi-topic survey designed to examine changes in livelihoods and lifestyles of Indian households in an era of rapid social transformation. These surveys provide a rich empirical database that will be available free of charge to a wide range of researchers in India and abroad, providing data for informed policy debates.

IHDS-I is a nationally representative survey of 41,554 households conducted in 2004-5. IHDS-II has re-interviewed 83% of the original households as well split households residing within the same locality and an additional sample of 2134 urban households. This makes the sample size for IHDS-II, around 42,152 households. The sample is spread across 33 (now 34) States and Union territories and covers rural as well as urban areas. Most of the IHDS-I interviews were conducted between October 2004 and December 2005, while the IHDS-II interviews were conducted between October 2011 and December 2012. IHDS-I and IHDS-II collected extensive data on education, health, livelihoods, family processes as well as the way in which households are embedded in a broader social structure. Contextual information was also collected in surveys of village infrastructure and markets, and from one private and one government school and medical facility in each village/block.

Interviewers in IHDS-II were given a list of members residing in their assigned households in 2004-5. Using this list, they confirmed the location of each 2004-5 household member during the 2011-12 interviews. Thus, we tried to obtain the whereabouts of each of the 215,754 household members from IHDS round 1 during the IHDS round 2 interviews. In case of migrants, proxy information about their current whereabouts was obtained from the household members still in place of origin or neighbors. It is important to note that although a large proportion of the losses in rural areas were due either to the inability of the interviewers to obtain respondent cooperation, or to temporary travels of respondents for holidays or weddings, at least some of the household losses may be due to migration where neighbors were not able to provide any information. Thus, our estimates of migration are on the lower side. We believe that this is a bigger problem for the urban rather than the rural sample. However, since sample losses due to non-contact could include some migrants, the final analyses were replicated in which we assumed that every household lost to re-interview was due to migration The results of this sensitivity analysis suggest that while treating all sample losses as migration adds measurement error and thereby reduces coefficient size for some of the key relationships, the conclusions do not change.

For the individuals still residing in the household, the respondents were asked, "Have you or any member of your household left to find seasonal/short term work during last five years and returned to live here?" The interviewers were asked to probe about relevant work such as during harvest, temporary work in brick kiln/construction, tourist season etc. and to include absences of at least one month. Taking these two sets of questions and combining them with pre-migration

information available in survey round 1, we obtain a fuller picture of migration from rural India. Short-term migration is slightly underestimated since it is based on a five-year reference period as opposed to nearly 7 years for long-term migration. Long-term migration in the present paper refers to migration period being greater than 6 months, whereas circular migration refers to migration period being less than 6 months. The present paper focuses only on rural out migration.

Descriptive Statistics

While the multivariate analyses in the present paper focus only on men between ages 16-40 in order to hone in on labor migration, the descriptive statistics in Tables 1, 2 and Figure 1 are presented for men of all ages. Table 1 describes current status of the 2004-5 rural sample of men by age. This includes individuals who have died as well as the households we were unable to re-interview. Table 1 suggest that a majority of migration takes place for individuals who were between 15 and 30 in 2004-05 and would be ages 22-37 by 2011-12. This is consistent with earlier findings which highlight that young adults are more likely to migrate, because of the positive return on migration due to longer life expectancy or because social norms encourage young people to move out in search of better opportunities (De Haan and Rogally, 2002).

-Table 1 about here-

In contrast, Figure 1 refers only to individuals who are still alive and were not lost in the re-interview process.

-Figure 1 about here-

While comparing to other statistics (e.g. from NSS) this is the number that is most useful. NSS documents out migration rate to be 9 percent for rural males; in the

IHDS sample, it is 15.4 percent over a seven year period. NSS documents short-term migration rate to be about 3 percent for rural males; IHDS figures are 3.3 percent for rural men. For the reasons discussed above, we believe that the IHDS provides better estimates of long-term out migration from rural areas than the NSS, although short-term (return or circular.) migrations rates are similar for both. However, whether we look at NSS or IHDS estimates, long-term migration appears to be substantially greater than circular migration. This stands in contrast to estimates provided by other scholars who estimate circular migrants to be a much greater proportion of the total population (Deshingkar and Akhtar 2009).

-Table 2 about here-

Table 2 shows reasons for migration for long-term migrants where at least one member of the household was left behind to provide information about migrant. It is important to note that these reasons for migration are fuzzy descriptions of underlying processes. Frequently, an uncle may ask his nephew to come to the city, take a short course and then stay on to work. However, a look at stated reasons allows for an opportunity to narrow down the most appropriate ages for a study of labor migration. It can be seen from Table 2 that migration for educational reasons drops dramatically after age 15. Hence we focus on men between ages 16-40 at the time of the first round interview and their behavior in subsequent seven years to understand migration dynamics associated with labor market opportunities.

- Table 3 about here-

If long-term migration is driven by poverty and lack of economic opportunities, we would expect it to be greater in poor States. However, Table 3 that contains estimates on long-term and short-term migration as well as mean and median

household incomes for each State in 2004-5 shows no consistent pattern. In this Table, States are sorted according to their migration levels. Although some of the top, sending States are quite poor (e.g. Bihar), rich States like Himachal Pradesh and Kerala also have substantial outmigration. The IHDS sample is not designed to be representative at State level and hence these relationships should be treated as being indicative rather than being treated as State-wise estimates of out migration. Nonetheless, once we distinguish between long-term and short-term migration, an interesting pattern begins to emerge. Long-term migrants come from both wealthy and poor States but short-term (return or circular) migrants are mostly located in poorer States such as Uttar Pradesh, Bihar and Chhattisgarh.

Since State level economic conditions may be too far removed from actual labour market conditions faced by specific households, we also look at prevailing wage rates in the village and the probability of migration. Since migration may lead to higher wages, we look at round 1 wages and migration in subsequent years, allowing us to leverage longitudinal data. Prevailing wage data are obtained from a village schedule that was completed via village focus groups consisting of knowledgeable individuals from each village. The interviewers were asked to ensure that the respondents represented diverse sections including farmers and village officials. Respondents were asked to specify prevailing wage rates for men, women and children for a variety of activities. Below, we plot migration against prevailing male wages for unskilled manual work, construction work as well as average of wages for agricultural workers during kharif and rabi harvests. In some instances, no such work was available in or close to the village and wage data are not available. In some cases village schedules were not completed and hence the data are missing.

-Figure 2 a) about here-

-Figure 2 b) about here-

Consider these observations in the context of the conclusion by de Haan (1997) where he notes that, "The evidence available shows quite convincingly that it is not necessarily the poorest districts from which people migrate. Colonial reports in the late nineteenth century show that the out-migrating districts were not necessarily the poorest." De Haan was speaking about long-term migration and arriving at a legitimate conclusion; in contrast circular migration is clearly driven by poor wage rates in the village as well as lack of work.

If regional poverty is not pushing individuals into long-term migration, could it be household poverty? After all, even in better off areas, many individuals could be poor and this relative deprivation may be even a more powerful force towards migration (Czaika 2012; Czaika and de Haas 2011). However, migration also requires resources and descriptive statistics suggest that long term migrants are more likely to emerge from richer households than from poorer households. Increases in household income or consumption in round 1 are linked to increases in long-term migration and to decreases in circular migration. This suggests that circular migration is driven by distress, whereas long-term migration is driven by opportunity. These findings, in spite of a different methodology and data source, are very similar to those observed from NSS data (National Sample Survey Organisation, 2010; Srivastava, 2011).

-Table 4 about here-

Table 4 shows distribution of migration status across various socioeconomic characteristics. Once again it shows a pattern of privilege for long-term migrants and

marginalization for circular migrants. Long-term migrants are more likely to be educated, come from upper income groups and are from a forward caste. In contrast, circular or return migrants are less educated, tend to be dalits or adivasis and come from poorer sections of the society. What is most interesting is that these opposite forces often counterbalance so there are few differences in overall migration status across individuals from different social backgrounds.

Conceptual framework

Based on the literature it has been observed that long- term and circular migration are determined by certain sets of individual, household and contextual factors. Table 5 sketches out the conceptual framework used in the present paper. These factors could affect long-term and circular migration in similar or different ways. We expect that while an increase in the level of education would cause a rise in the probability of long-term migration, it would cause a decline in the probability of circular migration.

Moreover it is expected that an increase in household income would lead to a rise in the likelihood of long-term migration since this type of migration is a means to further diversify income and attain upward social mobility. Circular migration on the other hand is expected to decrease with an increase in household income since this type of migration is mostly need based. The above expectations in the Indian context are consistent with the proposition that while circular migration is driven by "need" or "distress", long-term migration is a part of mobility strategy for an individual. Another household level variable that would have an impact on long and short- term migration would be social networks. In the present study social networks are measured by whether the household received any remittance income in 2005. Social

networks would be expected to have a positive impact on both long-term and circular migration.

At the contextual level, wages in unskilled jobs would be expected to have a negative impact on circular migration and no impact on long-term migration. This is because for those working in the unskilled jobs, short-term migration is an alternative source of employment. It is assumed that those opting for circular migration are mostly looking for employment in unskilled jobs, whereas those who opt for long-term migration are likely to be comparatively privileged and thus not seeking employment in unskilled jobs. If wages in the unskilled jobs in a village are high then an individual seeking employment in these type of jobs would not have the need to migrate for the short term in order to seek employment.

Finally, if a village is situated far away from a bus stop, individuals residing there would have greater difficulty in commuting to work, thus an increase in the distance to the bus station would increase both long-term and circular migration.

In the present study we control for marital status, number of adults in the household, caste, religion, age, and regional variation.

-Table 5 about here-

Multivariate Analyses

Long-Term Vs. Short-Term Migration: Are they on a Continuum?

Discussion of migration often fails to distinguish between long-term and short-term migration as if the two are a part of a continuum. Tables 5a and 5b suggest that this is not the case. Factors that encourage long-term migration, in fact tend to discourage short-term migration.

Migration literature has noted that migration, particularly long distance migration to unfamiliar places, takes resources (Massey et al. 1998). Moreover, work opportunities and salaries for educated individuals in rural areas tend to be highly constrained. IHDS data from 2004-5 shows that daily income for uneducated adult males in 2004-5 was Rs.57 /day in rural areas and Rs.91 /day in urban areas; for college graduates, the corresponding figures are Rs.206 and Rs.347 per day respectively. While workers at each education level gain by being in a city, the absolute gain is much higher for educated workers and easily offsets the migration related expenditure. In contrast, literature (Breman 1985; Deshingkar et al. 2008) suggests that short-term migration is driven by distress and vulnerability – factors least likely to affect households with sufficient wealth to obtain high levels of education for their children.

In order to disentangle the effects of household income, education, caste and social background we examine male migration using a multinomial logistic framework where men could engage in one of the three activities: (1) Continue to reside in the same village and either work in the village or undertake daily commute to a nearby town to work; (2) Migrate and live elsewhere; (3) Go away to work for a period of at least one month but return to the village of origin to live. These three outcomes are jointly determined in a multinomial logistic regression where we examine the impact of a series of individual, household and community characteristics on the type of migration chosen.

Results from these multinomial regressions are presented in Tables 5a and 5b. Table 5a evaluates the log odds of undertaking long-term migration against staying in place. Table 5b evaluates the log odds of undertaking circular migration against

staying in place. For each outcome, we estimate three models. Model 1 contains household per capita income quintile (for 2004-5), model 2 adds educational attainment in 2004-5 and model 3 adds village wage rates and distance from transportation.

-Table 5a about here-

-Table 5b about here-

Results in Table 5a and 5b suggest that households with higher income are more likely to engage in long-term migration, although they are less likely to engage in short-term migration. Forward castes are more likely to engage in long-term migration but less likely to undertake circular migration. Part of this effect is due to higher education among wealthier and forward caste households. Addition of education variables in panel 2 reduces the size of income coefficients for long-term migration substantially, making them almost insignificant. In contrast when we look at circular migration, men from better off households are less likely to migrate regardless of the education, i.e. the income coefficient for short-term migration becomes somewhat smaller after adding education but remains large and statistically significant. Similarly, forward castes remain less likely to engage in short-term migration, regardless of their education.

Village economic conditions affect short-term migration but have almost no impact on long-term migration. Men who live in villages where unskilled workers are paid more are far less likely to engage in circular migration than those who live in villages with low wages. In contrast, individuals who live in villages that have higher wages for unskilled labourers are as likely to engage in long-term migration as those who live in villages with lower wages. This is not surprising if we think of long term

migration as a mobility strategy in which workers are drawn to higher paying jobs, mostly in urban areas.

Access to transportation is one factor that has a similar impact on both long-term and short-term migration. Villages that are closer to a bus stop tend to depress both long-term and short-term migration since workers can easily commute to nearby towns while living in their native villages.

Migration literature has increasingly moved beyond simple push-pull arguments to highlight the complex considerations involved in individuals' and families' decisions regarding whether to migrate. In the context of the present study, two such considerations deserve particular attention. First, as the new migration literature notes (De Haan and Rogaly 2002; Lucas 1997; Stark 1991), migration is part of a complex household decision. Larger households may choose to send some of their members to work in other areas to diversify income sources and protect against shocks, as well as to increase opportunities for children and other family members. Thus, for one brother to stay in the native village and take care of the farm while for another to move to a city and look for work is quite common.

-Table 6 about here-

Our results, particularly those presented in Table 6, show that larger households are far more likely to engage in long-term migration. In contrast, larger households appear to be less likely to engage in short-term (predominantly circular migration) possibly because circular migration is driven mostly by distress and larger households with more workers are less likely to experience such distress.

Secondly, once long-term migration begins, it is a fissure that continues to widen. One household member migrates and provides an anchor that allows others to follow. Thus, as Table 6 documents, households that received remittance in round 1, indicating successful migration by some household members, create conditions for continued male long-term migration. However, no such effect is visible for short-term (predominantly circular) migration.

Discussion

The present paper presents results from a nationally representative panel survey of households carried out by University of Maryland and National Council of Applied Economic Research (NCAER) in 2004-5 and 2011-12. The India Human Development Survey (IHDS) provides estimates of out migration using a prospective design. Focusing on migration of rural males ages 16-40, we show that diametrically opposite forces seem to drive long-term migration and circular, short-term migration.

Long-term migration is a part of households' mobility strategy and is largely used by privileged rural households from which educated men migrate – mostly to urban areas – in search of better paying jobs. This type of migration is not driven by wages in unskilled jobs in rural areas but rather by urban opportunities. The only contextual factor that affects long-term migration is a better transportation network, allowing workers to commute to nearby towns for urban opportunities instead of having to migrate long-distance. Having closer access to transportation would cause declines in both long and short- term migration, by giving individuals alternative ways to travel to places in order to work nearby conveniently.

The household's social networks (measured by whether a family received remittance income in 2005) are seen to have a positive impact on long-term migration but no impact on short-term migration.

In contrast to long-term migration, short-term circular migration is part of households' survival strategy and is primarily used by marginalized and poor households. Men from dalit and adivasi communities are far more likely to engage in circular migration than those from forward caste households. When rural wages for unskilled work rise, rising opportunities are reflected and the incentive to engage in short-term circular migration reduces.

It is important to look at the phenomenon of long-term and short-term migration separately and figure out how socioeconomic and contextual factors impact these similarly and differently. The present study addresses these issues. Creating unskilled jobs that provide good wages to individuals residing in villages could cause declines in short-term migration by providing individuals lucrative alternatives within their village. Future studies could examine the differences between rural-rural and rural-urban migration. In addition studying the well-being of short-term and long-term migrants compared to non-migrants would be interesting.

Next Steps

Taking the present study forward, we examine the impact of the Indian Government's employment generation program in rural areas, MGNREGA that has been designed to provide 100 days of manual work to each household per year on subsequent short-term circular and long-term migration. It has sometimes been argued that this work sets a floor on wages and thereby increases agricultural and non-agriculture manual wages in all types of work. It also reduces the incentive to migrate, causing labor

shortages in factories in urban areas and in states like Punjab where agriculture relies on migrant labor. We try to make contributions to this debate. We will use multinomial logistic regression models and calculate the log odds of undertaking long-term migration (versus staying in a place), and the log odds of circular migration (versus staying in a place) and control for phase implementation of MGNREGA. MGNREGA was first implemented in the poorest districts of the country, followed by rest of the country being divided into phase 2 and phase 3. A number of studies have shown the intensity of MGNREGA work availability is associated with the duration of implementation, captured by implementation phase (Berg et al. 2012). However, it is also important to remember that the first set of districts to receive the program were the poorest districts. Based on our observation that wages for unskilled manual workers have very little impact on long-term migration, we hypothesize that there would be few differences in long-term migration between districts in phases 1, 2, and 3. In case of circular migration, we expect MGNREGA to be associated with rising rural wages and lead to a reduction in circular migration. We expect the phase 1 districts – where MGNREGA has been implemented for the longest time – to have the lowest levels of circular migration.

List of Figures and Tables

Figure 1a: Migration status of the males from round 1 who were locatable in round 2

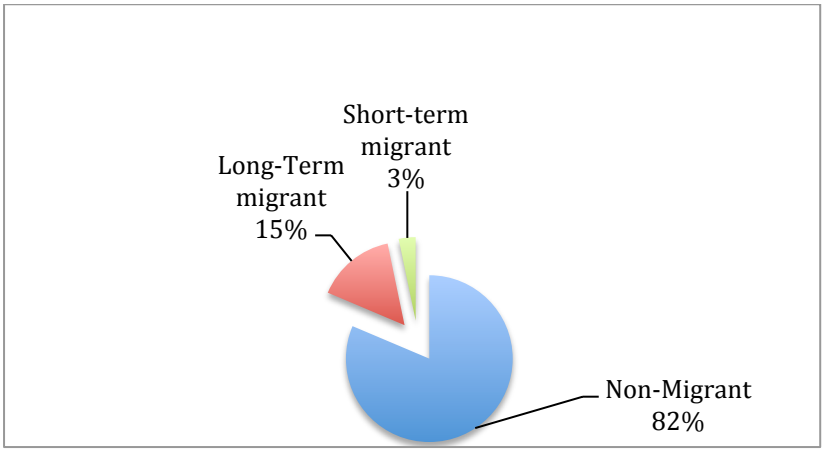

Fig 2a: Proportion of male short-term migrants by village wage rates

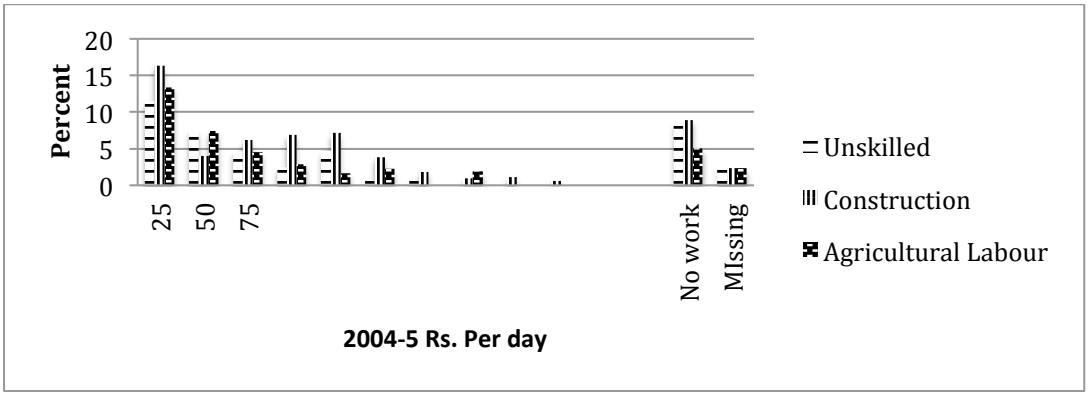

Fig 2b: Proportion of men who migrate long-term by village wage rates

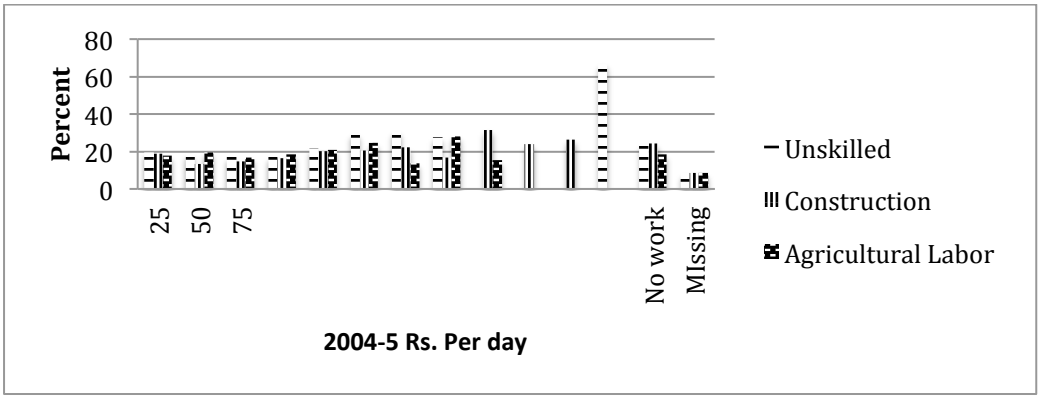

Table 1: Status of IHDS-I (2004-5) household members at the time of IHDS-II (2011-12) interview (Rural Males)

Age	Non-Migrant	Long Term Migrant	Whole Family Migrated	Short-Term Migrant	Died	Lost in Reintervie w	Total
0-5	83.95	10.68	0.44	0.02	1.16	3.75	100
6-10	77.69	14.89	0.66	1.31	0.6	4.85	100
11-15	67.31	23.53	0.39	3.5	0.75	4.51	100
16-20	63.62	22.78	0.41	5.84	1.23	6.11	100
21-25	66.6	18.95	0.57	5.62	1.73	6.53	100
26-30	69.3	16.35	0.67	5.32	2.19	6.17	100
31-35	76.54	10.6	1	4.55	2.56	4.75	100
36-40	78.97	7.88	0.51	4.45	3.19	5.01	100
41-45	81.32	5.92	0.59	2.38	5.56	4.23	100
46-50	81.35	3.74	0.38	1.76	6.52	6.25	100
51-55	79.22	2.69	0.22	1.03	11.44	5.39	100
56-60	73.88	2.57	0.65	0.77	15.7	6.44	100
61-65	66.27	2.75	1.16	0.66	22.2	6.95	100
66-70	57.33	1.21	0.34	0.21	35.05	5.85	100
71-75	48.98	2.31	0.79	0	40.71	7.22	100
76-80	41.96	2.9	0.08	0	46.8	8.26	100
85+	41.58	1.02	1.21	0	54.02	2.17	100
Total	73.06	13.23	0.55	2.94	4.95	5.26	100

- Age refers to age at 2004-5 interview and hence the age at migration may be 1-7 years beyond the age from the round 1 of the survey.

Table 2: Reasons for Long Term Migration (Rural Males)

Age in 2004-5	Job	Studies	Marriage	Family Reasons	Other	Total
0-5	5.37	51.6	0.1	39.68	3.24	100
6-10	39.93	43.92	0.7	13.04	2.35	100
11-15	60.61	30.83	2.21	4.89	1.38	100
16-20	81.01	11.1	3.95	2.99	0.93	100
21-25	84.84	2.75	5.62	4.84	1.95	100
26-30	86.78	0.18	3.63	6	3.41	100
31-35	86.41	0.15	1.21	9.07	2.99	100
36-40	85.89	0	0.25	8.95	4.91	100
41-45	84.87	0	0.29	9.69	5.14	100
46-50	85.01	0.81	3.73	2.16	8.28	100
51-55	65.56	0	0	22.27	12.16	100
56-60	55.72	0	0	27.39	16.89	100
61-65	60.06	0	0	17.08	22.86	100
66-70	16.76	0	83.24	0	0	100
71-75	12.74	0	0	12.28	74.98	100
76-80	0	0	0	13.23	86.77	100
85+	0	0	0	100	0	100
Total	63.93	21.05	2.51	9.9	2.58	100

Table 3: Migration of Rural Men ages 16-40 and Household Income by State

State	Not Migrant	Long Term Migrant	Short-term Migrant	Mean Household Income	Median Household Income
Bihar	55.74	29.52	14.74	30819	20185
Madhya Pradesh	68.1	20.18	11.72	36152	20649
Rajasthan	69	23.95	7.06	50479	32131
Himachal Pradesh	69.08	29.53	1.38	68587	46684
Uttar Pradesh	70.36	23.73	5.9	40130	24000
Uttarakhand	70.43	28.12	1.45	49892	32962
Kerala	74.51	25.17	0.32	72669	43494
Chhattisgarh	74.81	15.08	10.1	39198	23848
Tamil Nadu	75.43	20.94	3.63	40777	26000
Andhra Pradesh	77.88	18.81	3.31	39111	25600
West Bengal	79.75	13.18	7.07	46171	28051
Orissa	79.79	15	5.2	28514	16500
Gujarat	82.21	13.06	4.73	54707	30000
Karnataka	82.34	13.65	4	51809	25600
Punjab	83.35	15.4	1.25	73330	48150
Northeast	85.05	14.71	0.24	82614	60000
Maharashtra, Goa	85.44	10.84	3.72	59930	38300
Assam	86.77	10.17	3.06	42258	25000
Jharkhand	86.99	10.57	2.44	42022	24000
Jammu & Kashmir	88.63	9.95	1.42	78586	51458
Haryana	88.89	10.58	0.53	74121	49942
Delhi	94.45	5.55	0	87652	68250
Total	75.95	18.35	5.7	47804	27857

Table 4: Migration status by socio-economic characteristics for rural men ages 16-40

Individual characteristics	Not Migrant	Long Term Migrant	Short-term Migrant	Total
Education in 2004-5				
No education	75.56	14.67	9.77	100
1-4 std	75.74	15.5	8.76	100
5-9 std	77.07	17.62	5.31	100
10-11 std	76.2	20.51	3.28	100
Class 12 & some college	72.82	24.73	2.45	100
College graduate	74.94	23.87	1.19	100
Missing data on education	74.5	20.39	5.11	100
	Per capita household income quintile in 2004-5			
Lowest quintile	76.05	16.26	7.69	100
2nd quintile	73.32	18.44	8.24	100
3rd quintile	75.7	17.62	6.68	100
4th quintile	76.86	18.47	4.67	100
Highest quintile	77.43	20.35	2.23	100
	No. of adults in 2004-5 household			
1-2	76.23	16.47	7.3	100
3-5	75.52	19.38	5.1	100
6+	76.71	20.29	3	100
	Social group			
Forward High castes	77.31	19.94	2.74	100
OBC	75.4	19.47	5.12	100
Dalit	74.4	17.42	8.18	100
Adivasi	77.82	13.35	8.83	100
Muslim	77.23	17.45	5.32	100
Christian, Sikh, Jain	77.74	21.52	0.74	100
All India	75.95	18.35	5.7	100
Sample Size	20421	4934	1534	26889

Table 5 Conceptual Framework

	Long term	**Circular**
Individual		
Education	+	-
Household		
Income	+ diversification and social mobility	- push
Social Networks	+	+
Community		
Village wage rate in unskilled jobs	NA	- if higher wage
Distance to bus stop	Increase	Increase

Table 5a: Determinants of long term migration vs. staying in place from multinomial logistic regression for men ages 16-40

Indep. Vars measured in 2004-5	1: Without Education		2: With Education		3: With Contextual Effects	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Log of Unskilled male wage in village					-0.073	0.0826
No unskilled work easily available/Missing village module					-0.248*	0.1209
Km to bus stop					0.036***	0.0073
Education (None omitted)						
1-4 std			0.117	0.1077	0.118	0.1073
5-9 std			-0.002	0.0765	0.007	0.0762
10-11 std			0.143	0.0954	0.149	0.0950
Class 12 & some college			0.444***	0.0985	0.446***	0.0985
College graduate			0.438**	0.1334	0.445***	0.1315
Missing data on education			0.112	0.3538	0.132	0.3618
Per capita household income quintile (lowest omitted)						
2nd quinti	0.108	0.0861	0.111	0.0863	0.107	0.0862
3rd quintil	0.044	0.0797	0.037	0.0804	0.041	0.0805
4th quintil	0.082	0.0806	0.059	0.0813	0.065	0.0815
Highest qu	0.179*	0.0798	0.101	0.0813	0.117	0.0816
Age in 2004-5	-0.044***	0.0050	-0.046***	0.0051	-0.046***	0.0051
No. of Adults in HH	0.044***	0.0130	0.033*	0.0133	0.035**	0.0133
Married	-0.261***	0.0728	-0.241**	0.0734	-0.249***	0.0733
Social group (Forward caste omitted)						
OBC	-0.109	0.0708	-0.069	0.0713	-0.065	0.0713
Dalit	-0.149	0.0762	-0.087	0.0774	-0.066	0.0771
Adivasi	-0.166	0.0997	-0.106	0.1011	-0.109	0.1016
Muslim	-0.046	0.0985	0.021	0.0994	0.043	0.0992
Christian,	0.054	0.1460	0.051	0.1482	0.074	0.1493
Constant	0.072	0.1492	0.009	0.1638	0.128	0.3690

*State dummies included

Wald chi2	21343.12	19190.40	19564.21
d.f.	66	78	84
Sample Size	26,889	26,889	26,889

Table 5b: Determinants of short term migration vs. staying in place from multinomial logistic regression for men ages 16-40

Indep. Vars measured in 2004-5	1: Without Education		2: With Education		3: With Contextual Effects	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Log of Unskilled male wage in village					-0.587***	(0.1334)
No unskilled work easily available/Missing village module					-0.010	(0.1993)
Km to bus stop					0.065***	(0.0100)
Education (None omitted)						
1-4 std			-0.028	(0.1455)	-0.028	(0.1457)
5-9 std			-0.465***	(0.0995)	-0.443***	(0.1001)
10-11 std			-0.665***	(0.1589)	-0.637***	(0.1601)
Class 12 & some college			-0.778**	(0.2368)	-0.761**	(0.2384)
College graduate			-1.380***	(0.3952)	-1.407***	(0.3995)
Missing data on education			-0.748	(0.5471)	-0.641	(0.5383)
Per capita household income quintile (lowest omitted)						
2nd quinti	-0.013	0.1216	-0.022	0.1212	-0.040	0.1218
3rd quintil	-0.180	0.1292	-0.165	0.1300	-0.141	0.1306
4th quintil	-0.379**	0.1270	-0.325*	0.1282	-0.284*	0.1291
Highest qu	-0.737***	0.1604	-0.582***	0.1644	-0.522**	0.1659
Age in 2004-5	-0.037***	0.0077	-0.042***	0.0075	-0.041***	0.0076
No. of Adults in HH	-0.144***	0.0271	-0.117***	0.0272	-0.115***	0.0270
Married	0.291*	0.1198	0.247*	0.1190	0.225	0.1205
Social group (Forward caste omitted)						
OBC	0.292	0.1618	0.210	0.1629	0.217	0.1634
Dalit	0.782***	0.1681	0.648***	0.1698	0.654***	0.1715
Adivasi	0.861***	0.1700	0.672***	0.1716	0.593***	0.1729
Muslim	0.535**	0.1929	0.356	0.1963	0.353	0.1967
Christian,	-0.030	0.4356	-0.007	0.4373	0.027	0.4405
Constant	-1.471***	0.2813	-0.966***	0.2883	0.985	0.5651

*State dummies included

Table 6: Determinants of Long-Term and Short-Term Migration (vs. not migrating) from Multinomial Logistic Regression with Social Networks

Indep. Vars measured in 2004-5	Long-term migration		Short-term Migration	
	Coefficient	**SE**	**Coefficient**	**SE**
Received any remittance income in round 1	0.388***	0.0987	-0.286	0.2031
Log of Unskilled male wage in village	-0.083	0.0829	-0.581***	0.1329
No unskilled work easily available/Missing village module	-0.246*	0.1208	-0.011	0.1997
Km to bus stop	0.036***	0.0073	0.065***	0.0101
Education (None omitted)				
1-4 std	0.120	0.1077	-0.029	0.1456
5-9 std	0.003	0.0763	-0.441***	0.1001
10-11 std	0.141	0.0956	-0.633***	0.1601
Class 12 & some college	0.441***	0.0986	-0.758**	0.2386
College graduate	0.445***	0.1316	-1.411***	0.3998
Missing data on education	0.135	0.3636	-0.651	0.5380
Per capita household income quintile (lowest omitted)				
2nd quintile	0.106	0.0864	-0.042	0.1217
3rd quintile	0.028	0.0810	-0.137	0.1302
4th quintile	0.049	0.0818	-0.276*	0.1286
Highest quintile	0.093	0.0819	-0.510**	0.1654
Age in 2004-5	-0.046***	0.0051	-0.041***	0.0076
No. of Adults in HH	0.033*	0.0133	-0.114***	0.0270
Married	-0.242**	0.0736	0.221	0.1205
Social group (Forward caste omitted)				
OBC	-0.056	0.0712	0.215	0.1632
Dalit	-0.057	0.0772	0.651***	0.1714
Adivasi	-0.110	0.1019	0.592***	0.1727
Muslim	0.045	0.0995	0.357	0.196
Christian, Sikh, Jain	0.070	0.1494	0.044	0.4415
Constant	0.117	0.3702	0.987	0.5631

*State dummies included

Wald chi2	19607.41
d.f.	86
Sample Size	26889

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