Demography India (2015) ISSN: 0970-454X
Vol.44, Issue: 1&2, pp: 69-82

Research Article

Lifetime Vs Current Migration: A Methodological Review

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Abstract

Despite its methodological inappropriateness in migration analysis, the lifetime method is widely used in migration research by the National Sample Survey (NSS) reports as well as by many scholarly articles. Using unit level NSS data on migration from 1983 to 2007-08, the present paper empirically establishes how the use of lifetime migration is inappropriate for analyzing 1) the dynamics of contemporary migration, 2) the trend in migration pattern over time, and 3) for quantifying the effects of the various socio-economic factors (basically the incentives/costs) on contemporary migration. The macro evidences reveal that such methodological fallacy most negatively affects the study of women's migration in India, as the recent and remarkable surge in their employment and education related migration does not feature in the estimates at all. Moreover, because of its insensitiveness to time related changes, the lifetime method yields erroneous and misleading conclusions with respect to temporal change in migration pattern and the recent effects of socio-economic correlates on migration.

Introduction

The widely used National Sample Survey report on migration documents marriage as being the most dominant reason for women's migration in both rural (91 percent) and urban India (61 percent) in 2007-08 (NSS Report no. 533). If marriage and family associated migration of women are to be considered, they jointly constitute an overwhelmingly 96 percent and 90 percent of the total women's migrations in rural and urban India respectively. No wonder that the employment and education linked migration comes out as being so trivial and insignificant that even in urban areas they could jointly make barely five percent. These figures give an impression that even in modern times, employment and education opportunities do not play any role in women's migratory decision making! A number of scholars have however attributed part of this invisibility of women's economic migration in the data to the inherent lacuna in the data collecting processes, which do not account for the possible implicit economic motives behind women's tied migration (Banerjee & Raju, 2009; Prabha, 2011; Shanti, 2006). However, many of them ignore that even the accounted 'explicit' form of economic or education related migration gets covered up because of inappropriate methods of analysis. For e.g., Prabha (2011) and Shanthi (2006) both use lifetime migrants i.e. those who have come to the destinations anytime in their life, for presenting the motivations/ reasons behind women's migration in the survey year 1999-2000. The NSS reports use the same method for presenting the reasons for migration of the migrants for each survey year. The corpus of lifetime migrants covered by the NSS includes bulk of women who had migrated to their respective destinations way back in time. Can the women who had migrated sometime around 20-30 years back or even earlier give an idea about the present motivations behind women's migration in the country? The changes in macroeconomic policies, continuous technological revolutions, changes in cultural ideologies and so on are very much likely to alter the motivations for migration with the passage of time. Nevertheless, the published NSS reports do not single out the migrants according to their time of migration and present the characteristics of the migration based on the total sample of migrants. Needless to say that

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the same estimates are often used as the foreground in many migration studies that accentuates the bias in perceiving migration dynamics in the country.

The aforementioned methodological error is further aggravated when the same estimates, generated using lifetime migrants, are compared for different survey years for temporal analysis of the migration pattern. In a dynamic socio-economic environment, comparison of the estimates devoid of any time reference, for the very temporal analysis could be highly erroneous and misleading. For e.g. the statement 4.13 of NSS report number 533 presents the reasons for migration for men and women based on the sample of lifetime migrants for the survey years 1993, 1999-2000 and 2007-08. In case of women migrants in urban areas, the table shows an increase in the joint proportion of marriage and associational migrations, from 81.2 percent in 1993 to 89.5 percent in 1999-2000 to 90.2 percent in the latest survey year 2007-08. The employment related migration of women to urban areas reportedly experiences a steady decline in the post-liberalized period from around five percent in 1993 to almost three percent in 2007-08. Even the education related migration seems to have precipitated to mere two percent in the recent period from around seven percent a decade and half earlier. The estimates tend to imply that the phenomenon of Indian women's migration is so static that even the post-liberalization boom in service sector jobs and educational opportunities in the cities could not enhance women's economically productive migration but rather has deteriorated the same. Even though the migration estimates through lifetime method seem to be quite unreasonable, these are widely cited in various research papers (for e.g. see Mazumdar, Neetha, and Agnihotri, 2013).

Another area where the use of lifetime migrants could cause disaster is in estimating the effects of various socio-economic factors on the propensity of migration. A cross-section of migrants, who had migrated at different points of time, could have experienced the push and pull factors of migration very differently if the gap in time has been substantial. Levy and Wadycki (1972) note that the recent migration might vary from earlier migration because of possible changes in costs and benefits associated with regions over time, improvement in information about regional opportunities in modern time, and also changes in attitudes toward moving. They also pointed out that most of the explanatory variables of migration are measured at the end of the survey period, while (lifetime) migrants had decided to move anytime in the past, and hence the explanatory variables are unlikely to reflect the situation existing during the time when migration decision was made. The Indian NSS data provide only a few variables, such as, rural/urban status of the last residence and type of economic activity of individuals before migration had taken place, and record all other relevant correlates at the end of the survey. If a person had migrated much earlier, then it is possible that her higher educational status or higher income level could be the aftermath of the migration and not the cause per se. Levy and Wadycki (1972) suggest the use of recent migrants, who had migrated within one year prior to the survey period, for analyzing the effects of the determinants of migration.

In an attempt to highlight this methodological lacuna in migration research, the present paper aims to illustrate how the use of lifetime migration is inappropriate for analyzing the dynamics of contemporary migration, the trend in migration pattern over time, and for quantifying the effects of the various socio-economic factors (basically the incentives/costs) on contemporary migration. The empirical evidences reveal that such methodological inappropriateness most negatively affects the study of women's migration in India, as the recent and remarkable surge in their employment and education related migration does not feature in the estimates at all.

Data and Methods

Four rounds of National Sample Survey data on migration conducted in the years 1983 (38th round), 1993 (49th round), 1999-2000 (55th round) and the recent 2007-08 (64th round) have been used here. The surveys have asked for migration particulars and other socio-economic and demographic characteristics of a total of 623494 persons in the 38th round, 596712 persons in the 49th round, 596686 persons in the 55th round, and 572254 persons in the 64th round.

The sample of individual migrants, identified in the NSS database as having place of enumeration different from the place of last residence has been considered for the analyses. This

sample is divided into two types of migrants: 1) those staying at the destination for any duration of time – the lifetime migrants, and 2) those whose duration of residence at the destination has been less than one year – one year migrants or current migrants. The aim is to compare and highlight the differences in the estimates of migration by using conventional lifetime migrants and proposed one-year migrants. The analysis has been divided into three parts: first, comparison of estimates of contemporary migration, using the latest survey data of 2007-08; second, comparison of temporal pattern of migration over the years 1983 to 2007-08, using all four rounds of NSS; and third, comparison of estimated effects of various socio-economic correlates on the likelihood of migration using NSS 2007-08. It is to be noted that NSS also collects data on individual's short-term migration (circulation) as well as migration of households (family migration), which are not considered for the present analysis, the reason being that for both types of migrants, short-term and household, the migration is recognised only if it has happened during one year prior to the survey date. Hence, the estimates of short-term and household migration reflect the current pattern unlike that of the individual migration.

Post 1990s, the country witnessed major macroeconomic restructuring and expansion of service sector jobs in the cities. As the opportunities go up in urban areas with time, the urban-bound migration is likely to be more dynamic than the rural-bound migration. That is why the urban migration pattern has been analyzed for methodological illustrations. All the analyses are done using working age people, i.e. men and women aged 15-59 years.

Empirical Results

Contemporary Migration

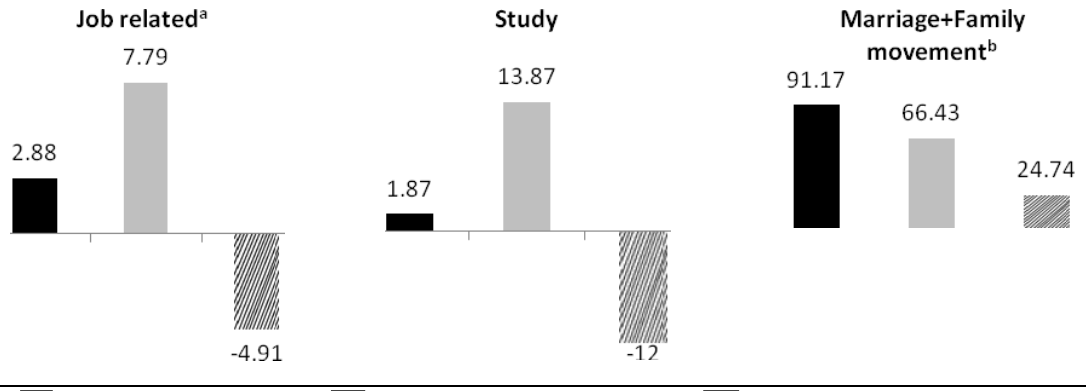
In migration literature, it has always been fascinating to know why people migrate. The latest NSS identifies 16 such reasons of migration including six job related reasons, and study, marriage, earning members' migration, political reasons etc. among others. Based on NSS 2007-08 unit level data, Figure-1 presents the reasons behind the migration of women and men to urban India anytime in the past (lifetime migrants) and during recent past i.e. one year prior to 2007-08 (one-year migrants or 2007-08 migrants). If the lifetime estimates are to be believed, marriage and family associated movements have been the ultimate reasons (for over 90 percent), with insignificant importance of study (less than two percent) and job (less than three percent) related reasons for women migrating to urban areas in 2007-08. For both men and women the differences in the lifetime and one-year estimates are evident, but the extent of overestimation of marriage and family related migration and underestimation of study related migration of women by lifetime method is striking. Marriage and family related reasons are dominant even in the recent times, but for only two third of women migrants and not for over 90 percent of them, as the NSS report claims. As the lifetime estimates inflate the share of marriage and associational migration of women by around 25 percent, the economically productive aspect of women's migration in the form of their education and employment linked migration almost disappears from the macro data. The one-year estimates reveal that the recent rise in job opportunities in the cities has attracted women migrants as around eight percent of the total women migrating to the cities in 2007-08 were motivated by job related reasons. However, the most interesting and contrasting finding the one-year method reveals is that in 2007-08, women have surpassed their men counterparts in education related migration to the cities, making education the second most dominant reason (14 percent) for their current migration. Such a significant change in the migration pattern of women remains invisible and the stereotypes prevail because of inappropriate methodological choice in migration studies. For men too, the shares of job and study related reasons turn out be higher than that shown by the lifetime method. As expected, the one-year estimates show a mere seven percent as opposed to over 19 percent (lifetime estimate) of marriage and family associated movements among men migrating to the cities in 2007-08.

The main reason for such a stark difference in the estimates of marriage, study and job related migration among women is that over 40 percent of lifetime women migrants enumerated in the 2007-08 survey had migrated to the cities at least 15 years back (see Table-1). Over 26 percent of women lifetime migrants had entered the cities at least 20 years prior to the survey date. Marriage and family

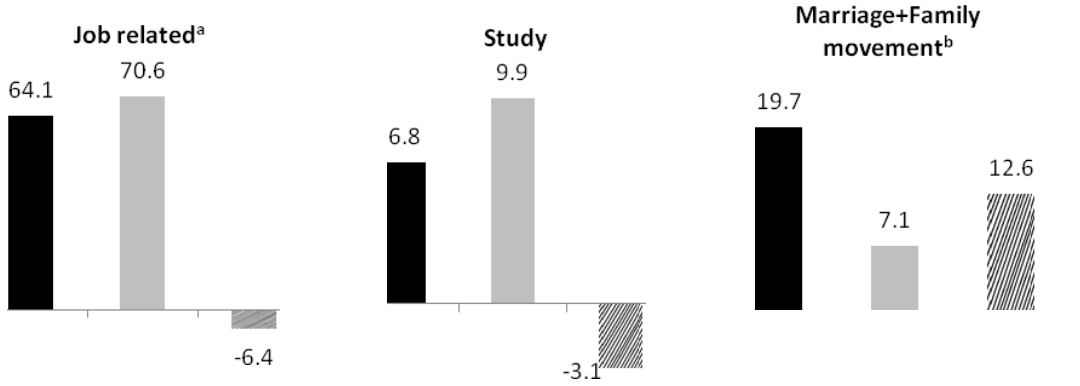
associated migrations dominated among these older women migrants because of limited opportunities in the urban job market as well as little prioritization of women's education and employment in families and societies back then. But because of inclusion of these older migrants, the mean estimates by lifetime method become skewed towards the extreme values.

Figure-1: Comparison of lifetime and 2007-08 migrants with respect to the stated reasons for migration to urban areas for men and women of working age-group, 2007-08, India

WOMEN



MEN



Notes: a. job related comprises of NSS reason codes: in search of employment –01, in search of better employment – 02, business – 03, to take up employment / better employment – 04, transfer of service/ contract – 05 and proximity to place of work – 06.
b. marriage + family comprises of NSS reason codes, marriage –16, and migration of parent/earning member of the family–17
Source: Computed from unit level data on migration, NSS 2007-08

As a result the characteristics of recent migration get masked in the lifetime estimates. Because of the same reason the marriage and family associated migration of men tend to be higher than that of the one-year estimates. The dissolution of joint families and emergence of nuclear families in recent times might explain the decline in men's tied migration with earning members of their families. Table-1 illustrates that the lifetime migrants enumerated by the NSS data include the bulk of people who made their migration decision at an earlier period when different socio-economic conditions prevailed. Hence this sample is not appropriate for analysis of contemporary migration.

Table-1: Percent distribution of men/women migrants aged 15-59 years migrating to urban areas by their period of in-migration, Urban India, NSS 2007-08

Reported period since leaving last	Approximate in-migration period (taking 15 Dec, 2007 as survey mid-point)	Men	Women
Less than 1 year	16 Dec, 2006 to 15 Dec, 2007	5.19	2.78
1-2 years	15 Dec, 2005- 15 Dec, 2006	16.27	10.55
More than 2 to 5 years	15 Dec, 2002 to 14 Dec, 2005	18.88	14.55
More than 5 to 10 years	15 Dec, 1997 to 14 Dec, 2002	20.51	18.28
More than 10 to 15 years	15 Dec, 1992 to 14 Dec, 1997	11.77	13.56
More than 15 to 20 years	15 Dec, 1987 to 14 Dec, 1992	11.75	13.97
More than 20 years	Before 15 Dec, 1987	15.28	26.15
Total		100.0	100.0
Sample		19437	36078

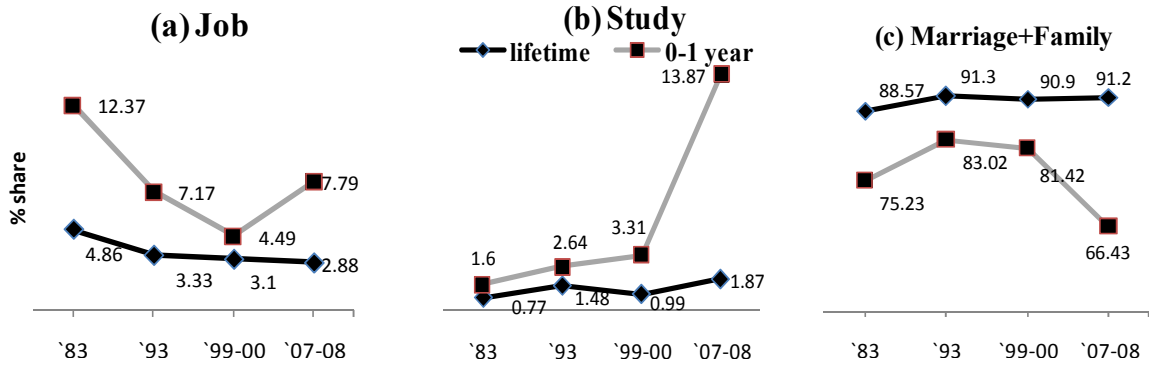
Source: computed from unit level data on migration from NSS 2007-08.

Trends in Migration

As the lifetime method fails to reflect the recent motivations behind the migration of people, especially women, the use of such a method for temporal analysis of migration patterns results in grave inconsistencies. The reason is that for every NSS survey round, the lifetime migrants include all people who have migrated to their destinations at any time prior to the survey date and the corpus of all older and newer migrants tends to distort the average estimates. Figure-2 presents a vivid illustration of how the trend in job, study, and marriage and family associated migration of women to urban areas changes completely when one-year method is invoked over the lifetime method.

The line graphs show how percentage share of each reason for migration, say, job or study, out of all reasons cited by women migrants to urban areas in any time in their life (lifetime estimates) and in one year prior to the survey dates (one-year estimates) changed in last 25 years, from 1983 to 2007-08.

Figure-2: Trend in women's (aged 15-59 years) job, study and marriage + family associated migration to urban areas by lifetime and one-year method, 1983, 1993, 1999-2000 and 2007-08



Source: computed from unit level data on migration, NSS 1983, NSS 1993, NSS 1999-2000 and NSS 2007-08

Besides expected underestimation of job and study related migration of women and overestimation of their marriage and family associated migration by the lifetime method, the most prominent outcome observed is the inability of this method to capture important fluctuations in

migration pattern with respect to time. According to the lifetime method, the job related migration of urban migrant women experiences a steady decline over last two and a half decades, whereas the one-year method reveals resurgence of the same from a low of 4.49 percent in 1999-2000 to an appreciable 8 percent in 2007-08. For study linked migration, the trend by the conventional method is even more misleading. An oscillating pattern at a very low level is seen for study related migration of women during 1983 to 2007-08 by the lifetime method, whereas, the one-year method presents an increasing trend with a steep rise of 10 percentage points during 1999-2000 to 2007-08. While the one-year estimates suggest that there has been improvement in the education status of women over the years and more women tend to migrate to the cities for pursuing studies, the lifetime estimates completely ignore this positive evolution in women's migration. Likewise, marriage and family associated migration maintain a high 89 to 91 percent throughout the pre and the post-liberalized period as per the lifetime estimates; whereas, the current estimates show a declining trend of the same during the post-liberalized period with a record low at 66 percent during 2007-08. These estimates illustrate that women's migration in India is tending to be more economically driven in recent times and such change is highly encouraging. Thus, it is clearly established that the trend estimation by the lifetime method corresponds little to the existing dynamics of women's migration in India and hence, its applicability in trend analysis is highly questionable.

Determinants of Migration

Researchers have long been attempting to identify the determinants of migration and to quantify their effects on the process of migration by using multivariable regression models. A number of papers have attempted to test the macroeconomic theories of migration where income differential between regions, urbanization levels, population size, unemployment rates, distance as intervening obstacles etc. feature among others in the models as correlates of migration (Greenwood, 1969, 1971; Bhattacharya, 2002; Chen & Coulson, 2002; Mitra & Murayama, 2009). Others have tried to model individual level socio-economic and demographic characteristics of migrants, such as their educational level, employment status, economic status, age, marital status etc. on their propensity to migrate (Yang & Guo, 1999; Ackah & Medvedev, 2012). However, the regression models have mostly considered the migration of the lifetime migrants, who made their decision for migration anytime in the past, as the dependent variable (see Greenwood, 1969, 1971). On the other hand, the socio-economic factors, which are assumed to affect the migration propensity of these lifetime migrants, are measured at current point of time. This obviously results in a logical flaw in the cause and effect relationship between the factors and the migration outcome. Moreover, the regression models also bank on a strict assumption that the correlates of migration would have constant effects on the migration choice of people, irrespective of their time of migration. In other words, it suggests that the determinants of migration, say spatial distance or one's education level or a region's relatively high income etc. influence the current migrants in the same way, in both magnitude and direction, as they did the older migrants, who moved several decades back. Levy and Wadycki (1972) critique this assumption and in their paper on Venezuela's internal migration based on the Census data of 1961, they empirically establish that the magnitude of effect of many vital determinants vary substantially for lifetime and one-year migrants, even though their direction remain largely the same. They found that the effect of spatial distance between the source and the destination on one-year migrants turns out to be less negative than that on the lifetime migrants. Advancements in transportation and communication in recent times explain this obvious difference. Similarly variables, such as educational status of people at origin and at destination, degree of urbanization of origin and destination, and unemployment levels at source and destination are found to be affecting the migration of lifetime migrants and one-year migrants in different magnitudes. The one-year model proves to be more reasonable in explaining the effects of the major correlates of migration in contemporary period. Much of the difference in the magnitude of the regression coefficients of the correlates lies in the fact that the recent time has witnessed advancements in information and communication technologies, higher education levels, improved awareness about opportunities, and hence the response of recent migrants to concurrent socio-economic change is different from that of older migrants. In the similar lines, an exercise has been carried out in the Indian context using the individual level migration

records of NSS 2007-08 data. The point of departure from Levy and Wadycki's (1972) illustration is that the present regression model will model the micro-level decision about migration based on both structural variables and individual socio-economic characteristics.

Although the question of migrant's duration of residence at destination was included as early as in Census 1961 and also made available in the first 'full sample' migration survey of NSS 28th round in 1973-74, the usage of this variable for segregating recent migrants from older migrants was not common in India. While the use of lifetime migrants has the benefit of larger sample size in statistical analyses, the very purpose of the model of quantifying the recent effects of various factors on migration becomes futile without such a separation. On the other hand, if using one-year migrants alone result in inadequate sample size, two to five year migrants can be used as recent migrants. The time reference to migration will help identifying recent motivations and barriers, and their intensity of influence on contemporary migration.

Table-2 presents an illustration that how the relevance of determinants of migration changes over time as manifested in quantitative difference in their effects on lifetime migration and recent migration. In this study, the recent migrants are recognised as those migrated within two years instead of one-year prior to the survey. The reason for considering 0-2 year migrants is to have a larger sample size for obtaining robust estimates in regression analysis. The NSS 2007-08 migration data have been used for the multivariable regression analysis. Migration flows to and from the following twenty large states have been analyzed: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. These twenty states as origins capture 94.11 percent of total migrants and as destinations capture 84.93 percent of total migrants. The reason for taking large states is to be able to compute and compare state level wages and unemployment rates between the origin and the destination places. Literature suggests that the wage differential between the origin and the destination is a crucial determinant of urban migration (Greenwood, 1969, 1971; Bhattacharya, 2002; Dholakia, 1994, c.f. Dholakia, 2006; Mitra & Murayama, 2009).

Determinants: Variable Computation

The two models – lifetime migration model and the two-year migration model consider the same and standard structural and individual level determinants of migration to illustrate the quantitative difference in the coefficients of the covariates because of exclusion and inclusion of the time dimension in migration. The tendency of job related migration of individuals from rural and urban areas of the origin state to the urban areas of the destination state is modeled using a binary logit regression model. The socio-economic and demographic covariates considered for the regression model are as follows: the expected wage differential between the origin and the destinations, big city destination, the migrant's last place of residence, the migrant's marital, educational, occupational and economic status. These are standard well-known covariates, drawn from the existing literature, in order to highlight the differences in the estimates due to use of two methodologies, viz. the lifetime migration and the current migration.

Todaro's (1969) expected wage differential, primarily in the context of rural-urban migration, is conceptualized as the variation between the rural and urban expected wages, calculated as the product of the rural/urban wage and the employability in that rural/urban sector. The expected wage differential between the origin and the destination is assumed to augment job migration. However, for the recent job migrants to urban areas, the relevance of wage differential might become feeble because of increased awareness about the job opportunities and other avenues of income in the cities as a result of advancement in information and communication technologies. In this study, the expected wage differential has been computed as the ratio of the urban expected wage of the destination state to the rural expected wage of the origin state in case of rural to urban migration, and to the urban expected wage of the origin state in case of urban to urban migration. Using the data from the NSS report 2004-05, the expected wage differentials between the origin states and the destination states for

each of the 20 big states are computed. The detailed computation has been provided in Table-A1 in the appendix.

Large urban centres offer greater avenues for income and other urban amenities, which attract and pull migrants massively. For the recent migrants, the influence of large urban centres as attractive destinations should be high because of the concentration of New Economy jobs over there. Six such large mega cities, viz. Mumbai, Delhi, Kolkata, Chennai, Bangalore and Hyderabad having a population of above five million each have been identified. Pune, despite having less than five million people is being considered among the large cities because of its proximity to Mumbai, the most populated urban centre in the country. The variable 'large city destination' is a NSS state-region level variable which assumes one if the destination state-region contains any of the aforementioned large cities, and assumes zero otherwise. The NSS divides each state into a number of regions, which comprise of a group of districts in the state based on their geographic location. So for example, for Maharashtra state, the coastal region, comprising of Mumbai (suburb), Mumbai, Thane, Raigarh, Ratnagiri and Sindhudurg districts, contains the megacity of Mumbai and hence would assume value one for all migrants enumerated in that region.

The effect of a person's education, marital status, type of occupation before migration, and economic class is being observed for both lifetime migrants and recent migrants. NSS provides expenditure data instead of income data at household level and hence economic class is proxied through the monthly per capita expenditure (MPCE) categories.

Regression Results

Table-2 presents the odds ratios of binary logit regressions modeling the likelihood of job related migration over other type of migration for men aged 15-59 years belonging to various socio-economic backgrounds, migrating to urban India anytime in their lifetime (lifetime migrants) and migrating within two years prior to the survey period (0-2 year migrants). Both the lifetime model and the 0-2 year model explain a fair amount of the variation in the model and are significant at one percent level of significance. The percent distribution and sample sizes of various categories of the select variables have been presented in Table-A2 in the appendix.

The results for the variables such as expected wage differential and large city destination are interesting to note. The men lifetime migrants are 25 percent more likely, that too at a strong one percent level of significance, to have job induced migration to the cities for which the expected wage is higher than that of the origin's. However, for the 0-2 year migrants, the positive effect of this variable (wage differential) on men's labour migration remained weakly significant at 10 percent level of significance. This implies that keeping other factors constant the expected wage differential between origin and destination loses its erstwhile dominating role in attracting men labour migrants in contemporary period.

For the five million plus populated destinations, the difference in job migration is even striking. While lifetime migrants are 15 percent less likely to have job related migration to state-regions with large urban centres, the recent migrants are 43 percent more likely to do so. Both the coefficients are significant at one percent level of significance. The attractiveness of large urban centres should have increased in the recent period because of service sector boom and rise in associated job opportunities in the big cities of the country. A clear change in the motivators of migration is witnessed in the recent period. This also establishes that use of lifetime migrants may mask the actual relevance and intensity of the determinants of migration.

For other individual and household level variables, the differences in the coefficients are more in quantitative terms than qualitative terms. Married men are significantly more likely to have job related migration to urban areas than their single counterparts. This makes rational sense as marriage bestows more financial responsibilities upon men for maintaining their families.

The educational status of men migrants hardly matters in job migration to the cities for both lifetime migrants and recent migrants. No category of education comes out to be significant except the

secondary and higher secondary category. This implies that men with secondary or higher secondary level of education are significantly less likely to migrate to the cities than the illiterate men. Men with secondary and higher secondary level of education may pursue their studies further and hence may not migrate for a job. For lifetime men migrants, the graduate and above educational level reduces their likelihood of job migration by 20 percent as compared to that of the illiterate men. However, this negative effect of higher education on job migration ceases to be significant for 0-2 year migrants. The insignificant result of other educational categories suggests that all sections of men migrate for jobs irrespective of their educational attainment and the uneducated greatly outnumbers the educated.

The last usual place of residence of a migrant is an important determinant of job migration. A lifetime migrant from rural area of a state is twice more likely to have job migration to the cities in a different district of the same state as compared to a migrant from rural area of the same district. The quantum is slightly higher for the recent migrants than that of the lifetime migrants in the same scenario. A lifetime migrant with rural origin is more than three times as likely to migrate to urban areas of a different state as had his origin been rural area of the same district. The odds ratio of job migration for a recent or 0-2 year migrant is more than five for a man from rural area of different origin of state than rural area of same origin of district. This implies that the interstate rural to urban labour migration has always been important, but the recent surge in such migration does not get reflected if the lifetime migrants are taken into consideration instead of the current migrants. The development in rural transportation and rise in information and communication systems leading to awareness about jobs in even far-flung states could be the plausible reason behind this upsurge. Intra-district urban to urban migration for job is however significantly low for men migrants than that of the intra-district rural to urban migration. For the recent migrants this is even lower than that of the lifetime migrants and significant at one percent level. One reason could be that there is no significant wage differential between the urban areas of the same district. Secondly, rise in urban commutation in recent times possibly led to such decline in intra-district urban to urban job migration. With passage of time and advancement in urban commutation, intra-district urban to urban migration will decline further, which would not be captured by use of lifetime migrants. While inter-district (within a state) urban to urban migration is significantly higher than that of intra-district rural to urban migration for men lifetime migrants; it turns out to be weakly significant (at 10 percent level) for recent migrants. Inter-state urban to urban migration is however very high for both lifetime and recent migrants as compared to intra-district rural-urban migration.

Migrant's activity status at the time of migration turns out to be a very relevant determinant of job migration for men. As compared to students and unpaid workers, regular/salaried employees are around 12 times and 10 times more likely to have employment related migration to urban areas for lifetime and recent migrants respectively. Lifetime migrants, who were previously self-employed or casual workers, are more than 12 times as likely to migrate to the cities for jobs as students or unpaid workers. However, for the recent migrants, the previously self-employed or casual workers are just seven times more likely to migrate to the cities for jobs than that of the students and unpaid workers. The decline in the magnitude of migration of self-employed/ casual workers vis-à-vis students/ unpaid workers could be rise in the migration of the latter in recent times. The expansion of IT-based services in the cities has opened up employment opportunities in many white collar jobs for even basic 12^{th} pass candidates and this has attracted many recent students to join job market. This has possibly resulted in recent surge in student's migration for jobs to the cities. In the similar fashion, earlier the migration of unemployed people to the cities had been more than 25 times higher than that of the students, which has declined for the recent migrants to 14 times that of the student's migration level. This clearly establishes that students' job induced migration has increased in recent times than that of the earlier period.

The effect of economic classes, measured in terms of the MPCE classes, seems to be almost the same for both lifetime and recent migrants. As compared to the bottom one-third of men migrants, middle one-third and top one-third migrants are more likely to migrate to the cities for jobs. However, there is slight decline in the magnitude of job migration of the top one-third vis-à-vis the bottom one-third migrants in the recent time. There could be multiple reasons for this change. One of the plausible explanations could be that the bottom class is not as poor as it used to be in earlier times, and hence

their ability to migrate has increased. Also, the migrants from the upper most economic class might undertake study related migration more in recent times. A portion of this class might be involved in international migration also.

Table 2: Odds ratios of logistic regression showing the likelihood of job related migration to urban areas for men aged 15-59 years, India, 2007-08

Dependent variable: reported reason for migration is job related=1, others=0					
Determinants/ covariates	**Lifetime migrants**	**95% confidence interval**		**0-2 year migrants**	**95% confidence interval**
Expected wage differential	1.25***	[1.188, 1.316]		1.13*	[1.000, 1.274]
Large city destination	0.85***	[0.768, 0.933]		1.43***	[1.151, 1.787]
Marital status					
Currently married	Reference			Reference	
Single[a]	0.34***	[0.311, 0.376]		0.45***	[0.360, 0.564]
General Education					
Not literate	Reference			Reference	
Literate but below primary	1.07	[0840, 1.356]		0.89	[0.508, 1.548]
Primary and middle	0.91	[0.759, 1.081]		0.90	[0.586, 1.391]
Secondary and higher secondary	0.63***	[0.522, 0.750]		0.45***	[0.293, 0.702]
Certificate/Diploma	1.05	[0.799, 1.370]		0.96	[0.536, 1.728]
Graduate and above	0.80**	[0.655, 0.968]		0.76	[0.473, 1.207]
Last usual place of residence					
Same district: Rural	Reference			Reference	
Same district: Urban	0.78**	[0.638, 0.951]		0.55***	[0.361, 0.843]
Same state diff. district: Rural	2.09***	[1.832, 2.384]		2.50***	[1.874, 3.342]
Same state diff. district: Urban	1.61***	[1.352, 1.921]		1.45*	[0.980, 2.135]
Diff. state: Rural	3.36***	[2.860, 3.949]		5.44***	[3.693, 8.017]
Diff. state: Urban	2.94***	[2.427, 3.570]		2.33***	[1.538, 3.535]
Activity status at the time of migration					
Others (student, unpaid workers etc.)	Reference			Reference	
Regular/salaried employee	11.85***	[10.492, 13.394]		10.19***	[7.735, 13.432]
Other employees (Self-employed, Casual worker etc.)	12.41***	[11.024, 13.968]		7.43***	[5.667, 9.742]
Unemployed	25.52***	[21.338, 30.520]		14.53***	[10.209, 20.667]
Economic Class					
Bottom 1/3rd	Reference			Reference	
Middle 1/3rd	1.49***	[1.316, 1.692]		1.50***	[1.117, 2.004]
Top 1/3rd	1.96***	[1.717, 2.228]		1.55***	[1.159, 2.062]
Log likelihood:	-6887.9836			-1526.2008	
LR chi2 (21)	7520.18			1299.24	
Prob>chi2	0.0000			0.0000	
Pseudo R^2:	0.3531			0.2986	
No. of Observations:	16790			3801	

Note: *** significant at 1% level, **significant at 5% level, *significant at 10% level
[a] single includes never married/ widowed/divorced
Source: Computed from unit level data on migration from NSS 2007-08

Conclusions

The major fallout of the lifetime method is its inability to capture the changes in the dynamics of migration with time. So this method ignores any recent surge in women's study and employment driven migration to urban India. It also fails to account for the steadily increasing trend in women's study-related migration over last 25 years. As a result of this methodological flaw, the spurious overestimation of marriage and tied migration of women in contemporary India is unjustly

maintaining the stereotypes around women's passive and so called "unproductive" nature of migration.

The lifetime method also turns out to be inadequate in identifying the recent motivations behind migration and quantifying their actual effects on the process of migration. For e.g. in the case of men's job migration to urban areas, the declining relevance of origin-destination wage differential in determining migration is not captured, nor is the positive impact of big city destinations in inducing job migration adequately captured. Because of its insensitiveness to time related changes, the lifetime method yields erroneous and misleading conclusions with respect to current migration pattern, temporal change in migration pattern and the recent effects of socio-economic correlates on migration. Hence, it is of utmost importance that the widely used NSS reports as well as scholarly research articles on migration take note of this methodological inadequacy and carry out contemporary migration analysis using data on current migrants instead of lifetime migrants.

Notes

[1]The reasons for individual migration are coded in NSS 2007-08 as: in search of employment –01, in search of better employment – 02, business – 03, to take up employment / better employment – 04, transfer of service/ contract – 05, proximity to place of work – 06, studies – 07, natural disaster (drought, flood, tsunami, etc.) –08, social / political problems (riots, terrorism, political refugee, bad law and order, etc.) –10, displacement by development project – 11, acquisition of own house/ flat – 12, housing problems – 13, health care – 14, post retirement –15, marriage –16, migration of parent/earning member of the family–17, others –19.

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Appendix

Table A1: Calculation of Rural and Urban Expected wages

If i,j denote the origin and the destination state and R and U denote the rural and urban areas respectively, then the expected wage differential between the source and destination as computed for a migrant from

$$R_i \text{ to } U_i = \frac{\text{urban expected wage of state } i}{\text{rural expected wage of state } i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$U_i \text{ to } U_i = \frac{\text{urban expected wage of state } i}{\text{urban expected wage of state } i} = 1 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$R_i \text{ to } U_j = \frac{\text{urban expected wage of state } j}{\text{rural expected wage of state } i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$U_i \text{ to } U_j = \frac{\text{urban expected wage of state } j}{\text{urban expected wage of state } i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The first two situations depict the intra-state migration and the latter two show inter-state migration. The rural (urban) expected wages are computed in the following manner:

Rural (Urban) expected wage = Average daily rural (urban) wage per worker [$ADW_{R(U)}$]
X Probability of getting a job in rural (urban) sector [$Pjob_{R(U)}$];
where,

$ADW_{R(U)}$= $ADWRegular_{R(U)}$ X $PWRegular_{R(U)}$ + $ADWCasual_{R(U)}$ X $PWCasual_{R(U)}$
and
$Pjob_{R(U)}$ = $PRegular\_job_{R(U)}$ + $PCasual\_job_{R(U)}$
= $PWRegular_{R(U)}$ X (1-$UR_{R(U)}$) + $PWCasual_{R(U)}$ X (1-$UR_{R(U)}$)

Where,
$ADW_{R(U)}$: Average daily rural (urban) wage per worker
$ADWRegular_{R(U)}$: Average daily wage per worker in regular/salaried employment in rural (urban) areas.
$ADWCasual_{R(U)}$: Average daily wage per worker in casual employment in rural (urban) areas
$PWRegular_{R(U)}$: Proportion of regular workers to total workers in rural (urban) areas
$PWCasualr_{R(U)}$: Proportion of casual workers to total workers in rural (urban) areas
$Pjob_{R(U)}$: Probability of getting a job in rural (urban) areas
$PRegular\_job_{R(U)}$: Probability of getting a job in regular sector in rural (urban) areas
$PCasual\_job_{R(U)}$: Probability of getting a job in casual sector in rural (urban) areas
$UR_{R(U)}$: Unemployment rate in rural (urban) areas in the state

Data sources:
ADWRegular$_{R(U)}$: Average daily wage per worker in regular/salaried employment in rural (urban) areas. *[Data source: Average wage/ salary earnings (Rs. 0.00) per day received by regular wage/ salaried employees (activity status codes: 31, 71, 72) of age 15-59 years for each state and UT (NSS 2004-05, Report-515, statement 5.11.1, p-148)]*

ADWCasual$_{R(U)}$: Average daily wage per worker in casual employment in rural (urban) areas *[Data source: Average daily wage/ salary earnings (Rs. 0.00) for casual workers engaged in works other than public works (activity status codes: 51) of age 15-59 years for each state and UT (NSS 2004-05, Report-515,statement-5.11.3, p-150-151)]*

PWRegular $_{R(U)}$: Proportion of regular workers to total workers in rural (urban) areas *[Data source: Per 1000 distribution of usually employed (Principal status) by category of employment for different states and UTs (NSS 2004-05, Report-515, Statement 5.7.1, p-130 and P-133)]*

PWCasualr $_{R(U)}$: Proportion of casual workers to total workers in rural (urban) areas *[Data source: Per 1000 distribution of usually employed (Principal status) by category of employment for different states and UTs (NSS 2004-05, Report-515, Statement 5.7.1, p-130 and P-133)]*

UR $_{R(U)}$: Unemployment rate in rural (urban) areas in the state *[Data source: Usual principal status unemployment rates for the educated persons of age 15 years and above for each state and UT (NSS 2004-05, Report-515, statement 6.3.1, p-170)]*

Table A2: Percent distribution and sample sizes for various categories of lifetime and 0-2 year men migrants aged 15-59 years enumerated in Urban India, 2007-08

Variables used in Regression Analysis (in Table-2)	Lifetime migrants		0-2 year migrants	
	% distribution	Sample size (unweighted)	% distribution	Sample size (unweighted)
Job related migration				
Yes	64.4	11258	65.1	2816
No	35.6	5557	34.9	989
Total	100.0	16815	100.0	3805
Large city destination				
Yes	41.4	5827	37.0	1096
No	58.6	11041	63.0	2717
Total	100.0	16868	100.0	3813
Marital status				
Currently married	68.3	11610	43.9	1982
Single[a]	31.7	5257	56.1	1831
Total	100.0	16867	100.0	3813
General Education				
Not literate	9.4	1490	7.7	284
Literate but below primary	6.0	1044	5.4	231
Primary and middle	27.8	4755	24.6	1053
Secondary and higher secondary	30.7	5100	32.4	1150
Certificate/Diploma	4.5	691	6.6	193
Graduate and above	21.6	3785	23.4	901
Total	100.0	16865	100.0	3812
Last usual place of residence				
Same district: Rural	18.9	3831	16.7	794
Same district: Urban	7.7	1323	9.2	332
Same state diff. district: Rural	19.9	3279	18.4	703
Same state diff. district: Urban	19.6	3387	21.8	853
Diff. state: Rural	23.6	3214	20.4	629
Diff. state: Urban	10.4	1827	13.5	501
Total	100.0	16861	100.0	3812

Activity status at the time of migration				
Others (student, unpaid workers etc.)	37.9	6092	37.8	1104
Regular/salaried employee	19.6	3748	24.1	1108
Other employees (Self-employed, Casual worker etc.)	27.0	4656	25.5	1081
Unemployed	15.5	2358	12.6	518
Total	100.0	16854	100.0	3811
Economic Class				
Bottom 1/3rd	17.3	3179	12.7	563
Middle 1/3rd	30.7	5350	24.6	1089
Top 1/3rd	52.0	8339	62.8	2161
Total	100.0	16868	100.0	3813

Note: [a] single includes never married/ widowed/divorced

Source: Computed from unit level data on migration from NSS 2007-08