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WAGES IN THE INFORMAL SECTOR WITH A SPECIAL EMPHASIS ON MIGRATION

Mokshda Kaul[1]

Abstract

Wage data in India has serious gaps which motivates the need for primary data collection in order to comprehend the dynamics of wage. In 2004-05 92 per cent of the 457 million strong workforce in India, was reported to belong to the unorganised sector. This sector is plagued by terrible work conditions such as poverty and low wage levels. This paper looks at the construction sector in the informal sector in India to analyse what motivates wage in this sector; what motivates an informal sector labourer's decision to migrate and how do the determinants of wage among other social factors play a role in this decision. Finally, this paper models the movement across skill levels in the informal sector from low skilled to high skilled. Using the results from the empirical analysis, this paper then proceeds to draw implications for development policy and labour related policy.

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1. INTRODUCTION:

In 2004-05 92 per cent of the 457 million strong workforce in India, was reported to belong to the unorganized sector. The construction sector features predominantly in this unorganized, informal segment. It best captures the dynamics of informal labour which is why this paper focuses on it. The existent void in wage data across India has led to most studies utilizing primary sample sized data for any evaluation. Within India's labour demarcations, the informal sector, presents an interesting setup wherein there exists an opportunity for skilling, educating and helping a huge section of the population reach better economic outcomes. Within the informal sector, the construction sector is one which succinctly captures wage response to skill and education. In the changing economic scenario characterized by urbanization coupled with agricultural distress, migration has started to play a huge role. While collecting primary data for this paper, it was found that the construction sector aptly represents this nuance with most workers being migrants, which is why migrant employment becomes a pivotal part of this paper's analysis. This paper thus seeks to find not only the determinants of wage for this sector but also the role wages play in migration. The migration aspect also holds implications for rural development and urban poverty as the paper analyses ahead.

The efficiency wage theory derives from varying explanations, each of which focus on a different aspect of labour. Leibenstein in 1957, came up with the earliest efficiency wage model. His idea was that it would benefit the landowner to pay a wage above the competitive level. The reason being that the amount of workers' efforts positively depends on wages. It becomes a nutritional model where higher wages are related to greater consumption levels for the workers and subsequently they can afford to put in more work efforts.

The cynosure of the various theories explaining efficiency wages, post-Leibenstein, lies in the idea that involuntary unemployment is an inherent part of market economies. The labour market does not clear by moving to a lower wage and there exists some rationale behind employers not choosing to move to a lower wage. Unemployed individuals do not get offered wage contracts at a lower level– lower than the higher prevalent wage - even if they are willing to work at the lower level.

Other reasons attributed to efficiency wage are of efficiency wage being a gift exchange in the form of a premium to the worker (Akerlof, 1982) and absence of complete information about workers and thus paying the efficiency wage in order to prevent shirking (Shapiro and Stiglitz, 1984).

There is also the adverse selection model, the recruiting model and some other sociological or normative models.

The Mincer earnings function is a single equation model which explains wage as a function of schooling and experience. The equation uses a quadratic function for years of experience.

Wage bargaining considers how labour consists of a unionized sector where wages are set by unions and non-unionized sector where wages are not covered by unions and the employer sets the efficiency wage. Wages which the union sets, are higher than the efficiency wage that the employer would have already set. In economies where unions exercise no restraint, wage will be set very high above the efficiency wage in light of the union's strong bargaining power, leading to even higher unemployment prevailing.

Further, wage rigidity is a concept that arises from the insider-outsider model where the union prevents unemployed labor from entering the labor market, which would have increased the supply of labor and thus bought the equilibrium wage rate down. When the union does bargain for wages, it does so solely with focus on the wages and supply of unionized workers, thereby leading to a high equilibrium wage.

As regards to migration, the Structural Change Theory propounded by Lewis (1955) also known as the Lewis Model argues that the rural agriculture sector frees up labor which then migrates to the more productive urban sector. The increase in workers manifests in the form of industrialization. The industrial profits can be re-invested into more industrialization, and capital starts to accumulate which then leads to sustained economic development.

The Harris-Todaro Model states that rural-urban migration is motivated by the difference between rural and urban incomes and the probability of finding employment. Additionally, younger the migrant, wider is the time horizon facing them and thus will encourage migration because their probability of finding a job will be higher.

1.1. Objective:

This paper tries to understand what are the determinants of wage in the informal sector. Using the Mincerian earnings equation the paper analyses how do skill, education and migrant status influence the wage of a laborer. Further owing to the huge proportion of migrants in the sector that has been chosen (*i.e.* construction), motivations for migration are estimated. Finally, factors determining and significant for movement across skill levels of unskilled to most skilled are also calculated.

1.2. Hypothesis:

This dissertation utilizes data from a pilot study of construction sites across India, to ascertain the relationship between migration and wages; whether migration affects wages or vice-versa. In addition, it also uses this data to test the ideas of efficiency wage with regards to skill and education. It builds a primary version of a wage equation to check how does the efficiency wage model work in the construction sector and what faculties does it reward. It also looks at establishing what elements does migration respond to in the construction sector. Finally, it also models the skill levels across categories within the sector and how workers move across skill lines.

In doing so, it tests the following hypothesis:
- Wage using the Mincerian earnings equation, such that it is a function of experience, skill and education such that greater the values of the latter greater will the wage be. A level of experience exists beyond which an increase in experience does not increase wages.

- The migrant status of a laborer is dependent on his age and skill level. Older the laborer in the informal sector, the more he will experience the need to migrate in search of viable job opportunities.

- To move from least skilled to medium skill level, the laborer needs more experience while in going from low or medium skill to most skilled, the laborers needs skilling.

2. REVIEW OF LITERATURE:

2.1. Theoretical Literature:

The idea of this dissertation stemmed from a chapter in the book 23 Things they Don't Tell You About Capitalism by Ha Joon Chang. The chapter explains that the wage gaps between rich and poor countries are not due the differences in their marginal products but due to immigration control which makes labor in rich countries scarce and thus allows it to command a higher price.

Further with regard to efficiency wage theory, after Leibenstein, the following perspectives emerged. Akerlof (1982) developed a theory on more sociological grounds with efficiency wages being referred to as gift exchanges. Each worker thus rationalises efficiency wages as a premium that he might lose, were he to quit and find a job elsewhere. The idea of minimizing turnover also grows on this theory, saying that the worker's motivation to quit and look for another new job will be reduced in lieu of this premium. Probability of getting a new job will also be affected given the high costs of training new labour.

Shapiro and Stiglitz (1984) came up with the shirking efficiency wage model. Their model offers information asymmetry as the reason for employers choosing the efficiency wage level for labour contracts. In absence of complete information and lack of access to proper monitoring of the employee, employers imagine paying a premium will act as enough monetary motivation for workers to get them to work effectively. Their hypothesis has two kinds of workers:

- Productive workers: whose utility is positively linked to wages, negatively to effort put in to the work and to the likelihood of losing their jobs.

- Shirking workers: who put in less work effort while earning the same wage but who face a higher risk of job loss if their employer discovers the shirking and consequently the higher risk of unemployment which is associated with unemployment benefits which in turn are lower than the wage and thus lower utility levels.

What arises out of this setup is that wages are set at the level at which workers do not 'shirk'. Wages are higher when the effort being extracted from the workers is higher, higher the unemployment benefits and smaller the probability of firms discover shirking.

To quote Shapiro and Stiglitz in order to understand their premise:

"To induce its workers not to shirk, the firm attempts to pay more than the "going wage"; then, if a worker is caught shirking and is fired, he will pay a penalty."

Out of the various theories which set stage for the idea of efficiency wage, Shapiro and Stiglitz's work seems to be the most widely acknowledged and recognized. As Carlin and Soskice note in their book Macroeconomics: Institutions, Instability and the Financial System, the most literal example of the efficiency wage setting in the real world comes from Henry Ford. Raff and Summers documented that Henry Ford's introduction of a $5 per day wage for his production workers in 1914 led to a 240 per cent pay increase for workers at his plant. Worker turnover rate fell from 370 per cent in utility from 1913 to only 16 per cent in 1915 and absenteeism reduced from 10 per cent to 2.5 per cent in just one year. The authors concluded that in this case, wage increases "did yield substantial productivity benefits and profits."

2.2. Empirical Literature:

Correa (2007) Wage-Employment Dynamics in the Struggle against Stagnation utilizes a circuit approach to understand what contributes to stagnation. Relies on the premise of the big push kind of a theory that once an economy is out of the low equilibrium The paper then establishes the requisite conditions to move away or not step inside the stagnation space.

Barcellos (2010) in their paper The Dynamics of Immigration and Wages regress economic outcomes of natives, most commonly wages, in a given locality on the relative quantity of immigrants in that locality. The coefficient on the quantity of immigrants is then interpreted as the "impact" of immigration on native wages. The VAR analysis of a panel of US states shows that immigration does not have a significant effect on wages or internal migration. By contrast, wages do affect immigration: a 10 per cent increase in wages causes up to a 20 per cent increase in immigrant inflow. The effect is strongest for low-skill immigrants while it is small and insignificant for high-skill immigrants.

Meager, N., and Speckesser, S. (2011). Wages, productivity and employment: A review of theory and international data. Institute for Employment Studies comprises analyzing the relationship of wages, productivity and employment across short, medium and long run.

Ministry of Housing and Urban Poverty Alleviation. (2017) has a Report of the Working Group on Migration. Government of India utilizes Census and NSSO data to analyses various social dynamics of migration. The report "focused on actions that can be taken or facilitated by governments, whether at the Union, state or federal level to enhance free movement of citizens across India." It looks at migration across gender, education levels and other dimensions.

UNICEF and ICSSR. (2011). National Workshop on Internal Migration and Human Development in India Workshop Compendium: Workshop Papers consists of eight papers which focus on various aspects of migration in India ranging from social inclusion, healthcare, inclusion, gender issues, children migrants, unorganized sector labour migration, social security of these labourers.

Chapter 12, Economic Survey of India, Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017 is focused on migration and is titled "India on the Move and Churning: New Evidence." It uses new measures like Cohort based Migration Metric, railway data to evaluate the number of people who travel away from their area of residence for work on a daily basis. With

its rather unconventional measures, the chapter looks at migration differently and obtains less conservative estimates.

In a paper titled "Creative Practices and Policies for Better Inclusion of Migrant Workers: The Experience of Aajeevika Bureau" the implications of social security for migrant labour is explored under the ambit of enhanced financial inclusion. Under a special agency called Rajasthan Shram Sarathi Association, a Section 25 Company which has been promoted by the bureau, targeted financial services are offered to migrant workers who move from Southern Rajasthan. It has been instrumental in linking migrant workers to necessary financial instruments such as micro-credit, insurance and pension.

Micro-loans offered by RSSA help migrants prevent abrupt breaks in the migration cycle and informal savings instrument for women at the source helps them manage volatility in cash flows. It is a decentralized model that has the ability to cater to the various life-cycle needs of the clients. Under its financial inclusion programme, migrant workers are linked to bank accounts at both source and destination – the major objectives being promotion of savings and facilitating remittances. (Khandelwal, R., Sharma, A., and Varma, D., undated, p.10)

What also helps is that banks, at destination have started accepting the ID cards issued by the bureau.

This case study illustrates how social security under financial inclusion can help avert the negative consequences which come from short economic cycle of a migrant. Lack of volatility in cash flows will translate into less economic vulnerability and thus reduce the need to 're-migrate' in older age in the construction sector.

Srivastava and Sutradhar (2016) point out that the extant special acts such as Building and Other Construction Workers (Regulation and Employment) Act, 1996 (BOCW Act), as well as the Building and Other Construction Workers' Welfare Cess Act, 1996 have not been implemented properly. The purpose of these acts was to implement a cess on construction projects in order to help the construction workers.

Lack of awareness and knowledge among workers about these acts is also low (Srivastava and Sutradhar, 2016, p.30).

3. TREND ANALYSIS:

The sources of data for information on migration statistics in India are quite few. According to Government of India, Ministry of Housing and Urban Poverty Alleviation (2017) in the Working Group Report on Migration, there are four broad sources of data on migration. These are (a) numerous specific surveys conducted by researchers with varying methodologies and at different scales (b) the Census of India, conducted by the Registrar General of India (c) periodic surveys undertaken by the National Sample Survey Office and (d) administrative data at various levels, from local government to Union government, generated as part of administrative record-keeping.

One can sift through the varied sources which exist on a smaller scale and find that only the data from the Census and the National Sample Survey (NSS 64th round) in 2007-2008 is worth regarding as thorough and comprehensive on a national level. A possible reason could be the lack of a single definition to identify migrants. Both Census and National Sample Survey use different criteria despite both based on the change in place of residence, to define migrants.

Migrant definitions according to the Census are:

- Migrants by place of birth are those who are enumerated at a village/town at the time of census other than their place of birth.
- A person is considered as migrant by place of last residence, if the place in which he is enumerated during the census is other than his place of immediate last residence. By capturing the latest of the migrations in cases where persons have migrated more than once, this concept would give a better picture of current migration scenario.

The Census does not consider change in place of residence within a village/town nor temporary change in the place of residence due to religious visit,

official tour, sightseeing, medical treatment etc. as migration. (Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017, p.51).

According to the Census, 30 per cent of the total population in 2001 were migrants. Based on the NSS definition, 28 per cent of the total population in 2007-08 were classified as migrants. The NSS data shows that 28.3 per cent of the workforce in India are migrants. The Economic Survey (2016-207) states that as per Census data, the annual growth rate of labor migrants in 2001-2011, nearly doubled from 2.4 per cent in 1991-2001 to 4.5 per cent per annum. (Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017, p.265).

The Report of the Working Group on Migration by the Ministry of Housing and Urban Poverty Alleviation published in January 2017, recognizes that rural-urban migration has played a significant role in the urbanization process. Additionally, it also identifies areas of concern for the migrant workers as economic, social and political marginalization. This dissertation in its empirical analysis section, uses data and shows using empirical analysis to further establish these two specifics.

3.1.   National Sample Survey Data:

Data on migration was collected in the 38th, 43rd NSS rounds directly, while in the 55th it was integrated with the employment and unemployment survey. Further in the 49th round, it was integrated with a survey on housing conditions.

In both rural and urban areas, 99 per cent of the migrants were internal migrants. Nearly 91 per cent migrants in rural areas had migrated from other rural areas and 8 per cent had migrated from urban areas. In urban areas, 59 per cent of the migrants were from rural areas while 40 per cent were from urban areas. In urban migrants, nearly 75 per cent had migrated from within the state and 24 per cent had migrated from other states.

Figure 1.: Percentage of migrants in different categories from 38th to 64th round
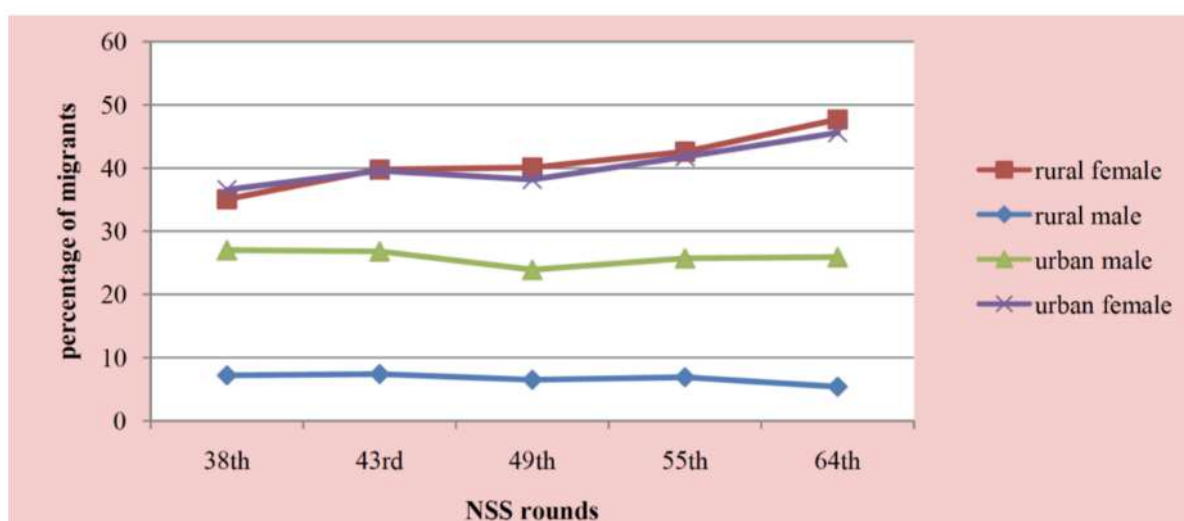

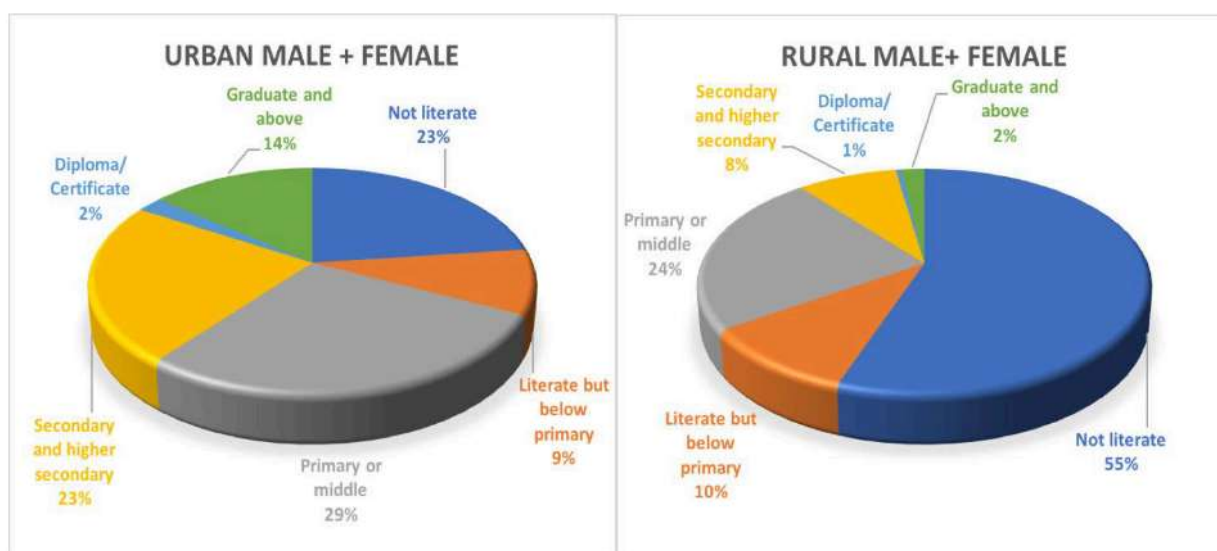*Image Source: NSS Report No. 533: Migration in India: July, 2007-June, 2008*

Overall, the migration rates in rural areas have increased from 21 per cent in 1983 to 26 per cent in 2007-2008; in urban areas the migration rates increased from 32 per cent in 1983 to 35 per cent in 2007-2008. From Figure 1 we can tell that the increase in the migration rates over the rounds has been primarily due to the marked increase in the migration rates for women both from rural and urban category. Male migration rates have dwindled. In the urban male category, migration rate has decreased by 1 percentage point from 27 per cent in 1983 to 26 per cent in the 64th round in 2007-2008. Rural male migration rate has decreased by 2 per cent from 7 per cent in 1983 to 5 per cent in the 2007-2008 round. The migration rates for females in rural areas has increased by 13 percentage points from 35 per cent in 1983 to 48 per cent in 2007-08. In urban areas, female migration rates have risen by 9 percentage points from 37 per cent in 1983 to 46 per cent in 2007-08.

On lines of social group demarcations, during 2007-08 the migration rate in the rural areas was the lowest among the scheduled tribe (ST), nearly 24 per cent, and it was the highest among those classified in the social group as 'others', nearly 28 per cent. On grounds of different levels of general education, migration rate for males in both rural and urban areas, generally, had shown an increasing trend with the increase in the educational level of the persons. It may be seen that for rural males, migration rate was lowest (nearly 4 per cent) among the 'not literates', nearly 22 per cent among those with level of education 'diploma/certificate' and it was nearly 14 per cent

among those with educational level 'graduate and above'. For urban males also, the pattern of migration rate was similar to the rural males: it was lowest for among the not literates (17 per cent), which increased to 43 per cent and 38 per cent for those with educational level 'diploma/certificate' and 'graduate or above' level, respectively. For females, in both rural and urban areas, on the other hand, migration rate was lowest among those with level of education 'literate and up to middle': 37 per cent among rural females and 40 per cent among urban females in this level of education. The female migration rates for the 'not literates' in rural and urban areas were significantly higher: 56 per cent in the rural and 47 per cent in the urban areas.

Migration rates for females in both rural and urban areas were significantly high among those with education level 'graduate and above' – 63 per cent among rural females and 56 per cent among urban females. Among those with education level 'diploma/certificate', migration rate was 61 per cent for rural females and 56 per cent for urban females.

Figure 2 and 3: Education category wise division across rural and urban categories

Data Source: NSS Report No. 533: Migration in India: July, 2007-June, 2008

From the above figures, one can ascertain the percentage wise distribution of migrants' education level wise. In rural area migrants, the largest proportion, nearly 55 per cent were 'not literates' while amongst urban area migrants, only 23 per cent were under the 'not literates' category. If we were to further divide on grounds of

gender, male migrants in both urban and rural areas had achieved higher educational level than their female counterparts; 14 per cent under the 'graduate and above' category for males of the combined category and 4 per cent for females of rural and urban areas. In rural areas, the proportion of migrants with educational level 'secondary and above' was nearly 28 per cent among male and nearly 9 per cent among females, while among the urban males and females, nearly 49 per cent and 33 per cent, respectively, had educational level 'secondary and above'. It may be seen that nearly 19 per cent of the urban male migrants and 11 per cent of the urban female migrants had the educational level graduate and above. Urban category records 14 per cent as 'graduate and above' and in the rural category, 2 per cent fit in the 'graduate and above' bracket.

Further, the data from the 64th round provides us with more specifics about migrants across urban and rural categories on grounds of their reasons for migration. As was pointed out earlier in presenting the general trend, there has been an overall increase in the migration percentages primarily due to the spike in women migrants in both urban and rural areas. The bulk of female migration across both categories comes from marriage leading women to move. The report classifies reasons such as:

- Employment related reasons (in search of employment, in search of better opportunities, transfer, proximity to place of work, to take up employment/better employment)
- Forced migration (natural disaster, social/political problem, displacement by development projects)
- Migration for studies
- Other reasons such as acquisition of own house/flat, housing problems, health care, post retirement, marriage, migration of parent/earning members of the family others

In urban areas, female migration due to marriage was around 61 per cent that the reasons for migration for males and females showed distinct pattern. For 91 per cent of rural female migrants the reason was marriage. Migration of parent/earning member of the family, was the next major reason for migration after marriage for

urban females, accounting for nearly 29 per cent of total urban female migrants. Although at a cursory glance it might seem like women move primarily for marriage, a more comprehensive analysis reveals a more progressive picture.

Figure 4.: Percentage-wise Distribution of Migrants of Urban Category
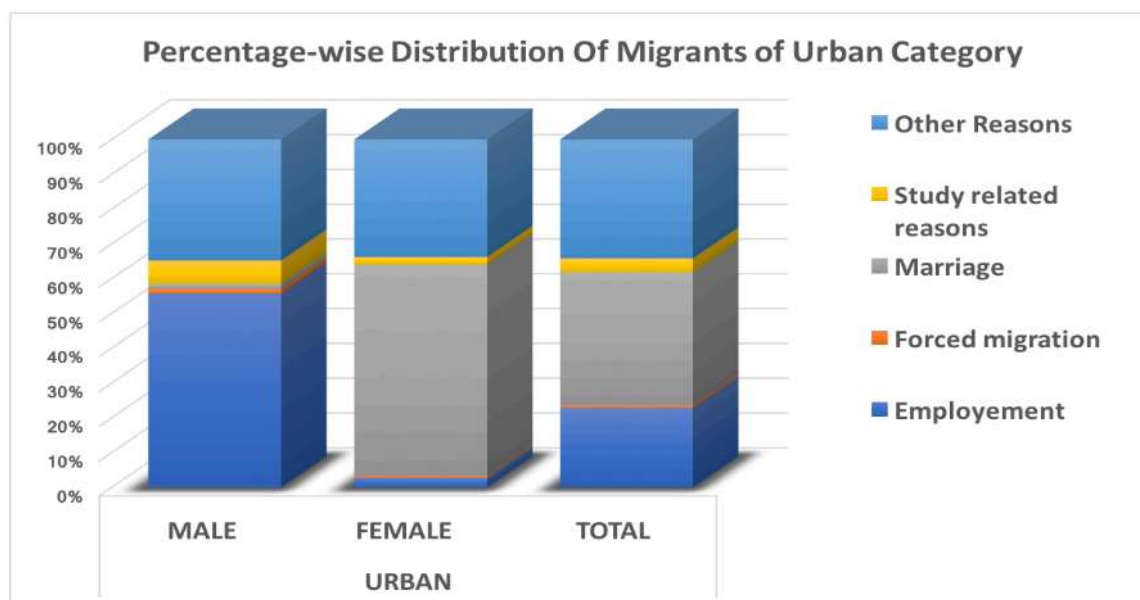
Data Source NSS Report No. 533: Migration in India: July, 2007-June, 2008

Despite 154 million out of 221 million female migrants having reported marriage as their reason for migration, in rural areas 31 per cent of those migrants are working, while in urban areas 13.3 per cent are working. The Report of the Working Group of Migration (2017) mentions that:

women who moved for marriage constitute a large share of the female workforce, an overwhelming 62.5 per cent in rural areas and 31.2 per cent, even in urban areas. Thus, the bottom line: women who move for marriage are a majority (57.4 per cent) of the female workforce in India. (Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017, p.6).

Reasons for male migration on the other hand, across urban and rural categories both were primarily motivated by employment related reasons. Nearly 29 per cent of rural male migrants and 56 per cent of urban male migrants had migrated due to employment related reasons. As was with female migrants, the migration of parent/earning member of the family also significantly induced male migration in both the rural and urban areas: nearly 22 per cent of rural male migrants and 25 per

cent of urban male migrants. Study as a reason for migration was more significant a reason for male migration than female migration– accounted for nearly 11 per cent of rural male migrants and 7 per cent of urban male migrants.

The NSSO data also maps how there is a change in people's occupation from before and after migration for both males and females. From this round's data, it is seen that in both the rural and urban areas and for both the males and females, after migration, the share of persons who were not in labour force has declined. With regards to workers engaged in economic activity, the percentage of male persons associated with this dimension were found to be higher, post-migration. In rural areas, for males the percentage of workers increased from 51 per cent before migration to 63 per cent after migration and from 46 per cent to 70 per cent in urban areas. On the other hand, for female migrants the percentage has increased from 20 per cent to 33 per cent in rural areas and from 8 per cent to 14 per cent in urban areas.

This data is also necessary considering how it helps modulate the kind of changes that the structure of the workforce (with regards to different employment statuses such as self-employed, regular employees and casual labour) has undergone after migration.

Figure 5.: Percentage-wise Distribution of Migrants of Rural Category
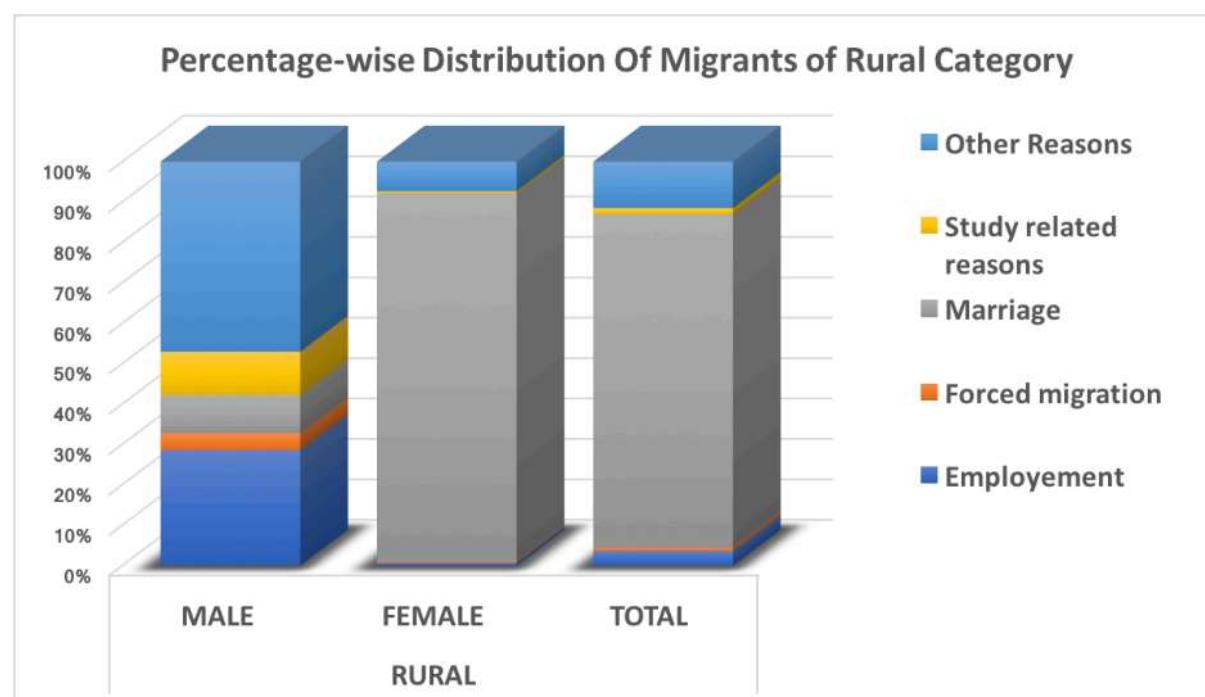
Data Source: NSS Report No. 533: Migration in India: July, 2007-June, 2008

It is seen that for rural males, after migration, self-employment emerged as the employment status that accounted for nearly 27 per cent of migrants while the shares of regular employees and casual labours remained almost stable. In case of urban males, there is a marked increase in the share of self-employment after migration (from 17 to 22 per cent) and also in the share of regular wage/salaried employees (from 18 to 39 per cent). On the other hand, casual labour has gone down post migration. For females in rural areas, self-employment went up from 9 to 17 per cent and from 10 per cent to 14 per cent in casual labour. In the urban areas for females, the share of self-employment has increased from 3 per cent to 5 per cent, for regular employees the increase was from 2 per cent to 6 per cent and for casual labour it remained static at 3 per cent.

3.2.   Census Data:

As per the Census 2011, there were 454 million migrants in India. This has been a doubling of numbers from 1991 to 2011. Census 2011 figures marked an increase of 139 million from 315 million in Census 2001 and 220 million from 1991.

From the provisional D-5 table of Census 2011, a comparative analysis as against 2001 data tells us that work and business as reasons of migration have registered a decrease from 16 per cent in 2001 to 13.1 per cent in 2011. Migrants due to marriage and other family related reasons have increased from 72.2 per cent (during 1991 to 2001) to 74.7 per cent (during 2001 to 2011). The D-1, D-2, D-3 tables of Census 2001, shed light on how predominantly does pull migration in this country, factor for rural-urban migration. Employment opportunities and education opportunities continue to make urbanized areas more appealing.

Pull migration refers to the movement of people seeking opportunity. The reason this is significant is because it not only is pivotal to the growth process but also because it enhances incomes and productivities. Another important aspect of households that have a migrant in the city is that it helps with risk spreading for the family income and diversify its sources of earning. This makes families in rural areas stronger in the face of shocks related to the agricultural income sectors. There is also push migration which involves migration due to lack of opportunities in the area of

origin for the migrant. The report identifies the role of employment guarantee schemes such as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), rural housing schemes such as Prime Minister 's Awas Yojana-Rural (PMAY-Rural) in countering pressures for push migration (Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017, p.8).

The Government of India, Ministry of Housing and Urban Poverty Alleviation (2017) in the Working Group Report on migration talks about a "movement away from the circular pattern" which seems very characteristic of Indian migration. Circular pattern here refers to individuals who migrate from place to place for temporary periods. It is evident from the increase in female migration from rural to urban areas (from 49.9 per cent in 2001 to 53.2 per cent in 2011) that migrants who had moved earlier, have now settled into their places of enumeration and are now brining their families too. The growing share of family migrants might also be validating these figures. Nonetheless, since the Census does not capture short term flows and if work related migration might be becoming short term in nature (considering how city centres and urban areas are becoming more and more accessible as the country develops) then it might be the nature of migration that is changing (p.4).

As mentioned before, the share of people migrating for business and work has reduced but if one were to consider the migrants as a share of rural and urban workforce, the inferences drawn would actually be different— work related migration could be said to have increased and not decreased. Inter-censal male migrant share as a share of the male workforce in the initial year of the inter-censal period reveals that in 2001, 3.4 per cent of the base year (1991) rural workforce migrated during 1991-2001. In 2011, this share was 4.1 per cent (base year being 2001). For the urban male work-related migrant, it had increased from 5.1 per cent to 6.8 per cent of the base year workforce. (Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017, p.4)

Figure 6: Migrants by Area of Origin and Destination

53.35 M
Rural to Rural

20.6 M
Rural to Urban

14.39 M
Urban to Urban areas

6.27 M
Urban to Rural
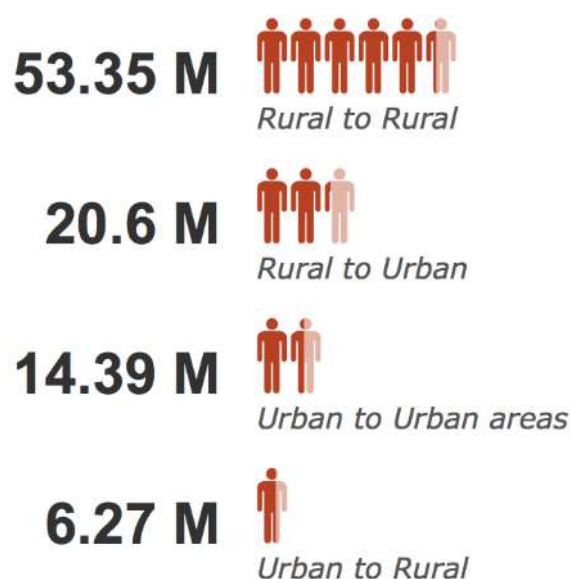
Data Source: Statement 8, Data Highlights – Table D1, D2 and D3 Census of India 2001

If we were to make an assessment of female migrants as a constituent of the workforce, we could see that there has been an increase between 2001 and 2011. In addition, women who move for marriage can also work after moving. The Report states that "…in rural areas 76.4 million working female migrants (from the D-8 table) constituted 69 per cent of the 111 million female work force in 2001 (from the B-4 table). In urban areas, the 8 million working female migrants were 50 per cent of the 16.1 million female work force."

The movement of skilled workers is also touched upon by the report by Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017. Skilled workers might move away from the area where they received their skill training, the movement of skilled workers can also be motivated by the facility of amenities such as good housing among others (p.8).

As per NSS 20011-12, there are 50 million building and other construction workers. In terms of short term and vulnerable migrants, construction work constitutes a major area of work.

De Haan and Dubey (2006) estimated the Gini coefficient among migrants and non-migrants registered in the 1999-2000 NSS. This indicates that inequality is higher among migrants than among non-migrants.

Table 1: Inequality Among Migrants and Non-Migrants

Inequality among migrants and non-migrants (Gini coeffect)			
1999-2000			
	Rural	Urban	Total
Migrants	0.273	0.335	0.333
Non-migrants	0.248	0.325	0.295

Data Source: De Haan and Dubey 2006, special tabulation using unit record data on employment and unemployment collected by the National Sample Survey Organization during 1987-88 (43rd round) and 1999-2000 (55thround).

De Haan (2011) found that NSSO data confirms the hypothesis postulated by Lipton (1982)—that migration only worsens inequalities because the ones who are already better off have better access to investment in migration opportunities are the ones who are likely to have higher returns than the ones who do not. To validate this there is the data on remittances, the average amount of remittances varies significantly across income groups: remittances for rural households in the lowest income decile were on average Rs. 9,300 (Rs. 14,600 for urban), while for the highest income group it was Rs. 40,300 (Rs. 85,000 for urban; NSS 2010: 109-10). International migration has the highest remittances returns but concurrently requires high investment too. The conclusion the paper draws is that "clearly migration on average reinforces 'initial inequalities'" (De Haan, 2011, p.18).

De Haan and Rogaly (2002) further point out that development of areas of origin need not reduce push migration. Evidently, "development and out-migration can be simultaneous processes". Their thought is backed by the idea that richer people in a rural area have the luxury to afford to be "pulled by" better prospects in the city while the people at the poorer end of the spectrum, are "pushed to" migrate.

Corroborating these claims, the report states:

...migrants are a little more represented in primary sectors and a little less in manufacturing. For males, while there is an expected large difference in rural areas with non-migrants being much more engaged in primary activities, the difference in urban areas is not very extreme. Migrants are more represented in manufacturing and modern services, and a little less represented in traditional services, but it would be difficult to argue from these aggregate patterns that there is a systematic exclusion of migrants from urban labour markets. This does not mean that there are no attempts to do so, as discussed later – just that those attempts have not succeeded in a discernible manner. We should continue to ensure that the labour market does not discriminate against migrants in any manner (Government of India, Ministry of Housing and Urban Poverty Alleviation, 2017, p.9).

3.3. Economic Survey 2016-2017:

The Economic Survey 2016-2017 utilizes extant data (Census data) in more sophisticated and new measure such as Cohort based Migration Metric. This measure measures net migration at the state and district level. This metric calculates net migration to be the "percentage change in population between the 10-19-year-old cohort in an initial census period and the 20-29-year-old cohort in the same area a decade later, after correcting for mortality. It is likely to capture labour migration, as other bilateral movements for reasons such as marriage are netted out in the equation" (Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017, p.267).

The data on CMM across states shows that internal migration has dipped sharply in Maharashtra and also reduced in Delhi. On the other hand, Tamil Nadu and Kerala have shown surges in in-migration. The following figure shows a positive relationship between CMM and state level per capita incomes which translate into more developed a state, more the net in-migration while less developed a state, more the out-migration. According to the Census 2001, 20-29 year olds formed one fifth of all migrants and of all migrants moving for economic reasons. If we were to scale the

CMM by a factor of 5, then the number of out-of-state net migrants would be 55 million between 2001 and 2011.
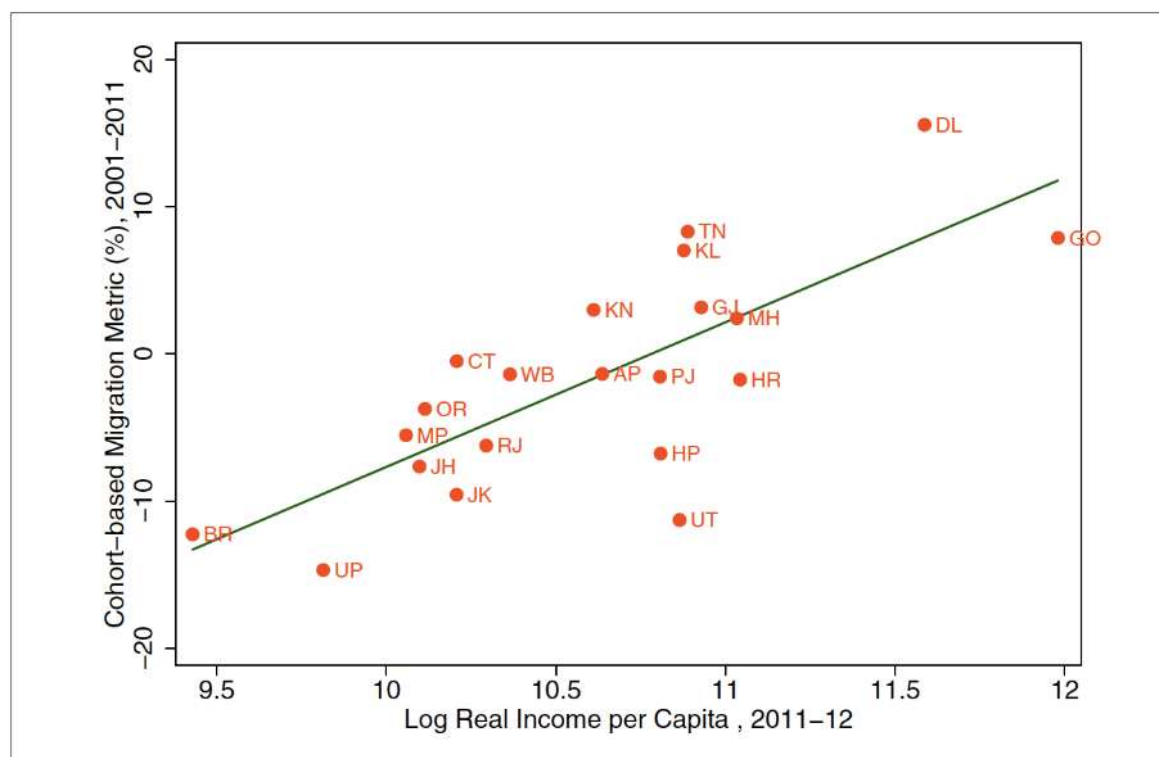
Figure 7.: CMM vs Real Incomes across States

Image Source: Chapter 12, Economic Survey of India, Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017

CMM also looks at the marked shift in female migration post 2000s. This observation is consistent with the findings from the Census and the NSSO data.

The Survey has also utilized railway data to get a less conservative estimate of migration than the Census data. By utilizing data on net annual flows of unreserved passenger travel, a proxy for work related migrant flow emerges. The Survey identifies that this mode of transport serves people who are more likely to travel for work related reasons and thus captures best short term migrant traffic. Net flows by this calculation, peaked in 2013-2014, averaging at the All-India level of 9 million.
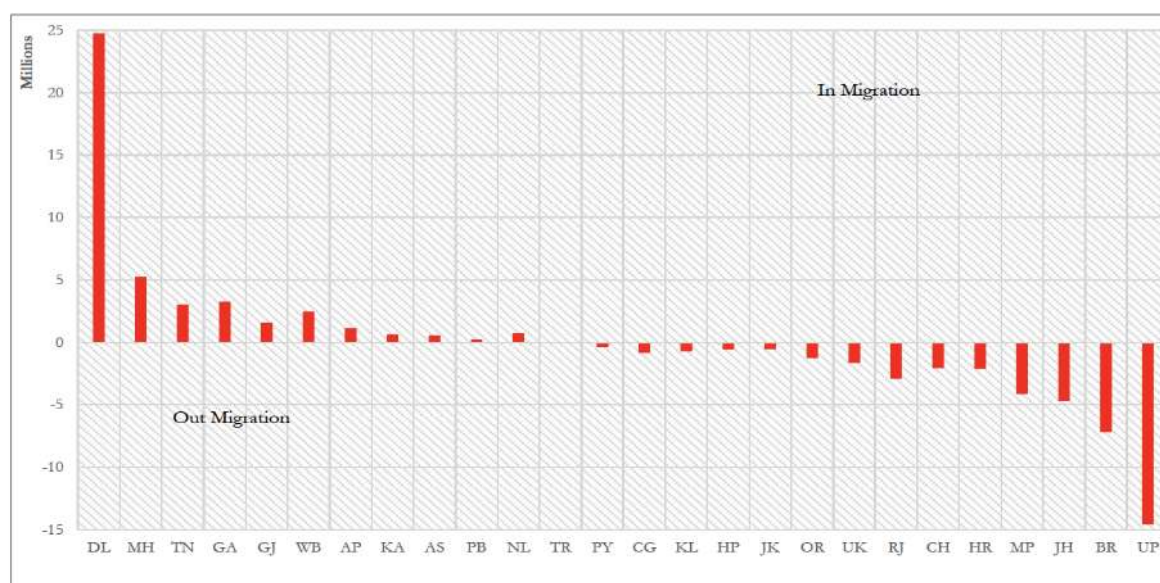
Figure 8: Average Net Flows at State Level

Image Source: Chapter 12, Economic Survey of India, Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017

In the above figure, net flows of migration are shown for 26 states. Delhi has accounted for most of the in migration for 2015-2016, while Uttar Pradesh accounts for most out migration.

Both the railway data and the CMM give estimates of migration which are considerably greater than the average 3.3 million suggested by Censuses and are also higher than figures estimated by any study (Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017, p.265)

A gravity[2] mode of trade and migration is utilized by the survey to check what really drives migration. In brief, it is found that distance has a strong negative effect on labour laws. There is a border effect where estimates have found that flows within states are four times the flows across states. Language does not seem to be a barrier to migration flows, *i.e.* language does not seem to be an impediment for both trade and labour flows.

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[2] "Gravity model is an empirical observation which finds that the migrant/passenger flows between two geographies is directly proportional to the level of economic activity/population of these two geographies and inversely proportional to some measure of physical distance between the two geographies. Geographers were pioneers in using the gravity models for studying the migration and mobility patterns." *Chapter 12, Economic Survey of India, Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017, p. 275.*

Additionally, the following heat map shows a state wise distribution of passenger flows for 2015-2016. The reds show higher inflows while the blues show outflow.

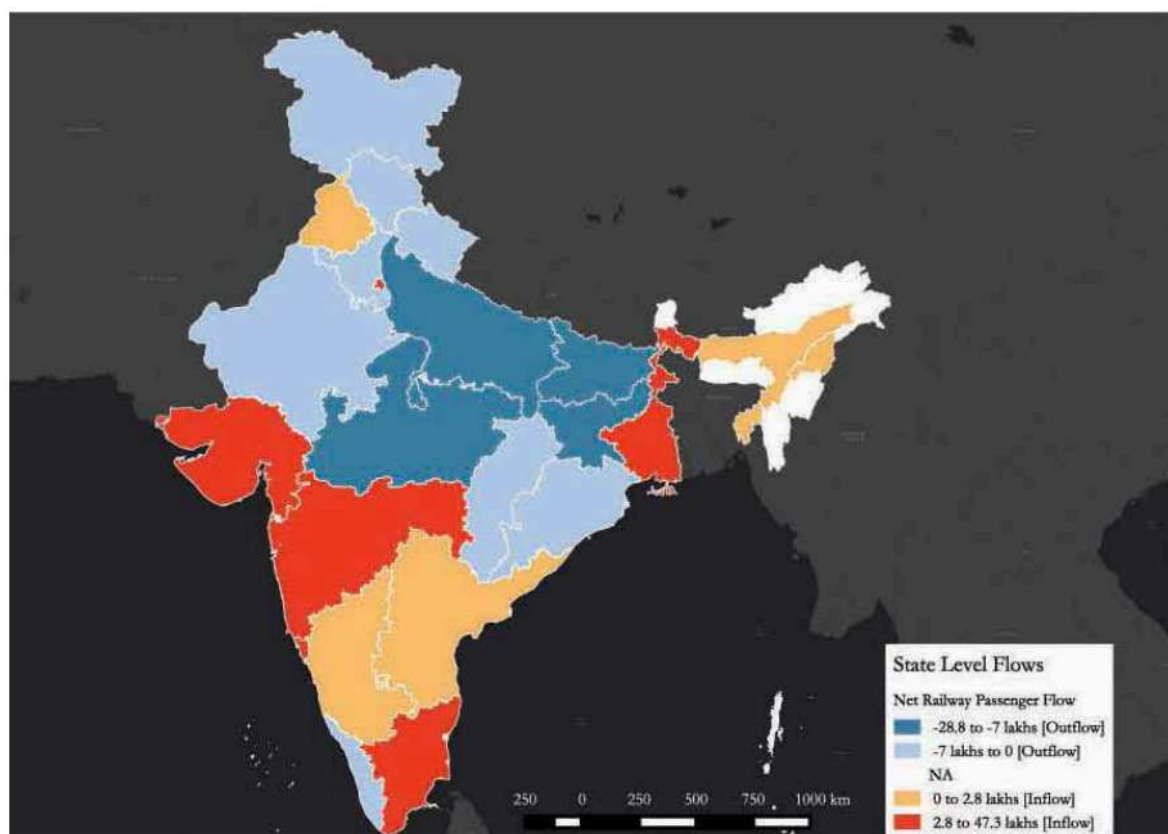Figure 9.: State-wise Heat Map for Passenger Flows in 2015-16

Image Source: Chapter 12, Economic Survey of India, Government of India Ministry of Finance Department of Economic Affairs Economic Division, 2017

4. EMPIRICAL ANALYSIS:

Wage and employment data was collected across three sites in India, using a survey form which is appended in the end of the paper. The survey collected data on wage, age, migrant status, skill level, previous level of wage and employment, literacy, category of worker and social category among others. The data has been collected at three construction sites, which are involved in either residential construction or industrial construction. The sample consists of 303 workers. The total categories of labor were subsumed into 17 categories, ultimately (attached in the appendix)

The data was collected by means of in-person interviews using a questionnaire. The framing of the questionnaire was the way it was done in order to bring out certain characteristics of the workforce. By means of migrant status, what was sought to bring out was the heavily migrant dominated nature of this workforce. Years of experience helps modulate the role that years on the job plays in the construction sector where a huge proportion of work is done by learning on the job. Skill training and literacy are in relation to efficiency wages and to see is the effort and investment taken in skill training rewarded by any kind of wage increment. To map the effect that information networks have on a migrant's decision making process, it also found out how did the laborer find out about the job. The idea thus far was to bring out characteristics which the Census and NSSO data had given us an idea about. By trying to ascertain how wages work in this rather informal sector, the notion was to find how can a migrant or an unskilled informal sector worker can advance to higher wage levels and improve their standard of living. Migrants respond to certain pressures in their areas of origin and how their personal attributes interact with the work opportunities that are present in the area of origin. If these opportunities do not align well with the laborer's characteristics such as years of experience, skill set and level of education, it translates into no job opportunities for the laborer in their area of origin forcing migration. In a sector such as construction, often workers might find themselves rendered redundant after a certain age because they lack the nimbleness necessary and consequently find the motivation to migrate. As recognized by the Census and NSSO these push and pull factors amalgamate to cause certain people to migrate and others to stay put.

4.1. Wage Equation:

The first model that this paper runs on the data collected, is a wage equation where the dependent variable log of daily wages (obtained by averaging the monthly wage) is regressed on age of the worker, the years of experience that the worker has, square of the experience term, the migrant or non-migrant status of the laborer, his skill level, his educational level in terms of literacy or illiteracy and finally the role the laborer's social category plays.

$$log(DailyWage) =$$
$$f(Age, Migrant, Experinece, Experinece\ (squared), Skill, Education,$$
$$SocialCategory)$$

Table 2: Wage Equation Variables

Variable	Coefficient	p values
Intercept	5.6410976	<2E-16
Age	0.0026418	0.46562
Migrant	0.0703589	0.0993
Experience	0.0309301	0.00168
Experience (squared)	-0.00052	0.06162
Skill	0.1439484	7.15E-05
Education	0.0915897	0.01918
General	0.0687019	0.68684
SC	0.1246978	0.45659
ST	0.1065291	0.53565
OBC	0.1776065	0.29523
Others	0.1651486	0.32551

This is modelled using the Mincerian equation which as mentioned earlier, utilizes the quadratic form of experience.

The extremely high intercept value reinstates that despite a lack of skill, migrant status, at any level of literacy, with any number of years of experience, and belonging to any age group or social category whatsoever will imply some wage level. Essentially, neutral to all attributes of a laborer, he will still earn a certain amount of wage. The migrant coefficient is significant at a 90 per cent level.

The years of experience coefficient is highly significant. For a 1 per cent change in the level of experience, in this case a possible one-unit increase in years of experience causes a 3 per cent/ 3-unit increase in the wage.

The change in the sign of the coefficient of the squared experience term fulfils the rationale behind the Mincerian equation. There exists a peak level of experience till which as experience increases, wage increases. Beyond a certain point of inflexion, an increase in experience reduces the wages.

Additionally, the skill coefficient is also very significant, possibly more than the experience coefficient with the p value extremely small. Correspondingly, a 1 per cent or 1 unit change in skill level, will cause an increase in the wage almost tantamount to 15 per cent. This is highly consistent with the age old trite which advocates the case for skill development. Higher the skill level, greater the wage level of the worker. Studies show that unskilled migrant workers are not only paid lesser but are also more vulnerable to being replaced than their skilled counterparts (Khandelwal, R., Sharma, A., and Varma, D., undated, p.3). This is thus consistent with the idea of a laborer earning lesser wage, lower their skill level. More so for a migrant worker.

The coefficient of level of education is significant only at a 95 per cent level and tells us that a one per cent increase in education, hikes up the wage by eight per cent. Deshingkar and Sandi (undated) identify that migration is indeed affected by differential returns to skills and education at the source area of the migrant. They also mention that success of migrants gets heavily influenced by their level of education. Coefficients for social category, age and migrant status are insignificant and do not reveal having any noteworthy impact on wages.

The wage equation thus draws on the idea that years of experience, skill and level of education, affecting the wage of a labourer in an informal sector such as construction.

4.2.   Migration Equation:

Next, a model was created to evaluate the parameters that lead to migration. The model regresses migrant status (which is coded as 1 for migrant and 0 for local) on the logarithm of daily wages, age, skilled or unskilled and years of experience. The premise of this model was to assess the motivations behind migration and whether the

afore mentioned factors have any role to play in a prospective migrant's decision making or not. Further, these also give us an insight into the specific push and pull factors which possibly affect their choice to migrate. Coefficients for wage and skill are found to be not significant and thus indicate indiscernible relationship between migration and wage or with skill. The paper proceeds by using a generalized linear regression model.
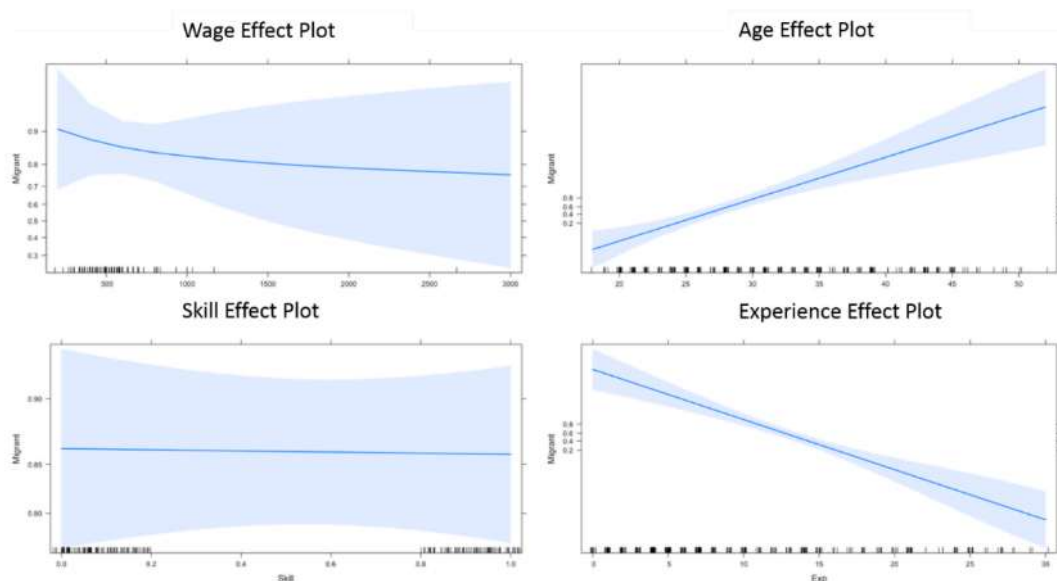
$$Migrant = f(log(dailywage), Age, Skill, Experience)$$

Table 3: Migration Equation Variables

| Variable	Coefficient	p values
Intercept	-4.65622	0.256
log(Daily Wage)	-0.41376	0.542
Age	0.46315	5.74E-0.7
Skill	-0.04101	0.924
Experience	-0.53077	7.59E-10

The coefficient for age is positive and highly significant, which implies that older the worker the greater the chance of them migrating. This may seem fairly conflicting given the Todaro model of migration which insinuates that younger the migrant the greater his incentive to migrate. The probable reason this exception to the rule arises is that construction sector works a tad differently. The older the worker, the more vulnerable he is because his age will make him less nimble and thus reduce the demand for him. So, an older worker will be less demanded in the informal sector and as a result might have to migrate in search of better opportunities, creating a push factor. The pull factor for this older worker might emanate from higher share of opportunities cropping up in the area of destination.

Figure 10 : Plot of Effects Daily Wage, Age Experience and Skill have on Migrant status

Source: Own Calculations, clockwise log of Daily wage, Age, Experience and Skill

Figure 11 : Economic Life Cycle of a Migrant Laborer
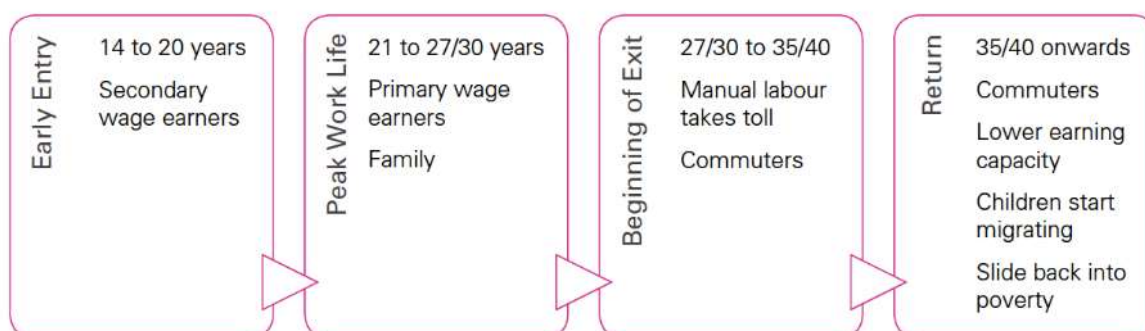
Source: The Experience of Aajeevika Bureau Rajiv Khandelwal, Amrita Sharma, Divya Varma (undated)

Khandelwal, Sharma and Verma (undated) have established that a migrant worker has a short life cycle, except their work also recognizes that at the end of a migrant worker's economic cycle, his children might begin migrating and he might migrate back home.

In the face of this section of the argument, the unskilled worker might need to migrate more towards his 40s, till his children start migrating. Sliding back into

poverty might then again lead this worker to migrate in order to seek out odd jobs which could grant him certain amount of self-sufficiency in the face of children who will have migrated. This also recognizes that hard manual labor takes a toll on the health of the workers, which further affects the long term earning potential of these workers.

Here we can reemphasize on the importance of skill development and education in national development policies. Higher education would mean higher wages for the migrant to send back home and could positively contribute to the level of education of the migrant family's members at the source area too. This gets validated by Mueller and Sharif (2009) who found a high correlation between remittances received by internal migrants and the schooling attendance of teens in their family. This draws some serious implications with regards to how a migrant from a low socio-economic stratum needs skill development to not only enhance his earning potential but to also enhance learning outcomes of his consequent generation, thereby breaking away from the vicious circle of poverty paradigm. An older migrant then, would possibly have lesser reasons for seeking work at an older age when his children with a higher earning potential could work in better places and act as a social security blanket for the parents.

On excluding the outlier observations of migrants beyond the age group of 45, the results change slightly.

Table 4: Migration Equation Variables

Variable	Coefficient	p values
Intercept	-6.3227	0.143
log(Daily Wage)	-0.6795	0.332
Age	0.6423	1.29E-0.7
Skill	0.0338	0.944
Experience	-0.7168	3.20E-10

The age coefficient is now significant and positive which endorses the Harris Todaro model of migration where younger the person, the greater the incentive to migrate. The younger individual, visualizes himself getting access to more and better opportunities over a longer time horizon than an older migrant. Additionally, due to the idea that his youth lies before him, even the prospect of initial joblessness does not deter him because he is well aware that there is scope for him to develop a social network over time which will give him access to jobs eventually.

In both the cases where outliers are included and even where they are not, the coefficient for experience is highly negative. As was established under the wage equation, higher the years of experience, greater the wage and consequently lesser the incentive to migrate. Construction is a 'learn as you go' sector where most workers rise through the ranks by learning on the job. What is of primal value from this relationship is that a high wage can be due to skill training, years of experience or education, which in turn could deter migration. This could have grave implications for tackling rural-urban migration. A skill development program that can replicate the effect that years of experience have for a worker, would lead to higher wages which would then dampen the incentive for said worker to seek opportunities to work elsewhere.

4.3. Odds Ratio:

Using the odds ratio helps us interpret how the probability of migration gets affected by these attributes. For a unit increase in the age, odds of being a migrant versus the odds of not being a migrant worker increase by a factor of 1.6. This corroborates the previous idea about the economic cycle of a migrant. The other significant factor is experience, where the probability of being a migrant versus the probability of not being a migrant, due to a one unit change in experience increases by a factor of 0.5.

Table 5: Odds Ratio Values

Variable	Odds Ratio	p values
Log (Daily Wage)	0.661160	0.5418
Age	1.589067	5.738E-0.7
Skill	0.959817	0.9242
Experience	0.588154	7.590E-10

4.4. Movement from least-skilled to most-skilled:

Now using a multinomial logistical regression model, this paper tries to model the movement of a laborer across the different skill levels.

$$SkillLevel(referencelevel) = f(Skill, Experience)$$

For this, we group the laborers into 3 categories of least skilled, medium skill and most skilled denoted by 1, 2 and 3 respectively. Groups are made on the following lines:

Table 6: Division across skill levels

Least Skilled: 1	Medium Skilled: 2	Most Skilled: 3
Khalasi/ Helper	Grinder	Fitter
	Rigger	Supervisor
	Fabricator	Site In charge
	Carpenter	Welder
	Mason	Operator
	Bar Bender	Quality Control
	Office Staff	Engineer
	Electrician	
	Plumber	

When modelling movement from least skilled to medium skilled, that is with 1 as a baseline, the experience coefficient turns out to be most significant. This implies that for a least skilled worker to move to a medium skill level, an increase in experience by 8 per cent will move the laborer from least to medium skill level. Experience will be relevant since most workers in type 2, have learned on the job and not through official skilling programs.

Table 7: Least to Medium Skilled

	Intercept	Skill	Experience
Coefficient	-1.4529663	0.2798975	0.8000944
p values	0.0000000	0.4639942	0.0010358

Further in evaluating the significant factors for moving from medium skilled to most skilled, we find that the significant factor is skill.

Table 8: Least to Most Skilled

	Intercept	Skill	Experience
Coefficient	-0.9797557	2.2888546	-0.0549685
p values	0.0001731	0.0000000	0.0197579

Thus for moving into the category of highly skilled workers, skilling is what is pertinent. For a least skilled worker to move to a most skill level, an increase in skill by a factor of 2.2 will move the laborer from least to highest skill level.

The baseline is then changed by eliminating the least skilled group and now the model is re-leveled with medium skilled group corresponding to 1 while 2 corresponds to most skilled now.

Table 9: Medium to Most Skilled

	Intercept	Skill	Experience
Coefficient	0.4731906	2.00888960	-0.1350575
p values	0.0001731	0.0000000	0.0197579

In concordance with what the previous results, the skill coefficient turns out to be significant, indicating that a medium skilled worker will move to most skilled level by an increase in skill by a factor of 2.

These factors just reinstate the importance of a skilling program. A skilling program would improve a laborer's prospects by moving him to a higher skill level. But for the same, a worker would need experience to move from least skilled to the most skilled level. Greater experience and skill collates with higher wage and lesser incentive to migrate. Skill development in tandem with social security for migrant workers could translate into lesser need for the worker to migrate back by ensuring their financial security.

Due to employers' hesitation in employing unionized workers, most workers refrain from joining associations or unions. As a result, they are unable to have appreciable bargaining power over wage or their contracts out of fear of losing out on employment opportunities against a preferred non-unionized worker. Through the primary data collected for this paper, no worker was found to belong to a union, reinstating this belief system that employers have which influences employer choice.

5. CONCLUSION:

In conclusion, wage employment dynamics as illustrated by the primary data collected reflect the importance of experience, skill and education. Further analyzing migrant labour is imperative because of the high incidence of migrant workers in the unorganized labourer sector which has been the focus of the data collected. In light of the same, it is observed that migrant labourers have a short economic life cycle and greater experience means lesser incentive to migrate. The peculiarity of the

construction sector is the reason for this short economic life cycle where an older worker is less nimble and will find lesser opportunities, which will then push him in to poverty and cause him to migrate for work again.

Due to the importance of experience and skill for a worker to move from being least skilled to most skilled, we can draw up many policy implications. First, greater skill would translate into a higher wage, skill training could thus be a pertinent cog in the gear helping labourers improve their standard of living. Second, the previous idea would mean that if a labourer were a migrant and received skill training he could possibly circumvent the short economic life cycle phenomena and move away from poverty as he turns older. Third, social security programs will help migrant labourers save, get access to financial services, pension and protect them from becoming economically vulnerable as they turn older. Fourth, this will consequently have implications on rural urban migration since it will help dampen the same among older workers. Policies that wish to affect migration levels, could seek to well utilize the above inferences and manage dual objectives of urban poverty and the negative outcomes of rising rural-urban migration. This is not to say that migration is inherently a flaw in the economy but to reduce the vulnerability of an older worker, who could benefit from social security schemes that could be directed in a way which would enable him to seek employment in a less harsh and strenuous sector which would not involve migration and could possibly even lead to self-employment. This inverted way of looking at people's earning potential, could even improve rural standards of living over the long run. Schemes for rural development despite their inadequacies have shown that self-employment brings up rural income levels.[3]

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[3] Consider schemes for rural self-employment such as Integrated Rural Development Program (IRDP) and Swarna Grameen Rozgar Yojna (SGRY). Roy (2014) cites a survey conducted by the National Bank for Agriculture and Rural Development (NABARD) in 1984 as an indicator of the performance of the IRDP. The survey shows that 47 per cent of households in the sample of beneficiaries had been able to increase their family income. Another study was conducted by the Institute of Rural Management in two blocks of Sabarkantha District of Gujrat. Here, it was found that with the average investment of Rs. 2,337 per beneficiary family, nearly 40 per cent of the beneficiaries were assisted with milk animals and they also crossed the poverty line.
Kenchanagoudra (2007) quotes Quick Evaluation of Beneficiary Oriented (SC/ST) Programme of SGRY (2005), which revealed that, 30.30 per cent beneficiaries who acquired various sustainable income generating assets e.g. sewing machines, rickshaw vans, cattle etc., confirmed of increase in their income. Nearly nineteen per cent beneficiaries of the total who were sanctioned for open irrigation wells, bore wells for irrigation could increase their income as an outcome of the asset.

Wage employment dynamics cannot be viewed in isolation when framing economic policy. The complex overlap between migration policy, rural development policies and labour regulatory laws, suggest that it is naïve to look at policies affecting either section in isolation. Any policy solution emanating from analysis bereft of incorporating this fluid interaction is essentially unworkable.

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APPENDIX:

7.1 Labor Categories

a) Khalasi/ Helper

b) Mason

c) Carpenter

d) Supervisor

e) Rigger

f) Welder

g) Bar bender

h) Quality Control

i) Fitter

j) Grinder

k) Operator

l) Site in charge

m) Office Staff

n) Engineer

o) Fabricator

p) Plumber

q) Electrician

7.2 Survey Form

Labour identity ->		
Age		
Gender		
Average monthly wage		
Migrant (from outside the local area) or local (1= Migrant, 0 = Local)		
Years of experience		
Any kind of skill training (1= Yes, 0 = No)		
Level of Education (1 = Literate, 0 = Iliterate)		
Belong to a trade union or not (1= Yes, 0 = No)		
General/SC/ST/OBC/ Others		
How did you find out abou this job		
What is the nature of the job? (Mason, Electric, etc.)		
Average monthly wage in previous year. If unemployed in previous year, please add 0.		