

Indian Labour Market: Emerging Dynamics

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Abstract

This paper provides an overview of emerging dynamics in Indian labour market, taking cues from demographic variables such as dependency ratios, labourforce participation rates, and labour market related variables like employment status, employment by economic activities, average wage rates and formal-informal decomposition of wage and employment. For this, we use data compiled from World Social Security Report, published by International Labour Organization in 2010, National Sample Survey (NSS) 64th round and literature. Moreover, we also discuss basic aspects of India's large public works programme Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA, the then NREGA), pointing out the need for bundling basic entitlements related to food and employment. Next, we look into the current status of educational attainment in India, in particular, participation of persons in the age group of 5-29. Finally, we present current out-migration and in-migration patterns in India. We also illustrate the core nodes of migration in India using the Social Network framework.

Key words: dependency ratio, education, employment, migration.

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Introduction

In this paper, we provide an overview of the emerging dynamics of Indian labour market, covering the trends of select demographic variables such as ageing, dependency ratio and labour force participation ratio, trend of employment status, wage scenario, an overview of India's largest public work programme Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA, the then NREGA), education and migration. Our exploration of the trend of demographic variables is based on the data given in the appendix of World Social Security Report 2010 (ILO, 2010). While we describe basic patterns of these variables, we make a comparative assessment of large emerging countries like India, Brazil, China, Russian Federation and South Africa. Moreover, we compare these four countries with two regions: Sub-Saharan Africa and More developed regions. Interestingly, our discussion covers three distinct point of time during 2010 to 2050 –2010, 2030 and 2050-. Next, using National Sample Survey (NSS) data, we outline the trend of employment status, mainly capturing the distribution of self employment and wage employment, during the period of 1988 – 2008. Further, for the same period, we describe the trend of employment by industry. Apart from the inter-temporal patterns mentioned above, we discuss the scenario of daily average wage in India, covering aggregate data, the range of wage rate, and industry wise data for both regular and casual employment. More importantly, we pin point the emerging dynamics of wage inflation in India. We give an overview of MGNREGA based on cues from the literature while basic aspects of education and migration are based on the data from NSS 64th Round.

Demographic Trends

As shown in Table 1, next five decades will witness significant rise in the share of aged people in total population across the globe. While the magnitude of change is higher in developed countries, the same is much lower in region such as Sub- Saharan Africa. On the other hand, Sub- Saharan Africa is going to experience significant decline in the proportion of population below 15 years declines while the change in the same ratio for More Developed Countries is of much lesser magnitude. In 2050, one-third of population in more developed region will be in the age group of 60 and above, while the share of this age group in the Sub-Saharan Africa will be just one tenth.

Against this backdrop -the ageing population in developed countries and the enormity of youth in regions such as Sub-Saharan Africa-, we compare this demographic indicator across world's largest five emerging economies: Brazil, China, India, Russian Federation and South Africa (Table 1). During 2010-2050, the share of Indian population in the age group of 60 and above is going to increase from 7% to 20%, clearly indicating that ageing of population may generate a set of challenges and opportunities in markets –labour market, product market and financial market-. On the other hand, the same indicator for the age group of 15 and less will decline from 31% to 18%, leaving great scope for significant changes in markets. Quite interestingly, three large economies -India, Brazil and China- show change of similar magnitude in the share of the age category of 60 and above, while the other two countries, albeit trends of similar directions, report changes of lower magnitude.

Table 1: Proportion of above 60 and below 15 populations

Major area, region or country	Population below 15 years (% of total population)			Population above 60 years (% of total population)		
	2010	2030	2050	2010	2030	2050
India	30.8	22.8	18.2	7.5	12.4	19.6
Brazil	25.5	17.0	14.7	10.2	18.9	29.3
China	19.9	16.9	15.3	12.3	23.4	31.1
Russian Federation	15.0	15.2	16.2	18.1	25.0	31.7
South Africa	30.3	26.2	22.5	7.3	11.1	14.2
Sub-Saharan Africa	42.3	35.6	28.4	4.9	5.9	9.1
More developed regions	16.5	15.4	15.4	21.8	28.8	32.6
World	26.9	22.7	19.6	11.0	16.5	21.9

Source: ILO (2010)

The demographic scenario described above may be assessed using measures such as dependency ratio. Here, based on ILO database, we compare select set of regions and countries (Table 2). The dependency refers to the ratio of dependent population (age group 0-14 and over the age of 65) to working age population (age group 15-64), referred as ‘Total dependency ratio’. Further, this measure is decomposed into two: ‘Old-age dependency ratio’ and ‘Youth dependency ratio’. While ‘Old-age dependency ratio’ is population in the age group of 65 and over as a proportion of working age group i.e. age group of 15-64, ‘Youth dependency ratio’ refers to the population in the age group of 0-14 as a proportion of working age group i.e. age group of 15-64. As shown in Table 2, total dependency ratio in more developed regions is going to increase from 48% to 71% during 2010-2050, while the same is going to decline from 83% to 52% in Sub-Saharan Africa, conveying clear signals of a structural change in the global economy. Further, old age dependency ratio in more developed countries is going to double during this period –an increase from 24% to 45%-. On the other hand, youth dependency ratio for this region will show slow movement, showing a slight increase from 24% to 26%. Contrary to this trend, Sub-Saharan Africa is going to see significant dropping youth dependency ratio from 78% to 43%, while the region will experience an increase old age dependency ratio from 6% to 9% (Fayissa, B. 2010)¹. Quite obviously, for more developed countries, rise in old-age dependency is too huge to crowd out the slight change in youth dependency ratio, while the decline in youth dependency is of enormous magnitude crowding out the change in old-age dependency.

¹ Fayissa (2010) estimates a growth equation for Sub-Saharan Africa by incorporating demographic factors. Using econometric analysis of panel data drawn from Sub-Saharan Africa economies, paper concludes that the existing growth puzzle can be explained in terms of the demographic factors, especially the level and dynamics of dependency ratio of the region.

Table 2: Dependency ratios

Major area, region or country	Total dependency ratio (%)			Old-age dependency ratio (%)			Youth dependency ratio (%)		
	2010	2030	2050	2010	2030	2050	2010	2030	2050
India	55.6	45.3	47.0	7.7	12.2	20.2	47.9	33.1	26.8
Brazil	47.9	44.2	59.3	10.2	19.7	35.9	37.7	24.5	23.4
China	39.1	48.7	62.9	11.4	23.7	38.0	27.7	25.1	24.9
Russian Federation	38.7	53.0	65.6	17.9	29.7	38.8	20.8	23.3	26.8
South Africa	53.6	51.6	47.9	7.1	11.9	14.5	46.6	39.7	33.3
Sub-Saharan Africa	83.5	65.4	52.4	5.8	6.4	9.1	77.7	58.9	43.3
More developed regions	48.1	61.1	71.3	23.6	36.2	44.9	24.4	24.8	26.4
World	52.7	52.3	56	11.6	17.8	25.3	41.2	34.5	30.6

Source: ILO (2010)

Interestingly, patterns described above appear to hold good for the set of countries given in Table 2. Of five large economies, India and South Africa are going to experience a decline in total dependency ratio during 2010-2050, while the trend for other three countries is just opposite. Moreover, the magnitude of change in total dependency ratio for India and South Africa is quite similar i.e. 6-8% decline. On the other hand, China and Russian Federation are going to witness significant rise in the total dependent ratio i.e. 24-27% increases. Decomposing total dependency ratios, among these countries the magnitude of falling youth dependency during this period appears to be highest in India followed by Brazil and South Africa, while Russian Federation and China are unlikely to experience similar change. It is important to note that India and China present contrasting picture of dependency. By 2050, youth dependency ratio in China will be two-fifth, while for India this ratio will be just one-fifth. Further, youth dependency ratio for India will fall from a half to one-fifth, implying a significant change in demographic structure. However, for this ratio china is going to experience insignificant change. Although, both the countries will see rise in old-age dependency ratio, the magnitude of change in China is more than in India.

Table 3: Labor force participation rates

Major area, region or country	Male						Female					
	Ages 15+ (%)		Ages 15-64 (%)		Ages 65+ (%)		Ages 15+ (%)		Ages 15-64 (%)		Ages 65+ (%)	
	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020
India	81.0	80.5	84.6	85.2	29.7	26.3	32.7	32.4	35.3	35.5	2.1	2.1
Brazil	81.9	80.4	85.1	83.8	46.2	52.2	60.4	60.4	64.6	65.8	23.2	24.9
China	79.6	77.2	84.9	84.8	30.0	27.3	67.2	63.0	74.3	72.6	9.4	10.8
Russian Federation	69.5	68.5	75.9	76.7	16.3	16.6	58.0	57.8	69.3	71.8	9.5	9.6
South Africa	63.7	64.7	67.0	69.2	4.3	1.5	47.0	46.4	50.9	51.9	1.6	1.3
Sub-Saharan Africa	80.8	80.9	81.7	82.0	61.9	61.2	61.1	62.7	62.7	64.5	35.9	36.2
More developed regions	68.4	66.2	78.7	78.8	15.1	15.7	53.4	52.7	65.9	67.5	8.8	9.1
World	77.7	76.7	82.6	82.7	29.2	28.6	51.6	50.6	56.8	56.6	11.8	12.8

Source: ILO (2010)

The above discussion points to the advantages, India may gain by 2050, primarily emanating from significant decline from total dependency rate. However, the significance of this demographic dividend needs to be assessed against the trend of labour force participation rate, in particular participation of women in the labour market (Table 3). As shown in table, India reports lowest labour force participation for women. In fact, during 2010-2020, this indicator hardly changes. While labour force participation for women in India is just one-third, the same indicator in China is three-fourth. Interestingly, this indicator in Sub-Saharan Africa approximates two-third in 2020. This trend raises questions about the veracity of the view that India may gain from this demographic change.

Employment Status: Trends

In this section, using the National Sample Survey (NSS) data, we discuss trends of two core variables for the period 1988-2008: Employment status and Employment by Industries (Table 4 and 5). Employment status refers to the type of employment –wage employment and self employment-. Further, wage employment consists of regular employment and casual employment. Moreover, based on NSS 64th round, we outline average daily wage rates for wage employment, covering both casual and regular employment. Next, we compare average daily wage rates across industries for regular employment which is disaggregated for educational attainment.

Table 4: Percentage Distribution of employment (by Principal Status) for different Rounds for all India

Rural Area							
Survey (Round)	Period	Male Self-employed	Regular wage/salaried	Casual labour	Female Self-employed	Regular wage/salaried	Casual labour
2007-08 (64)		54.9	9.3	35.9	50.8	5.3	43.9
2004-05 (61)		57.6	9.1	33.3	56.4	4.8	38.9
1999-00 (55)		54.4	9	36.6	50	3.9	46.1
1993-94 (50)		56.7	8.7	34.6	51.3	3.4	45.3
1987-88 (43)		57.5	10.4	32.1	54.9	4.9	40.2
Urban Area							
Survey (Round)	Period	Male Self-employed	Regular wage/salaried	Casual labour	Female Self-employed	Regular wage/salaried	Casual labour
2007-08 (64)		42.5	42.1	15.4	35.8	43.2	21
2004-05 (61)		44.6	40.8	14.6	40.4	42.2	17.4
1999-00 (55)		41.2	41.9	16.9	38.4	38.5	23.1
1993-94 (50)		41.1	42.7	16.2	37.2	35.5	27.3
1987-88 (43)		41	44.4	14.6	39.3	34.2	26.5

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 531

As shown in Table 4, throughout the period for rural workforce, irrespective of gender, the share of self-employment in total employment varies from 50% to 57%, while the share of casual employment varies from 32% to 46%. Comparing male female throughout the period, share of casual employment in total employment of male remained lesser than the same ratio for female. While the range of this ratio for rural male is between 32% and 37%, for female the range is between 39% and 46%, showing noticeable differences between ranges. Although, share of self employment for male turns out to be greater than the same for female, differences between ranges is quite thin. However, differences between ranges with

respect to regular employment is quite apparent; for male the range is between 9%-10%, while for female the ranges is between 4%-5%.

Table 5: Percentage Distribution of employed persons (by Principal Status) by broad industry division (NIC 2004) at All India Level

Broad industry division	Survey Period (NSS Round)	Rural		Urban	
		Male	Female	Male	Female
Agriculture	2007-08 (64)	66.2	81.6	5.8	12.9
	2004-05 (61)	66.2	81.4	6	14.7
	1999-00 (55)	71.2	84.1	6.5	14.6
	1993-94 (50)	73.7	84.7	8.7	19.3
	1987-88 (43)	73.9	82.5	8.5	21.8
Mining & Quarrying	2007-08 (64)	0.6	0.4	0.6	0.3
	2004-05 (61)	0.6	0.4	0.9	0.2
	1999-00 (55)	0.6	0.4	0.9	0.4
	1993-94 (50)	0.7	0.5	1.3	0.7
	1987-88 (43)	0.7	0.5	1.3	0.9
Manufacturing	2007-08 (64)	7.8	7.6	23.6	25.2
	2004-05 (61)	8	8.7	23.6	25.4
	1999-00 (55)	7.3	7.7	22.5	23.2
	1993-94 (50)	7	7.5	23.6	23.6
	1987-88 (43)	7.6	7.5	26	26.9
Electricity, Water etc.	2007-08 (64)	0.2	0	0.7	0.2
	2004-05 (61)	0.2	0	0.8	0.2
	1999-00 (55)	0.2	-	0.8	0.2
	1993-94 (50)	0.3	-	1.2	0.3
	1987-88 (43)	0.3	-	1.2	0.3
Construction	2007-08 (64)	7.8	2.3	9.6	4.8
	2004-05 (61)	6.9	1.7	9.3	4.5
	1999-00 (55)	4.5	1.2	8.8	5.5
	1993-94 (50)	3.3	1.1	7	4.9
	1987-88 (43)	2.7	3.2	5.8	4.3
Trade, hotel & Restaurant	2007-08 (64)	7.7	2.6	27.8	13
	2004-05 (61)	8.3	2.8	28.1	13.1
	1999-00 (55)	6.8	2.3	29.3	16.4
	1993-94 (50)	5.5	2.2	21.9	10.7
	1987-88 (43)	5.2	2.4	21.5	10.9
Transport, storage & Communications	2007-08 (64)	4.1	0.2	11	2
	2004-05 (61)	3.9	0.2	10.7	1.6
	1999-00 (55)	3.2	0.1	10.4	2
	1993-94 (50)	2.2	0.1	9.8	1.5
	1987-88 (43)	2.1	0.1	9.8	1.2
Other services	2007-08 (64)	5.7	5.4	21	41.6
	2004-05 (61)	5.9	4.6	20.7	40.2
	1999-00 (55)	6.1	4.3	20.9	37.8
	1993-94 (50)	7.1	4	26.4	38.8
	1987-88 (43)	6.4	3.7	25.3	33.6

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 531

The same table provides basic data on employment status in urban sector. In contrast to rural sector, irrespective of gender, share of regular employment in urban employment is much higher, varying in the range of 34% to 44%. Interestingly, this share, throughout the period, was higher than the share of casual employment; the share of casual employment varies in the range of 15% to 27%. Of these trends, the trend of share of regular employment in employment of urban female stands out; the only trend showing consistent increase. The share of regular employment for urban women increased from 34% to 44%, while the same for male was stagnant during this period. Irrespective of gender in urban sector, throughout the period, the share of self employment, like the share of regular employment, remains higher than the share of casual employment, varying in the range of 36% to 45%.

Table 5 provides composition of employment by industry. During 1988-2008, although agriculture remains as principal source of employment in rural sector, its share in total rural employment declined from three-fourth to two-third. For the rural male, during this period, shares of three industries in employment -construction, Trade, hotel & restaurant, and Transport, Storage & communication- have shown consistent increase. While the share of construction increased from 3% to 8%, the share for Transport, Storage & communication increased from 2% to 4%. For the rural female, only the industrial category "other services" showed steady increase in the share of employment, i.e. from 4% to 5.4%. It is important to note that for rural female, the share of agriculture in employment during this period showed only slight variation, i.e. from 81% to 85%.

For urban male, during 1988-2008, the share of manufacturing in employment declined from 26% to 24%, while a contrary trend is evident in trade, hotel & restaurant, showing an increase from 21% to 28%. Gist of trends for urban male clearly indicates that service sector continues to be the principal source employment, while share of manufacturing showed a decline. It is important to note that the share of construction increased from 6% to 10%. However for urban female, the share of the category 'other services' showed a significant increase from 34% to 40%, emerging as the principal source of employment, while the share of manufacturing dipped from 27% to 25%.

Wage Rate: Emerging Dynamics

As shown in Table 6, wage employment in India appears to be segmented, varying across segments in the range of Rs. 51 to Rs. 276. While, regular urban male gets daily average wage of Rs. 276 which is highest among the segments, rural female gets Rs. 51 only. Irrespective of sectors –rural or urban- male receives more daily wage rate than female gets. While the gap between wage rates for male and female is highest for urban casual employment, the same is lower for urban regular employment. Further, Table 6 gives the range of average wage for each segment –state with lowest and highest wage rates with respective figures-. The range between highest and lowest average daily wage is highest for regular employment for urban female, while urban female in casual employment shows the lowest spread between highest and lowest values.

Table 6: Wage scenario at All- India level

Regular Wage			
Category	Average wage/ salary	Highest Average wage/ salary	Lowest Average wage/ salary
Rural male	175.3	353.44 (Mizoram)	139.07 (Chhattisgarh)
Rural female	108.14	378.83 (Lakshadweep)	62.89 (West Bengal)
Urban male	276.04	401.10 (Jharkhand)	213.32 (Madhya Pradesh)
Urban female	212.86	448.41 (Bihar)	104.14 (Jharkhand)
Casual Wage			
Category	Average wage/ salary	Highest Average wage/ salary	Lowest Average wage/ salary
Rural male	75.3	171.14 (Mizoram)	50.84 (Chhattisgarh)
Rural female	51.17	123.59 (A & N Islands)	39.70 (Pondicherry)
Urban male	104.63	235.37 (Nagaland)	58.75 (Chhattisgarh)
Urban female	59.57	112.08 (A & N Islands)	38.63 (Chhattisgarh)

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 531

Table 7 outlines daily average wages with respect to type of industry, disaggregated for educational attainment. Quite apparently, across all industries except “Private households as employers of domestic staff”, there appears to be a direct relation to be educational attainment and average wage rate. Interestingly, the industry “Financial Intermediation, Real Estate, Renting and Business Services” reports the highest absolute difference between wage rates; graduates and above having the highest wage rates, while not literates having the lowest wage rate. On the other hand, the lowest spread wage rate is reported by trade, hotel & restaurant. In brief, the table clearly conveys that wage rates tend to go up with the educational attainment.

Wage dynamics in Indian Economy is deeply enmeshed in the structural changes in the labor market, importantly the formal-informal dualism. For instance, a noteworthy pattern, during the 2000s, is the growth of informal employment in the formal sector, which is quite manifest in tertiary and secondary sectors. On the other hand, during the same period formal employment in the formal sector showed a noticeable contraction. While noting this trend, it makes sense to throw light on four categories of employment: (a) informal work in informal sector (b) informal work in formal sector (c) formal work in formal sector and (d) formal work in informal sector (Table 8). Of these, the category ‘a’ is the largest, more than four fifth of total workforce, followed by c, the second, b, the third, and d. However this order is not consistent with wage and workforce’s average years of schooling; for these two variables c is at the top of the order while ‘a’ is at the lowest. It is important to distinguish between formal and informal categories, for work and activity. Formal work refers to the work with entitlements like regularity in pay and social security while informal work, with varying levels of regularity in pay, is devoid of social security. Further, the dichotomy ‘formal-informal’ is sensitive to the source of value addition; if the value addition emanates from sources like private corporate sector or public sector then the sector is formal or if it originates from the household sector, then the sector is informal. Although categories ‘b’ and ‘c’ absorb much lesser labor force than ‘a’ does, formal sector plays a pivotal role in manufacturing and service sector, in particular these sectors’ contribution to India’s Gross Domestic Product (GDP).

Table 7: Average wage/ salary earnings (Rs. 0.00) per day received from regular wage/salaried employment (31, 71 & 72) according to current daily status by industry of work and broad educational level

Industry of work	General Educational level				
	Not literate	Literate & upto middle	Secondary & higher secondary	Diploma/ certificate course	Graduate & above
Agriculture	64.21	86.68	168.08	177.17	280.83
Mining & quarrying	242.37	267.29	400.74	424.61	550.58
Manufacturing	95.33	109.81	150.28	195.17	429.04
Manufacturing	91.79	124.21	180.57	294.66	470.58
Electricity, gas and water	218.32	247.00	281.63	349.89	661.51
Construction	119.33	137.82	187.85	337.14	408.06
Trade, hotel & restaurant	89.33	99.80	127.67	213.17	279.10
Transport & storage etc.	129.53	150.48	209.36	416.55	402.25
Financial Intermediation, Real Estate, Renting and Business Services	123.17	136.13	219.68	281.84	614.72
Public Administration and Defense, Education, Health and Social Work; Other community, Social and Personal Service Activities	86.95	157.70	240.58	287.04	370.14
Private households With emp. Persons	51.59	86.25	128.41	45.25	287.25
Others	178.57	357.14	324.25	-	-

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 531

Table 8: Distribution of workers by Type of Employment (in Millions)

Employment Category	Workforce in Million
Informal work in informal sector (category 'a')	393.47 (2.89)
Informal work in formal sector (category 'b')	29.14 (7.33)
Formal work in formal sector (category 'c')	33.42 (-0.15)
Formal work in informal sector (category 'd')	1.43 (1.01)
Total (a + b + c + d)	457.46 (2.89)

Figure in parenthesis is compound annual growth rate for 1999-00 to 2004-05².

Source: NCEUS (2008), p 44, Table 4.1³

It is important to note that formal work in formal sector, the category 'c', forming 7% of the workforce, is the cynosure of wage dynamics. Moreover, approximately 70% of this category is employed in the public sector, covering the central and state governments, public sector enterprises, departmental enterprises and quasi/autonomous government entities. This

² The data in table 1 is based on national sample survey 55th and 61st rounds which were carried out in 1999-00 and 2004-05, respectively. The 61st round is the latest 'thick' sample survey, which are carried in five years interval.

³NCEUS (2008), "Report on Definitional and Statistical Issues Relating to Informal Economy", National Commission for Enterprises in the Unorganized Sector, Govt. of India.

segment of the labour force is relatively more organized, well supported by the collective bargaining strategies of trade unions. Their power in labour market is quite reflected in pay-offs they gained in long-term settlements called pay commission awards. Every ten year, their compensation –salaries, dearness allowance, benefits, pension and so on- gets revised, based on the recommendations made by the government appointed pay commission. The magnitude of wage increase tends to be quite substantial, as appears from the last six pay commission awards since India's independence. Quite presumably, pay-offs to public sector employees seem to show a significant upward revision of compensation, clearly manifest in recent pay hikes after the sixth pay commissions awards with effect from 2006. However, these pay hikes co-exist with the decreasing labour absorption by the public sector, resembling an insider-outsider issue; insiders in the public sector seem to settle for more wage but compromising with less absorption of new workers.

Interestingly, wage hike is not a one-shot game, rather a sequence of bargaining processes. First, one sixth of public sector employees, consisting of central government employees engaged in government services such as administration, education, health, home affairs and so on, defense staff, and railway employees get the new pay. Second, remaining segments of public sector also receive the pay award with a lag, going through rounds of collective bargaining. For instance, the central government implements pay hike soon after the government accepts recommendations of pay commission, while state and local governments, constituents in a three tier federal democratic governance system, tend to take longer time for implementing the pay hike. In fact, the first round of wage hike, principally for the one sixth of employees, seems to have a cascading effect on remaining five sixth of employees in the public sector, snow balling to other segments in formal employment, where collective bargaining plays crucial role in wage determination. For example, employee unions of scheduled banks and public sector banks, after a series of collective bargaining processes including strikes, settled for 17% hike in compensation; they signed five year agreement with the Indian Banks' Association (IBA), an employers' forum.

Contrary to the story of public sector, for remaining 30% of formal workforce who are employed in private corporate sector, wage determination is principally driven by forces in the labour market. Supposing, the commodity market is buoyant with the surge in sales the trend gets translated to more hiring at entry and lateral levels. As appears in recent content about the corporate compensation, upward shift in demand for workforce seems to have generated consistent increase in compensation. Except during 2008-09, when the slowdown was reflected in the campus placements, compensation showed consistent increase. Since transition economies like India offers great scope for expansion of services like Information Technology (IT) & IT Enabled Services (ITES), Banking Financial Services and Insurance (BFSI), and Transportation and Storage, market linked wage hike is likely to be a regular feature for this segment in the regular workforce. Going by macro economic trends, service sector is emerging as the largest contributor to India's GDP, which also absorbs largest chunk of manpower with higher human capital.

It is important to note that the aforesaid service led growth in India generated both formal and informal employment. For assessing employment absorption, we use a measure called employment elasticity, which is defined as the ratio of proportionate change in employment to proportionate change in sector's contribution to the GDP. Higher the ratio, higher will be the employment absorption and vice versa. Table 9 gives employment elasticities for formal and informal employment in select service activities. As shown in table, elasticities for informal employment, except for Banking, Financial Service & Insurance (BFSI), exceed

elasticities for formal employment, reflecting the exponential growth of informal work in formal sector (Table 9). The phenomenon of informalisation of formal employment appears as a strategic response to possible collective bargaining-led demand for upward revision of compensation. However, depressed wage levels emanating from this strategy may not sustain in the long-run due to the global labor forces; a surge in demand for labor due to global forces –for example, international division of labor in sectors like IT enabled services and manufacturing- may crowd out local forces which depress the wage level.

Table 9: Formal-Informal employment and Employment Elasticity in Tertiary Sector

Sector	Formal work (2004-05) (percentage)	Employment Elasticity (informal)	Employment Elasticity (formal)
Construction	3	0.91	0.81
Hotels & Restaurants	5	0.99	0.84
Transport & Storage	17	0.86	0.07
Banking, Financial Service & Insurance (BFSI)	61	0.94	1.03
Real estate, Business Services (including IT)	20	3.09	0.88
Education	54	1.81	1.02

Note: This is the ratio of proportionate change in employment to proportionate change in Gross Value Added from the sector during 1999-00 to 2004-05

Source: Compiled from NCEUS (2008), p 117, Tables 2 & 3, p. 116-117

Another important dynamics impacting wages in India is migration, especially when people migrate from low wage region to high wage region, by shifting from the old economic activity to the new one. An interesting case is the migration of labour force from rural to urban; it is quite likely that they shift from agriculture to activities like construction, which offers ‘easy to get casual work’ without basic contractual characteristics like regularity in work and pay. However, foot-looseness of casual work tends to be substituted by consistency of regular work as these migrants gain more experience, albeit not applicable to the whole construction workforce. It is also important to note that, as shown by field studies, more enterprising casual workers in this sector acquire appropriate skills to become self employed workers, with roles such as labour contractor or skilled worker, thus, setting a context for higher wages, which account for premium for skills.

Perhaps, an emerging factor in the dynamics of wage is recently initiated social protection programmes and a host of social security measures for the informal sector. Of these, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), resembling a fiscal strategy to ensure full employment in rural India, is the largest, in investment and coverage. The novelty of this programme is that eligible rural workforce gets an assured 100 days of work, with entitlements like minimum wage. Basically, government provides investment for MGNREGA, with an objective to generate productive assets for strengthening the agricultural economy. While the progress of MGNREGA lags in some states, there are states which attained crucial progress in the implementation of MGNREGA. Taking cues from the content and literature on MGNREGA, it is reasonable to surmise that this is going to increase reservation wage of rural workforce, viewing that people are learning to form expectations about wage levels.

National Rural Employment Guarantee Act: An Overview

After independence, spanning six decades since 1947, poverty and unemployment in rural sector, with hardly any significant decline, remain daunting challenges for India, while emerging problems, in particular agricultural crisis, may potentially thwart sustainability of the economy and society. Although there is a rich history of diverse development interventions, farmed in long run and short run strategies, by state and civil society, these initiatives often met with limited success, not translated into a critical mass that would have ameliorated intimidating impasse couched in entrenched inequalities. It is important to note that these perennial challenges were favorite policy variables under different five year plans since 1950, while emerging challenges, especially sustainability related issues are gaining attention by state and civil society. However, it is doubtful if development planning could make strategies which provide solutions by integrating perennial problems and emerging challenges. For instance, barring a few notable exceptions, most of country wide initiatives often failed to integrate important variables such as availability of work, public provisioning of food and protection of natural resources from selfish interests. Moreover, these gaps may evolve to a force that compounds asymmetries such as persistent inequalities, entailing non-tractable complexities in a democratic system. Given this lineage of development planning, interventions and strategies, mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), seemingly a significant mutation toward an integrated rural development strategy, was initiated by Government on India in 2005. This act guarantees hundred days of employment in a financial year to adult members of any rural household. Initially, this act covers two hundred districts, extending to the whole country by 2010.

Perhaps, MGNREGA can be a structural break in the development trajectory of India, bringing constructive changes, given this act creates close to full employment in rural sector by creating productive assets so as to increase agricultural productivity in a sustainable way, bringing food security in the country. Quite importantly, resource allocation for MGNREGA can be quite effective if it generates a non inflationary multiplier process, resulting in an inclusive growth (Shah, 2008). Interestingly, MGNREGA has its scholarly genesis, evolving from the stage of model to policy making. In fact, schools which provide rationale for MGNREGA, varying in scope and ideological base, concur that market has no built in capacity to solve unemployment and resultant asymmetries. One prominent view, propounded by John Maynard Keynes, posits that seemingly stable economy, characterized by equality of aggregate demand and aggregate supply may co-exist with unemployment. Further, such scenario may trigger off a chain of uncertainties impacting economy and society. Taking cues from business cycles in the late 1920s, which pervade through industrialized countries, Keynes showed, using the metaphor aggregate or macro economy, that state can be an effective catalyst to attain full employment by injecting investment, which is autonomous of return, to the society. As articulated by Keynes, such autonomous investments, through a geometric progression process, known as multiplier, generate a sequence of employment, income and consumption. As assumed by Keynes, these sequences are spontaneous, not subject to any leakages emanating from sources such as corruption. In fact, this logic became an active theme for empirical research, sharply divided about model's congruence with reality. While lineages defending Keynesian view promulgate fiscal intervention as a panacea for unemployment, critics, affirming markets' capability to self cure, have been exposing inefficacy of fiscal strategies to provide sustaining stability.

Interestingly, followed by early popularity of Keynesian views among industrialized countries, new republics such as India found this logic would be appropriate to social preferences. Until India transited to a an economy which is more open to exogenous variables

such as foreign trade and choosing deregulated market for many goods, services and assets since the 1990s, Keynesian model greatly impacted its macroeconomic policies, reflected in an expanding public sector, plethora of social sector programmes, subsidy to agriculture and so on. However, with unleashing of reforms, covering industry, trade and asset markets, since the 1990's, state's withdrawal from providing support to agriculture and social sector became quite pronounced. These tendencies to withdraw from welfare orientation and trading through the spontaneity of deregulated markets were fervently pursued by governments since 1990, often aggregated as neo-liberalism. It is important to note aggregates which represent macroeconomic sustainability, presumably due to the strategic drift towards neo-liberalism, continue to remain healthy, surviving major external shocks and recessionary forces. For instance, this trend is quite visible in summary measures of balance of payment. Moreover, this trend co-moved with stupendous growth in Gross Domestic Product (GDP) and other macro aggregates. On the other hand, throughout this period, agriculture steadily decelerated, in its productivity, profitability and employment generation. In fact, rural livelihood became less important theme for macro strategies, which was a clear departure from the pre 90s⁴. Interestingly, during 1995-2007, increase in deregulation of markets co-existed fractured electoral mandates, leading to a coalitional democracy formed by national and local parties. Quite evidently, during this period, a number of regions became power hubs, in contrast to previous model of high centrality around the Capital City. Perhaps, this dynamics exerted tremendous force to make local problems, in particular agricultural crisis, poverty and unemployment as the principal determinants of electoral victory. It seems economic buoyancy, once portrayed as driver of governance, became less important than newly identified determinant of electoral success⁵, i.e. pervading problem such as agricultural crisis, unemployment, poverty, lack of educational attainment and so on.

MGNREGA: Entitlements and Processes

Assessing MGNREGA guidelines, given by Government of India, we classify entitlements into three: (a) guaranteed employment, (b) entitlement of minimum wage arte fixed by the state government and (c) Unemployment Benefit. In translating these entitlements into well being individuals, processes and organizations, including law, government, local government, and grass root level organization, play significant roles.

Guaranteed Employment: MGNREGA provides an entitlement of hundred days of guaranteed employment in a financial year, targeting households located in area notified by the Government of India. This entitlement is available to more than one adult member of a household⁶, working jointly or different times. A seeker for this entitlement has to be a local, who resides within the Gram Panchayat. The definition 'local' covers both persons with domicile status and migrants. It is quite likely applicant will engage in manual work. The act is going to cover the whole country by 2010. While this act's prime focus is on livelihood generation in rural areas, the act serves complementary objective such as generating

⁴ See Bose (2004)

⁵ Chandrasekhar C. P. and Jayati Ghosh (2004) affirming the role of employment in electoral results "There is no doubt that employment generation has emerged as not only the most important socio-economic issue in the country today, but also the most pressing political concern. The mandate of the recent elections is clear on this: the people of the country have decisively rejected policies that have implied reduced employment opportunities and reduced access to, and quality of, public goods and services."

⁶ As given by Ministry of Rural Development (2005) 'Household' will mean a nuclear family comprising mother, father, and their children, and may include any person wholly or substantially dependent on the head of the family. Household will also mean a single-member family.'

productive assets, protecting the environment, empowering rural women, reducing rural urban migration and fostering social equity⁷.

Wages: According to the act, persons who work under the scheme are entitled to minimum wages determined by the state government for agricultural labourers, following the Minimum Wages Act, 1948. Further, complying with the Equal Remuneration Act, 1976, both men and women receive same wage. The act recommends that wage is to be paid on a weekly basis. Whether these wages are paid by gram panchayat or paid through banks or post office, information related to wage is available to public. Supposing there is a delay in wage payment, workers are entitled to compensation as per the provisions of the Payment of Wages Act, 1936, which shall be borne by the state government. The act gives option of social security to persons. If an individual is willing, state government may merge pay with social security arrangements, earmarking a portion of wage to schemes such as health insurance, accident insurance, survivor benefits, maternity benefits and other social security arrangements.

Unemployment Allowance: If an applicant for the work under MGNREGA does not get work within fifteen days from the day of application, applicant is entitled to unemployment allowance, which is paid by the state government.

It is important to note that conversion of these entitlements into desired objective like well being of a person, to a greater extent, depends on efficacy of processes which enable the functioning of MGNREGA. Interestingly, these processes are structured in a spectrum of governance, envisaging tiers of government such as village level, block level, district level, state level and central level. While implementation happens at grass root units like village, coordination happens at the block or district level. Moreover, planning and monitoring happens at all levels. Coming to individual level, the process begins when an individual registers with Gram Panchayat (GP), providing required information. After GP verifying the information, the individual get a job card, which is valid for five years. If the applicant does not receive job card, s/he may register grievances about non-issuance of a job card to the programme officer. Once individual gets job card, next step is to apply for work. Finally, work is allotted to the applicant. As given in MGNREGA operational guide lines, the scope of work covers works such as water conservation and water harvesting, drought proofing, including afforestation and tree plantation, irrigation canals, including micro and minor irrigation works, provision of irrigation facility to land owned by households belonging to the Scheduled Caste/Scheduled Tribe, or to land of the beneficiaries of land reforms, or to land of the beneficiaries under the *Indira Awas Yojana*, renovation of traditional water bodies, including de-silting of tanks, land development, flood-control and protection works, including drainage in waterlogged areas, rural connectivity to provide all-weather access. The construction of roads may include culverts where necessary, and within the village area may be taken up along with drains. Clearly, these works aim to generate productive assets in rural areas, which may rejuvenate rural economy⁸.

⁷ Ministry of Rural Development (2005) states “the basic objective of the Act is to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. This work guarantee can also serve other objectives: generating productive assets, protecting the environment, empowering rural women, reducing rural urban migration and fostering social equity, among others”.

⁸ Ghosh J (2004) expresses optimism “Such a scheme - which would dramatically improve the material condition of the rural poor while at the same time increasing capital formation and productivity in rural India - is clearly in the best interests of the country as a whole.”

Although a balanced assessment of MGNREGA's ability to attain desired objectives needs a longer time horizon, policy commentators, academic scholars and other observers, have been sharing their views on its likely direction. While some views position MGNREGA as an inevitable choice for India, contrary to this view, some commentators observe MGNREGA as a fiscal profligacy⁹. However, giving an assessment of first two years (Table 10), Drèze and Christian (2009) views that processes of MGNREGA are yet to attain desirable level of responsiveness, particularly in sharing data about its progress. Commenting on less satisfactory the state of art of database, Drèze and Christian (2009) observe "the accuracy of the official figures is an open question, which calls for urgent scrutiny. In any case, independent large-scale surveys of the MGNREGA (analogous to, say, the National Family Health Survey) would be very useful.... It is worth noting that there are crucial gaps in the present "Monitoring and Information System" (MIS). This is one reason why long delays in wage payments persist in many States, causing immense hardship to MGNREGA workers and even inducing some of them to "quit". These and other gaping holes in the statistical system need urgent attention if the MGNREGA is to achieve its ambitious transparency norms". Ambasta et al. (2008) identified five major shortcoming of MGNREGA implementation: lack of professionals, delay in administration, under-staffing, inappropriate schedule of rates and mockery of social audit. Quite visibly, these shortcomings can snowball to compounding of transaction costs, which may thwart sustainability of MGNREGA.

Table 10: MGNREGA Fact Sheet

	2006-07	2007-08	
	"Phase I" Districts Only	"Phase I" Districts Only	Phase I + Phase II Districts
Number of Districts under MGNREGA	200	200	330
<i>Person-days of employment generated</i>			
Total (in crore)	90	108	144
Per household	17	20	16
Per job card	24	25	22
Per household employed in MGNREGA	43	48	42
<i>Share of marginalized groups in MGNREGA employment (per cent)</i>			
Women	40	44	42
Scheduled Tribe (ST)	36	33	29
Scheduled Caste (SC)	26	27	27
<i>Expenditure on MGNREGA</i>			
Total Expenditure (Rs. Crore)	8813	12057	15857
Average Expenditure per district (Rs. Crore)	44	60	48
Average expenditure per person-day	98	111	110
Average wage cost per-person day	65	75	75
Share of wages in Total Expenditure (%)	66	67	68

Source: Drèze and Christian (2009)

It is interesting to note that four employment generation programmes initiated by Government of India have been linked with provisioning of food and nutrition, targeting poor,

⁹ Drèze (2004) sees employment guarantee act as an enforceable obligation on the state. However, Acharya (2009) expresses concern that NREGA can be an irreversible expenditure item, causing fiscal stress to the economy.

draught affected areas and objectives such as development of human resources and food security (Table 11). It is important to note that the linkage between food and work is quite a fundamental one. Moreover, nutritional value of food is a principal factor in this linkage.

Table 11: Integrating food with employment programmes

Programme	Period	Objective in relation to food
Food for Work Programme	1977-1980	Utilize surplus food grain for the development for human resources
National Rural Employment Programme (NREGP)	1980-1989	Raise nutritional standard of the poor.
Food for Work Programme II	2000-2002	Augment food security through wage employment in draught affected rural areas.
Sampoorna Grameen Rozgar Yojana (SGRY)	2001	Food security

Source: Table 2.1, page 5, Second Administrative Reforms Commission (2006)

Ray (2006, p 272), magnifying this linkage, expresses “Because under nutrition affects the capacity to work, it affects the functioning of labour markets in a central way.” As shown by Ray, work capacity tends to have a non linear relation with nutrition. While work capacity tends to be abysmally low for low nutrition levels, the former increases at an increasing rate for subsequent units of nutrition, until the curve reaches a point of inflexion. Beyond this point, the curve increases at a declining rate until it reaches saturation point. It is important to note that nearly one forth of married men and slightly above half of married women, in the age group of 15-49 are anemic (NFHS, 2005-06), implying lower work capacity for economically active population in India. Obviously, to a significant extent, the demographic dividend emanating from enormity economically active population in India greatly depends on this segment’s capacity to engage in both economic and non-economic activities. Further, this link is significantly directed by availability of nutritious food, either free or at affordable prices. Responding to this scenario, Government of India issued the citizen charter in November, 1997, aiming to make functioning of Public Distribution System (PDS) more transparent and accountable. This charter contains information on themes such as entitlement of Below Poverty Line (BPL) families, quality of food grains, and procedure for the issue of ration cards inspection and checking, information regarding fair price shop, right to information, vigilance and public participation. In 2007, the charter underwent a revision; the revised model citizens’ charter replaced the old charter¹⁰. Interestingly, revised charter places significantly great weight on defining the target population and operational aspects, while less emphasis is given on aspects such as distribution of more nutritious food to all segments of population, covering children, ageing population and economically active population. As shown by Virmani and Rajeev (2001), demand for higher quality food has been steadily going up in India, while Public Distribution System (PDS) still centers around cereals¹¹. Further, C.H. Hanumantha Rao, cited by Virmani and Rajeev, attributes the change in preference to factors such as spread of the road network to rural areas and the increased availability of manufactured goods in rural areas¹². The excess supply of cereals, contrary to

¹⁰ See http://fcamin.nic.in/dfpd_html/index.asp

¹¹ Citing them “Between 1972/73 and 1993/94 the food basket has become much more diversified. In particular, cereal shares have seen a dramatic decline of ten percentage points in most of regions--in both rural and urban India. Similarly, the share of meat and milk products, and vegetables and fruits has increased over time.” (p. 2)

¹² Reflecting on this change Virmani and Rajeev notes (p 3), “People today prefer to consume more of non-cereals and among cereals the preference is for rice and wheat as against coarse cereals. There is

preference better quality to food, often results in excess stocks in Public Distribution System (PDS). It is doubtful, if there have been constructive attempts to devise a right to quality food which can raise capacity to sustain and work.

This scenario is echoed by India Vision 2020, released in 2002, which says that India is going to have the capacity to produce more than sufficient quantities of food to provide a healthy diet to its entire population and become a major food exporter well before 2020. However, the report is doubtful if this is enough for eradicating under-nutrition. Citing the report “In spite of enormous progress in the food production, nearly half the country’s population still suffers from chronic under-nutrition and malnutrition. The most vulnerable are children, women and the elderly among the lower income groups”. The report views it is important to increase purchasing power of people by generating livelihoods, which would enable people to consume nutritious food. Expressing this links the report notes “Employment or livelihood security is an essential and inseparable element of a comprehensive strategy for national food security. Conversely, food security is an essential requirement for raising the productivity of India’s workforce to international levels... The problem of chronic macro and micro nutrient under-nutrition cannot be addressed simply by increases in food production or the accumulation of larger food buffer stocks. Nor has the public distribution system been able to effectively target the neediest in an effective manner. Targeted food for work programmes and targeted nutrition programmes can alleviate the problem temporarily. But in the long run, the solution is to ensure employment opportunities for all citizens so that they acquire the purchasing power to meet their nutritional requirements. Thus, employment or livelihood security becomes an essential and inseparable component of a comprehensive strategy for national food security and must be considered as one of the nation’s highest priorities.”

Cues from observations such as above clearly hint right to food is not just a transient food security¹³, built around building excess supply of cereals, but is more a dynamic one, which absorbs population’s demand for a food basket, having a direct linkage with health, capacity to work and sustenance. Undoubtedly, a dynamic approach to rights would entail bundling of right to education, right to work, right to health and right to food.

Education

We assess the emerging scenario of education in India, using the findings of National Sample Survey 64th Round. Our discussion covers the following variables: Age specific literacy rate, Educational attainment, Age specific attendance ratio, Net attendance ratio, Education by type of institutions, Incentives for pursuing education, Average annual expenditure per student, Percentage of never enrolled persons, Reasons for non enrolment and Percentage of enrolled in the past but currently not attending.

a shift in the consumption pattern of the population in favour of superior food items like milk, vegetables, fruits, and animal foods. Thus the growth of aggregate demand for cereals in the country is slowing down because of deceleration in the pace of population growth and a shift in consumer preference towards non-cereals. This is one of the factors that have contributed to accumulation of excessive food stocks in FCI godowns.”

¹³ See Radhakrishna and Venkata Reddy (2002)

Table 12 Literacy rate (%) for persons in different age-groups during 2007-08 at All India level

Age-group	Rural		Urban	
	Female	Male	Female	Male
Age 15 & above	47.5	71.8	74.6	88.7
Age 7 & above	56.7	77.0	78.1	89.9
Age 5 & above	57.3	76.8	78.1	89.7
All age (age 0 & above)	51.1	68.4	71.6	82.2
All ages (age 0 & above): NSS 42nd Round (1986-87)	24.8	47.6	59.1	74.0

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

As shown in Table 12, literacy rate varies across age groups, showing higher literacy rates for lower brackets while lower values for higher brackets. This pattern is consistent across the gender and the sector. Quite importantly, there is a glaring gap between male and female literacy rates in the rural sector, while the gap between male and female is less noticeable for the urban sector. Moreover, literacy rates for all 'age 0 and above' have increased significantly during 1987–2008.

Table 13 gives distribution of population '15 years and above' by educational attainment levels, comparing results of National Sample Survey 52nd and 64th round. While 52nd round refers to 1995-96, the 64th is for 2007-08. Quite interestingly, as shown by the data, during 1996-2008, percentage of population under educational attainment 'Secondary and above' showed a significant increase. In fact, this increase cuts across gender and sector. While rural female reports highest proportionate change in the percentage of people in the category 'Secondary and above', urban male reports the lowest increase. For rural female, the percentage of this category increased from 6% to 12%.

Table 13: Percentage distribution of population (15 years & above) by educational attainment levels in 1995-96 (52nd round) and 2007-08 (64th round)

Category	Not literate		Literate and up to primary		Middle		Secondary and above	
	1995-96	2007-08	1995-96	2007-08	1995-96	2007-08	1995-96	2007-08
Rural female	68.3	52.5	17	23	8.7	12.3	6	12.2
Rural male	39.4	28.2	27.9	28.2	16.8	19.9	15.9	23.6
Urban female	32.7	25.4	21	20	17.1	15.9	29.2	38.7
Urban male	14.3	11.3	22.1	19.7	20.6	18.8	43	50.1

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 14 gives age specific attendance ratio (AAR). AAR refers to the ratio of no of persons in the age group who are currently attending educational institutions to estimated population in this age group, multiplied by 100. As shown by the data, there is a marked deficit in child participation in education; for rural female in the age category of 6-10, 14% of children do not attend the school. This deficit increases with the age. For the age group 14-17, a whopping 45% of rural female do not attend education institutions, while the rate of non-participation for urban female is just 29%. Moreover, AAR for the age group 18-24, across the gender and the sector, vary from 10% to 28%.

Table 14: Age - specific attendance ratio (AAR) by broad Age group for any education at All India level

Age Group	Rural		Urban	
	Female	Male	Female	Male
6-10	86	89	90	91
11-13	82	88	88	90
14-17	55	66	71	73
18-24	10	19	26	28
25-29	0	1	1	3

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 15 shows the net attendance ratio (NAR) by broad class groups. NAR is defined as the ratio of no of persons in the age group attending a particular class group to the total no of persons in the age group, multiplied by 100. Across class groups, during 1996-2008, NAR increased. It is important to note that across gender and sector, rural female reports highest rates of change for all class groups; within this rate of change for class category XI-XII is the highest. Moreover, disparity in NAR between rural and urban among female class groups declined during this period. However, taking cues from the data, across gender and sector, participation in higher education among Indian youth is far from the desirable levels of participation.

Table 15: Net attendance ratio by broad class group at All India level

Class Group	Rural		Urban	
	Female	Male	Female	Male
NSS 64th Round (2007-08)				
I – V	83	86	84	86
VI – VIII	54	59	64	67
IX – X	35	40	51	52
XI - XII (general edn.)	19	25	39	39
XI - XII# (All education)	20	25	39	40
Post - HS (general edn.)	5	8	14	13
Post - HS (All education)	6	10	21	20
NSS 52nd Round (1995-96)				
I – V	56	68	77	80
VI – VIII	32	44	57	60
IX – X	17	26	40	41
XI - XII (general edn.)	8	13	28	25

including diploma with minimum entry requirement below HS

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

As shown in Table 16, across levels of education in rural India –primary, middle and secondary & higher secondary-, government institutions is the largest source of education. While 77% of female students who attend primary school get training from government institutions, 62% of female in secondary and higher secondary attend in government institutions. The same is consistent with the rural male as well. However, for urban male and female, share of government institutions in these three levels of education, albeit the leading share, is lower than participation in rural area; the share of government in urban sector, across

education levels and gender, varies from 33% to 46%. Interestingly, private unaided education has the largest shares in the category 'primary', irrespective of the gender. Another leading institutional source which provides education across educational levels, in particularly in urban India, is private aided; it shares varies from 16% to 28%.

Table 16: Percentage distribution of currently attending students aged 5 - 29 years pursuing various levels of school education by type of institution attended at All India level

Type of institution	Rural		Urban	
	Female	Male	Female	Male
Primary				
Govt.	77.6	74	37.5	33.2
Local body	6.3	5.4	4.7	4.4
Private aided	3.4	4.3	16.7	15.6
Private unaided	12.4	15.8	40.2	45.3
Total*	100	100	100	100
Middle				
Govt.	74.3	71.8	40.6	39.2
Local body	5.9	5	4.9	3.9
Private aided	9.2	9.1	23.3	20.5
Private unaided	10.2	13.7	30.3	35.3
Total*	100	100	100	100
Secondary & HS				
Govt.	62.3	62.4	46.2	39.6
Local body	3.8	3.5	2.9	2.4
Private aided	18.9	18.8	25.8	27.9
Private unaided	14.2	14.7	24.4	28.8
Total*	100	100	100	100

* incl. n.r. & 'not known' case

Source: National Sample Survey Organization (2010b),
64th Round, Report No. 532

Although government is the principal institutional source of general education, for technical and vocation training private unaided institutions have largest shares, except for urban male who pursue vocational training and urban female who pursue technical training (Table 17). Apart from these two sources, private aided institutions also provide technical and vocational education, these shares varying from 21% to 34%.

There is a fundamental difference between tuition fees at different levels of education provided in rural and urban section (Table 18). While most of rural student in all levels of education receive free education, coverage varies from 51% to 82%, the coverage of free education in urban sectors varies from 31% to 48%. The coverage of free education is highest for rural female in primary level, i.e. 82% and the same is lowest for urban male in secondary and higher secondary level. The data clearly shows that the coverage of free education has to go up significantly in urban sector. Otherwise, poor people with no willingness to pay for education are unlikely to participate in the schooling.

Table 17: Percentage distribution of currently attending students aged 5 -29 years pursuing different types of institution

aged

Type of education	Type of institution	Rural		Urban	
		Female	Male	Female	Male
General	Govt. & Local body	78.9	75.4	46.2	41.5
	Private aided	8.4	9.1	21.7	21.4
	Private unaided	12.3	15	31.1	35.8
	Total*	100	100	100	100
Technical	Govt. & Local body	23.2	23.1	38.5	23.5
	Private aided	26.8	36.6	21.9	28.1
	Private unaided	46.6	40.2	37.8	47.5
	Total*	100	100	100	100
Vocational	Govt. & Local body	20.3	39.6	29.3	38.9
	Private aided	14.8	9.5	34.2	21.5
	Private unaided	61.4	50.2	34.9	36.9
	Total*	100	100	100	100

* incl. n.r. & 'not known' case

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 18: Percentage of currently attending students aged 5 - 29 years getting free education or exemption from tuition fees at different levels of school education at All India level

Level of education	Type of waiver	Rural		Urban	
		Female	Male	Female	Male
Primary	Free education	82.4	77.2	43.6	36.4
	Tuition fee fully waived	0.9	0.7	1	0.8
	Tuition fee partly waived	0.3	0.3	0.5	0.8
Middle	Free education	78.5	72.5	47.7	43.2
	Tuition fee fully waived	1.5	1	0.9	0.7
	Tuition fee partly waived	0.5	0.6	0.5	1
Secondary & HS	Free education	58.2	51	40.1	31
	Tuition fee fully waived	2.4	2.3	2.1	1.5
	Tuition fee partly waived	1.3	1.2	1	1.6

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 19: Percentage receiving different types of incentives among students of age 5 -29 years pursuing general education, separately for MPCE decile classes

Type of incentive	% students receiving incentives in MPCE decile class* (%)									
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Rural area										
Scholarship	22.1	22.0	20.2	20.5	18.8	15.4	17.0	13.3	11.8	7.4
Free/Subsidized books	72.8	71.2	68.8	66.8	61.8	59.4	57.9	52.8	43.5	26.3
Free/subsidized stationery	8.8	8.5	7.6	8.2	7.6	8.7	7.7	7.1	6.5	4.5
Mid-day meals-from govt.	63.1	60.4	57.3	55.7	52.2	50.7	47.3	43.2	34.2	19.3
Mid-day meals-from Others	1.0	0.5	0.7	0.8	0.8	0.7	0.8	1.0	0.7	1.1
Mid-day meals-Total	64.1	60.9	58.0	56.5	53.0	51.4	48.1	44.1	34.8	20.4
Concession in public transport fare	1.2	1.8	2.3	2.6	3.9	3.9	5.1	5.9	7.5	12.0
Urban area										
Scholarship	11.5	12.3	7.1	7.2	5.1	5.8	4.0	3.5	3.4	1.2
Free/Subsidized books	51.6	50.2	39.3	36.2	32.0	24.3	21.0	14.4	9.5	3.5
Free/subsidized stationery	8.7	7.6	7.1	6.1	5.8	3.4	4.1	2.7	1.9	0.5
Mid-day meals-from govt.	39.5	40.9	31.4	24.9	24.3	17.2	13.9	8.3	4.6	1.8
Mid-day meals-from Others	1.0	0.8	0.8	0.9	0.8	1.2	0.7	0.6	0.8	0.3
Mid-day meals-Total	40.5	41.7	32.2	25.9	25.1	18.3	14.6	8.9	5.4	2.1
Concession in public transport fare	1.6	2.0	2.8	3.2	5.7	5.5	5.7	6.8	6.3	7.4

* MPCE decile classes were obtain separately for rural and urban sector

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

As given in Table 19, percentage of students pursuing general education who receive different types of incentives tends to decline with monthly per capita consumption expenditure (MPCE) decile classes. More proportion of students receives these incentives for lower deciles; while less proportion receive these incentives for higher deciles. Quite interestingly, across deciles and sector, free/subsidized books is the most popular incentives, participation rate varies from 3% to 73%. Mid day meals is the second most popular incentives across decile and sectors with participation rate varying from 2% to 64%. On the other hand, percentage of students who receive concession and public transportation tends to go up with MPCE decile class.

Table 20: Percentage receiving different types of incentives among students of age 5 -29 years pursuing general education, by type of institution at All India level

Types of incentive	Type of institution			
	Govt.	Local body	Private aided	Private unaided
Scholarship	19.0	10.9	8.7	2.8
Free/Subsidized books	68.8	75.6	22.1	3.9
Free/subsidized stationery	9.1	10.2	2.8	1.1
Mid-day meals- from govt.	57.6	59.4	14.8	1.6
Mid-day meals- from Others	0.7	0.9	1.4	0.6
Mid-day meals- Total	58.3	60.3	16.2	2.1
Concession in public transport fare	3.6	3.0	10.6	4.6

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 21: Average annual expenditure (Rs.) per student of age 5 - 29 years by type and level of education

Type & Level of education	Rural		Urban	
	Female	Male	Female	Male
NSS 64th Round (2007-08) at constant prices*				
Primary	437	530	1739	1893
Middle	761	846	1958	2307
Sec./Higher Sec.	1655	1869	3380	3830
Above HS (General)	3497	3885	4291	4226
General education-all	816	994	2446	2691
Technical Education	14026	16796	16955	17919
Vocational Education	9579	7452	9926	7676
Ref. Tables 28, 36 & 39 in Appendix -A				
NSS 52nd Round (1995-96)				
Primary	286	305	1092	1197
Middle	641	640	1456	1590
Sec./Higher Sec.	1156	1192	2136	2288
Above HS (General)	2323	2283	3260	3338
General education-all	516	605	1609	1750

* authros calculation based at constant prices (for UNME: deflated at 1984-85 as base by conversion factor 1.99; for AL: deflated at 1986-87 as base by conversion factor 1.69)

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

It is important to note that the coverage of incentives for students who pursue general education is highest in institutions owned by government and local bodies, while the coverage of incentives in private unaided institutions is the lowest except for concession in private transport fare (Table 20). Across institutional categories, except for private unaided, free/subsidized books is the most popular category, followed by mid day meals.

Table 21 shows the trend of average annual expenditure (at constant prices) per student for different educational levels during 2007-08 to 1995-96. We have deflated the expenditure data for these two years by Consumer Price Index (CPI) deflators –Urban non-manual employees (UNME) for urban sector and Agricultural Labourers (AL) for rural sector-. During this period, average annual expenditure, irrespective of sector and gender, grew exponentially with varying compound growth rates –from 1.3% to 4.3%, least for rural female in middle level and highest for rural male in primary level. It is important to note that, referring to NSS 64th round, technical education is the costliest, followed by vocational education.

Table 22 brings the contrast between rural and urban sectors in percentage of never enrolled persons of age 5-29 years; for the male, percentage in respect of urban sector is much higher than that of rural sector at all age groups, while this pattern is consistent with the female as well. A whopping 40% of female in the age group 25-29 never enrolled for education, showing the magnitude of the lack of employability among young rural women. If this trend continues unabated, chances of Indian youth, in particular women, gaining advantage of demographic dividend appear to be thin, calling for appropriate interventions to turn around inept educational policies.

Table 22: Percentage of never-enrolled persons of age 5-29 years in different age-groups at All India Level

Age -groups (years)	Rural		Urban	
	Female	Male	Female	Male
5	42.5	42.3	27.9	22.6
6-10	11.2	8.3	6.0	5.7
11-13	8.6	4.8	5.6	3.4
14-17	12.7	7.1	6.0	4.5
18-24	28.4	11.9	11.0	6.3
25-29	39.4	18.2	16.3	8.2
Total	21.0	11.0	10.0	6.3

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Further, percentage of never enrolled persons of age 5-29 declines with MPCE deciles, implying the linkage between non participation in education and poverty (Table 23). While the percentage of never enrolled, for the lowest class of MPCE across sector and gender, varies from 18% to 30 %, for the highest class the range varies between 2% to 13%. It appears that the escape from poverty is crucial for altering the discernible deficit in educational attainment among youth. Except for urban male, across sector and gender, parents' lack of interest in offspring's studies is the principal reason for non enrolment; share of this reason varies from 29% to 37%. However, for urban male, this reason is second to financial constraints which accounts for 38% (Table 24).

Table 23: Percentage of never-enrolled persons of age 5-29 years in each MPCE decile class at All India Level

MPCE decile class (%)	Rural		Urban	
	Female	Male	Female	Male
00-10	30.0	18.5	23.5	18.6
10-20	28.8	16.6	18.9	12.7
20-30	25.8	13.8	13.1	7.5
30-40	23.4	12.8	10.8	6.5
40-50	21.6	11.5	8.9	4.6
50-60	20.3	11.1	6.4	3.4
60-70	17.6	8.9	4.2	3.2
70-80	16.6	7.5	2.3	2.2
80-90	12.9	6.5	1.6	1.8
90-100	6.8	2.6	1.2	1.0

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Table 24: Percentage distribution of never-enrolled persons of age 5-29 years by major reason for non enrolment at All India Level

Major reason for non-enrolment	Rural		Urban	
	Female	Male	Female	Male
Parents not interested in studies	36.7	29.5	32.8	22.5
Education not considered necessary	23.2	20.3	21.0	17.2
Financial constraints	16.2	24.7	25.3	37.7
No tradition in the community	6.1	3.1	4.5	2.8
To attend other domestic chores	3.0	0.8	2.0	0.4
School is far off	2.2	1.6	1.1	0.9
For participating in other economic activities	0.7	2.8	0.7	3.5
To work for wage/ salary	0.4	1.9	0.5	2.2
To look after younger siblings	1.3	0.4	1.0	0.1
Other reasons	10.2	14.9	11.1	12.7
All	100.0	100.0	100.0	100.0

Source: National Sample Survey Organization (2010b), 64th Round, Report No. 532

Migration

Our discussion on migration covers three categories: in-migration, return-migration and out-migration. In-migration, often referred as migration, means number of persons for whom the last usual place of residence (UPR) is different from the present place of enumeration. As given by NSS, the UPR is a place where the person had stayed continuously for a period of six months or more. From this variable, migration rate is calculated; it is the ratio of number of migrants to population. Supposing migrants go back to their earlier UPR, the flow is called return migration. The third category 'out-migrants' refers to any former member of a household who left the household, any time in the past, for staying outside the village/ town.

As shown in Table 25, migration rates for women irrespective of sectors have gone up during 1983-2007, while the same for rural and urban male declined. Moreover, throughout

this period, irrespective of sectors, migration rates were higher for female than male. While the range of migration rate, for urban and rural female, varies from 35% to 48%, the range for male varies from 5% to 27%, showing higher degrees of dispersion. There is a marked difference in range of migration range for rural and urban male. The range for urban male is between 5% and 7%, the same for urban male is between 24% to 27%.

Table 25: Migration rates obtained from different NSS rounds at All India level

Survey year (Round)	Rural		Urban	
	Male	Female	Male	Female
2007-08 (64)	5.4	47.7	25.9	45.6
1999-00 (55)	6.9	42.6	25.7	41.8
1993 (49)	6.5	40.1	23.9	38.2
1987-88 (43)	7.4	39.8	26.8	39.6
1983 (38)	7.2	35.1	27	36.6

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 26 shows migration range by educational attainment, disaggregated for sector and gender. The data shows no clear direction of the relation between migration and educational attainment. From the data, the highest migration rate is for rural female who are 'graduates and above', while the lowest value is for rural male who are not literate.

Table 26: Migration rate by broad level of general education during 2007-08 at All India level

Category by persons	General educational level					
	not literate	literate and up to middle	secondary and higher secondary	diploma/certificate	graduate and above	all
Rural male	3.8	5.1	8.3	22.2	14.3	5.4
Rural female	56.2	36.6	50.3	61	62.8	47.7
Urban male	16.7	22.9	30.7	43	38.2	25.9
Urban female	47.2	39.7	51.3	56.3	56	45.6

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 27: Distribution of internal migrants over the four types of rural-urban migration streams as per NSS 55th round and NSS 64th round all India

Category of Migrants	Migration stream			
	Rural to Rural	Urban to Rural	Rural to Urban	Urban to Urban
NSS 55th round (1999-2000)				
Male	32.3	10.7	34.4	22.6
Female	70.3	5.2	14.4	10.1
NSS 64th round (2000-08)				
Male	27.2	8.9	39	24.8
Female	70	4.9	14.8	10.3

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 27 shows migration rates with respect to migration streams for NSS 55th and 64th rounds. Migration streams consist four: rural to rural, urban to rural, rural to urban and urban to urban. For male the migration rate is highest for the stream 'rural to urban, followed by rural to rural for both the rounds. The range of migration rate for male across streams, for 64th round, varies from 25% to 39%, while for female, the range varies between 5% to 70%. For female, among streams rural to rural shows the highest rate i.e. 70%, consistent for both the rounds.

Table 28: Distribution of migrants by reason for migration during 1993, 1999-2000 and 2007-08 at All India level

Reason for migration	Migrated in			
	Rural areas		Urban areas	
	Male	Female	Male	Female
49th round (1993)				
Employment related reasons	47.7	8.3	41.5	4.9
Studies	4.1	1.1	18	7
Marriage	2.3	61.6	0.9	31.7
Movement of parents/earning member	20.8	23.7	28.3	49.5
Other reasons (incl. n. r.)	25.1	5.3	11.3	6.9
55th round (1999-2000)				
Employment related reasons	30.3	1	51.9	3
Studies	5.3	0.4	6.2	1.3
Marriage	9.4	88.8	1.6	58.5
Movement of parents/earning member	26	6.3	27	31
Other reasons (incl. n. r.)	29	3.5	13.3	6.2
64th round (2007-08)				
Employment related reasons	28.6	0.7	55.7	2.7
Studies	10.7	0.5	6.8	2.2
Marriage	9.4	91.2	1.4	60.8
Movement of parents/earning member	22.1	4.4	25.2	29.4
Other reasons (incl. n. r.)	29.2	3.2	10.9	4.9

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

As shown in Table 28, for the rural male, during 1993-2007, the proportion of in-migration due to employment related reasons came down from 48% to 29%. On the other hand, the same for urban male increased from 41% to 56% during the same period. For the rural female, during this period, marriage continues to be the principal reason for the migration; in fact the share of this reason increased from 62% to 91%. The share of marriage as reason for migration with respect to rural female increased from 32% to 61% during this period. Quite apparently, the proportion of urban male who migrate for studies came down from 18% to 7%, comparing 49th round and 64th round. Contrary to this, the same for rural male increased from 4% to 11%. Another important trend is that, for the urban female, the proportion of people who migrate due to movement of parents/earning members declined from 50% to 29%. Further the same for the rural female declined from 24% to 4%.

As shown in Table 29, comparing before migration and after migration states, across gender and sectors, migration seems to positively impact labour market participation. For urban male, proportion of 'not in labour force' for 'before migration' is 40%, while the same

for 'after migration' is 29%, showing a significant decline. Moreover, for the rural male, the proportion of not in labour force is 45% for 'before migration' and 36% for 'after migration'. Similar trend is consistent with the female as well, irrespective of the sector. Quite interestingly, for male irrespective of sector, self employment appears to absorb the incremental participation of workforce due to migration. Pertinently, for urban male, the proportion of regular employment appears to be sensitive to migration; the proportion of regular employment 'before migration' is 18%, while the same after migration is 39%, showing a math increase. On the other hand, for urban male, participation in casual employment shows a decline after migration. However, for female, covering rural and urban, migration seems to have limited impact on labour market participation, during that even after migration proportion 'not in labour force' remains quite huge -67% for rural, while 85% for urban-.

Table 29: Distribution of migrants by their usual principal activity status before and after migration for different categories of migrants during 2007-08 at All India level

Usual Principal activity status	Category of migrants			
	Male		Female	
	before migration	after migration	before migration	after migration
Rural area				
Self-employed	15.9	26.6	9.4	17.3
Regular employees	14.1	15.4	0.5	1.5
Casual labour	20.8	20.5	10.3	13.9
Worker	50.8	62.5	20.2	32.7
Unemployed	3.9	1.5	0.5	0.4
Not in labour force	45.1	36.1	79.2	66.9
Urban areas				
Self-employed	16.9	22.4	3.1	5.3
Regular employees	18.3	39	1.9	5.9
Casual labour	11.3	8.2	3.1	3.1
Worker	46.4	69.7	8.1	14.2
Unemployed	13.2	1.6	0.7	0.5
Not in labour force	40.2	28.7	91	85.3

Note: includes the n.r. cases of usual activity status before migration

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 30 gives rate of return migration for 49th and 64th round. Interestingly, return migration increased, irrespective of sector and gender. Further, stream wise composition of return migration is given in Table 31. For the male, comparing both the rounds, the most striking change is that the share of rural to urban increase from 12% to 25%, while urban to rural declined from 44% to 27%. Most important change for female is that the share of rural to rural stream increased from 57% to 67%, while the share of urban to rural declined from 17% to 7%.

Table 30: Number of return migrants as per NSS 49th round (Jan-Jun 1993) and NSS 64th round (2007-08) at All India level

Category of Persons	Rural	
	NSS 49th round	NSS 64th round
Rural area		
Male	19.6	23.7
Female	4.3	10.6
Urban area		
Male	6.1	11.7
Female	4.9	10.4

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 31: Distribution of return migrants by different types of migration streams during NSS 49th round (Jan-Jun 1993) and NSS 64th round (2007-08)

Category of return migrants	Migration stream					
	Rural to Rural	Urban to Rural	Rural to Urban	Urban to Urban	Another country to Rural	Another country to Urban
NSS 49th round						
Male	26.1	44.3	11.9	14.7	2	1
Female	57.1	17.3	11.8	13.2	0.2	0.3
NSS 64th round						
Male	24.5	26.6	24.7	19.9	3	1.3
Female	67.4	7.4	14.1	10.5	0.3	0.3

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

As shown in Table 32, rate of out-migration is highest for rural female i.e. 17% and lowest for urban male i.e. 5%. Table 33 gives Distribution of out-migrant by present place of residence. For urban male, half of out-migrants stay in the same state, while one-third and one-sixth stay in other states and another country respectively. For urban female, four-fifth of out-migrants stays in the same state. For the rural sector, 47% of male out-migrants live in same state, while 46% and 7% live in other states and another country respectively. Close to 90% of urban female out-migrants live in the same state.

Table 32: Rate of out-migration

Category of out-migrants	Rural	urban
Male	9.2	5.1
Female	16.6	11.0

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 33: Distribution of out-migrant by present place of residence at All India level

Category of out-migrant	present place of residence					
	same state		same state	out-side the state	within the country	another country
	within same district	another district				
Rural area						
Male	17.3	29.3	46.6	45.8	92.4	7.2
Female	61.4	27.6	89	10.2	99.2	0.7
Urban area						
Male	14.3	35.6	49.9	33.3	83.2	15.9
Female	42.5	37.2	79.7	17.6	97.3	2.7

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Table 34 highlights distribution of out-migrant by reason for migration, decomposed into employment related reasons and forced migration. For male, irrespective of sector, the share of the forced migration, which comprises of components such as marriage, displacement and so on, varies from 1% to 2%. On the other hand, the components of forced migration, for both the rural and urban female, are quite large, 94%-95%. Interestingly, the major component in forced migration, for female is marriage, accounting for 84% in reasons for forced migration. On the other hand, employment related reasons, for both rural and urban male, account for 71% to 80% of out-migration. The major component of employment related reasons, for urban and rural is 'to take up employment/ better employment', accounting for one-third of reasons for migration. The second important component for rural male is 'in search of better employment' followed by the reason 'in search of employment' with respective shares of 21% and 20%. This clearly conveys that, for rural male the employment search accounts for 40% of reasons for out-migration. The same for urban male is 27%.

It is important to note that migrating labor force from a source called Last Usual Place of Residence (UPR) to a destination (called Present Place of Residence (PPR)), principally for employment reasons, brings tremendous dynamism to the labor market of the PPR. In fact, this component of labor market is basically an outcome of a flow that brings incremental change, with a potential for significant change in the economic activity of the PPR. For instance, this segment of workforce may cause more labor supply at given wage. Further, taking cues from previous table, a significant chunk of this labor force are likely to constantly search for employment, leading them to the large pool of informal workforce with low wage and casual work. Although this workforce tends to have lower bargaining power in the early stage of their exodus to the destination, they may become more indispensable for the PPR. Supposing the UPR attains betterment in economic growth and human development, this workforce may return from PPR to UPR, causing critical deficit in the labor market which can stagnate the core of the economy. Is there a potential for such scenarios in India? Although this is a complex question, we try to generate some interesting leads by using distribution of migrants by UPR for each PPR, based on NSS 64th round (Report No. 533). Basically, as given in NSS Report, this data is presented in a matrix format with equal number of rows and column, measured as number per 1000 persons. Every cell in this matrix means proportion of people from UPR for a given PPR. Treating the cell in the matrix as 'unit of analysis', we view every cell as a tie between UPR and PPR, while rows represents UPR, column represents PPR. Further, this is a relational data, with a direction –source and

end-. Here, UPR is the source while PPR is the end. Using the software ‘Ucinet’¹⁴, we convert this matrix into a ‘Sociogram’ in which UPR and PPR are represented by states and Union Territories of India. In our analysis, number of UPR is equal to number of PPR, i.e. 35.

Table 34: Distribution of out-migrant by reason for migration at All India

Sr. no.	Reason for migration	Rural		Urban	
		Male	Female	Male	Female
Employment related reasons					
1	in search of employment	19.8	0.7	12.9	0.5
2	in search of better employment	21	0.5	13.8	0.5
3	business	2.2	0.1	2.9	0
4	to take up employment/ better employment	33.6	0.9	34.7	1.4
5	transfer so service/contract	2.5	0	5.9	0.2
6	proximity to place of work	0.8	0.1	0.8	0.1
7	sub-total (srl. 1 to 6)	79.9	2.3	71	2.7
8	studies	7.8	2.2	14.3	3.4
Forced Migration					
9	natural disaster	0	0	0	0
10	social/political problem	0.1	0.1	0.3	0
11	displacement by development projects	0	0	0.1	0
12	sub-total (srl. 9 to 11)	0.1	0.1	0.4	0
13	acquisition of own house/flat	0.5	0.1	1.3	0.1
14	housing problems	0.6	0.1	1.4	0.3
15	health care	0.1	0	0.1	0
16	post retirement	0	0	0.2	0
17	Marriage	1.1	84.3	2.2	84.6
18	migration of parent/earning member of the family	7.6	9.5	5.9	7.5
19	Others	1.8	1	2.9	1
20	sub-total (srl. 13 to 19)	11.7	95	14	93.5

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

From the plot of this data, using ‘netdraw’ which is embedded in ‘Ucinet’, we identify the maximally connected sub-structure, called ‘main component’ (fig 1A). To arrive at main component, we use two procedures. First, we select cells if the cell value is greater or equal to the cut off value. This value was selected from a set of values by comparing the nature of structures, which were generated after selecting a particular value. Our core criterion for choosing a value was whether the generated structure provides cues about sub-structures and main component within it. While doing this process, we found that for lower cut off values, ranging from 1% to 3.5%, structures which were generated appeared to be quite cohesive, with less discernible sub-structures. However, for cut off value 4%, we fit a structure consisting of one ‘main component’, four ‘isolates’ and one ‘pendent’¹⁵. Further, values above 4% hardly provide useful cues about the structure, generating relatively more sparse sociograms. Second, we remove isolates and pendants from the sociogram, leaving main

¹⁴ Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. Ucinet for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies.

¹⁵ While ‘isolates’ means ‘states with no connection’, ‘pendent’ is just an isolated tie between two states.

component alone. Quite interestingly, as given in the figure, ‘Uttar Pradesh’ (UP) and ‘Bihar’, relatively under-developed populous Indian states, are positioned centrally, having first and second ranks in number of links originating from UPR. Clearly, this implies that these states are the principal sources of migration within the main components, showing their criticality in Indian labour market. Further, we decompose the structure into two by fitting ‘ego-centric’¹⁶ structures for both ‘Uttar Pradesh’ and ‘Bihar’ (fig 1B). As shown in the figure, UP caters to two sub-structures excluding Union Territories, smaller states and immediate neighbours; while one set consists of relatively more developed north Indian states such as Punjab, Haryana and Delhi, another set consists of two states in Western India: Gujarat and Maharashtra. Bihar, too, caters to one sub-structure consisting of Haryana and Punjab. These patterns clearly show that two states in India -UP and Bihar- have pivotal role in the above discussed labour market dynamics.

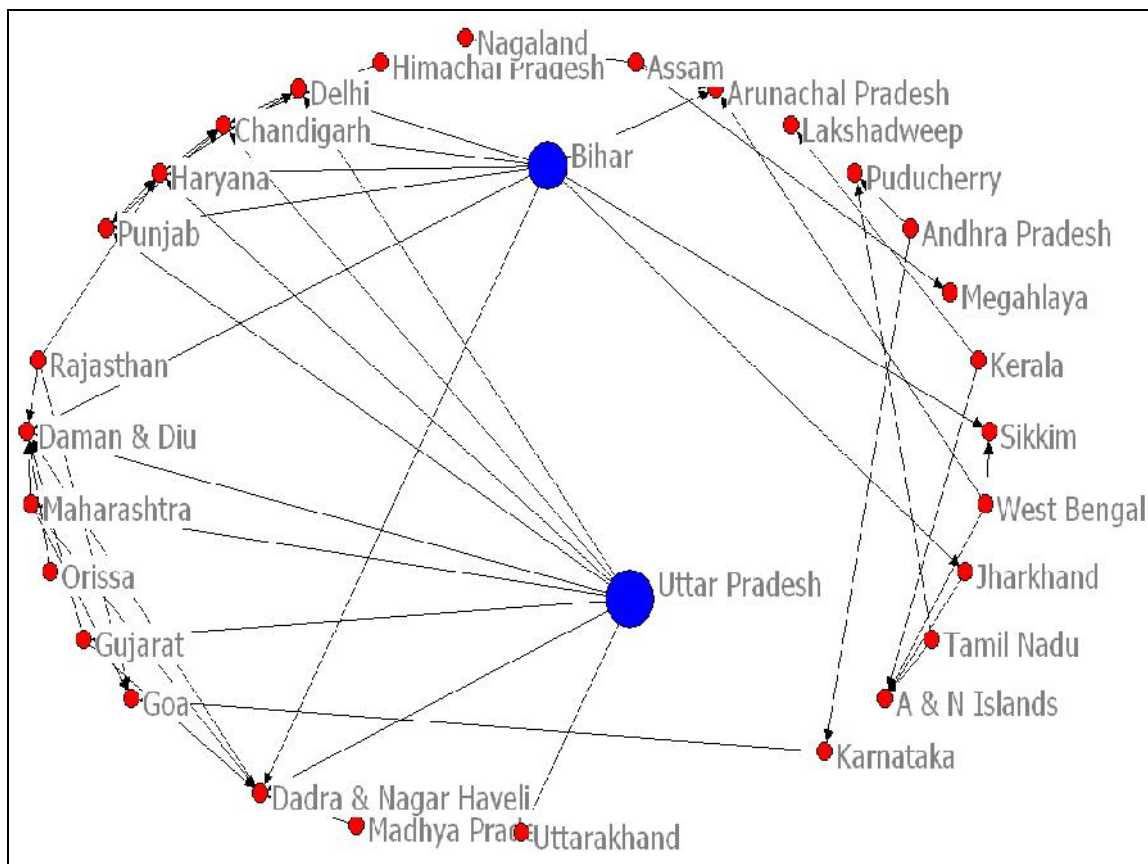


Figure 1.1A: Main component in the Social Network of Indian States measured by the strength of migration (Distribution (per 1000) of migrants by last usual place of residence for each present place of residence), Ucinet 6 representation, based on NSS Report No. 533: Migration in India: 2007-08, p: A-169 to A-170.

¹⁶ In social network parlance, ‘ego-centric’ means a structure with a node and its neighbours and neighbours’ neighbours.

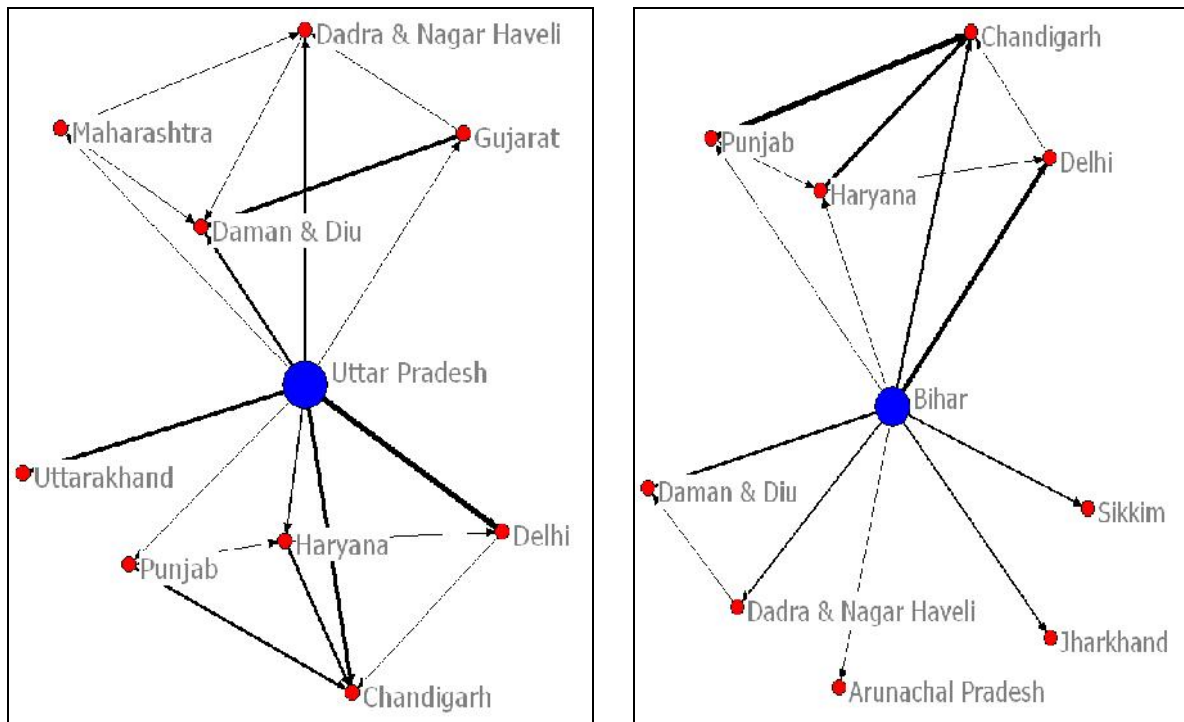


Figure 1.1B: Ego networks of Uttar Pradesh and Bihar based on figure 1A

For assessing a system of migration, it is important to compare both in-migration and out-migration flows, and finding the net flow by deducting out-migration from in-migration, called net migration. Moreover, this measure ‘net-migration’ may be calculated for two contexts; while one context consists of only domestic flow within the country, the other one includes both domestic and flows between the given country and rest of the world. Dividing this measure by population will generate net-migration rate, expressed as rate per thousand populations. In Table 35, columns 7 and 8 contain ‘net-migration rate’ and ‘domestic net-migration rate’ respectively. While ‘net-migration’ is arrived by deducting sum of columns 3 and 4 from column 2, ‘domestic net-migration’ is column 2 net of column 3. As shown in Table 35, consistent with network diagram (fig 1A & 1B), excluding Union Territories and smaller states, Uttar Pradesh and Bihar report higher values of negative net-migration rate, -31 and -56 respectively, while Maharashtra and Haryana are the principal states showing higher positive values of net-migration rate i.e. 41 and 35 respectively. These trends are consistent with domestic net migration rate as well, with a noticeable exception of Kerala. For this state, net-migration rate is -44, while domestic net-migration rate is 9. Further look into the data clearly shows that this phenomenon is because a sizable segment of labour force from this state is emigrating to abroad, principally to the Middle-East. Perhaps, this phenomenon means that large out-flow of workers to abroad, may have generated scarcity of workforce who would work at affordable wage rate for employers, leading to inflow of workers from other states in search of employment at higher wage rate.

Table 35: Net migration rate (per 1000 of population) for each State/ Union Territory

State/ Territory	Union	Type of estimate						
		in- migran t (00)	out- migran t (00) to anothe r state	out- migratio n abroad (00)	net migrati on (00) (col2- col. 3- col.4)	populati on (00)	net migrati on rate (Col 5/Col 6)*1000	Domestic net migration rate ((Col 2-Col 3)/Col 6)*1000
1		2	3	4	5	6	7	8
Chandigarh		4708	1168	117	3423	8574	399	413
Delhi		43585	11694	70	31821	131603	242	242
Daman & Diu		507	173	25	309	1449	213	231
A & N Islands		684	128	1	555	3370	165	165
Pondicherry		1704	535	127	1042	8376	124	140
Goa		1929	383	176	1370	14430	95	107
Maharashtra		56584	15414	2286	38884	948135	41	43
Uttarakhand		10005	6619	100	3286	86058	38	39
Haryana		22349	14175	502	7672	218264	35	37
Punjab		18586	11697	3864	3025	238582	13	29
Chhattisgarh		9651	3193	67	6391	229916	28	28
Sikkim		507	401	22	84	5181	16	20
Gujarat		20778	10879	1858	8041	494655	16	20
Tripura		895	273	33	589	34579	17	18
West Bengal		23670	12303	820	10547	784690	13	14
Karnataka		20130	14173	1228	4729	489468	10	12
Kerala		10691	8096	15832	-13237	298619	-44	9
Mizoram		215	226	1	-12	8786	-1	-1
Andhra Pradesh		10153	12324	4374	-6545	752758	-9	-3
Nagaland		233	277	1	-45	9654	-5	-5
Assam		1070	2282	27	-1239	249966	-5	-5
Rajasthan		17582	20841	2145	-5404	580845	-9	-6
Tamil Nadu		9906	13675	4983	-8752	614601	-14	-6
Madhya Pradesh		13168	17035	235	-4102	604647	-7	-6
Himachal Pradesh		3040	3442	151	-553	62251	-9	-6
Meghalaya		173	330	8	-165	23118	-7	-7
Jammu & Kashmir		824	1791	57	-1024	82912	-12	-12
Orissa		5303	9648	248	-4593	363647	-13	-12
Jharkhand		3913	8129	174	-4390	246211	-18	-17
Arunachal Pradesh		53	268	1	-216	10739	-20	-20
Uttar Pradesh		32326	81405	3836	-52915	1708700	-31	-29
Manipur		15	609	3	-597	20119	-30	-30
Bihar		5505	47077	1046	-42618	755017	-56	-55
Dadra & Nagar Haveli		515	664	1	-150	2061	-73	-72
Lakshadweep		22	83	3	-64	618	-103	-99

Source: National Sample Survey Organization (2010c), 64th Round, Report No. 533

Conclusion

In this paper, through an exploration of data on basic demographic and labour market aspects, we have brought out key dynamic forces in Indian labour market. It is important to note that while India is going to have relatively lower level of total dependency ratio by 2050, generating tremendous potential in terms of demographic advantages and labour market gains, the country suffers from critical deficits emanating from low education attainment, lower labour female participation rates, growth in indecent work due to expanding informal work, and lack of effective coverage of social security. This duality, if remains unabated, may puncture the scope for demographic pay-offs, needing strong proactive social/public policy interventions. While human development deficit is a salient feature of India, there are important initiatives, by Government and civil society, to extend support for social development and inclusive growth through social protection and public work programmes such as MGNREGA. As discussed in this paper, viewing the capacity of these deficits to impair the progress towards realization of demographic dividend, there is need for more concerted public actions for enabling circumstances for more participation women in labour market, more participation in education by youth, more participation in decent work by those who are deprived of basic social security, and migration leading to betterment in life. In future, assessing basic trends, growth in India is increasingly driven by service sector, requiring more educated youth as workforce. However, the current situation of low educational attainment and participation in education by youth, in particular the glaring disparity between male and female in participating in the labour market, appears to be the principal source of inertia that slows down the process of inclusive growth.

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Appendices

Appendix 1: Percentage Distribution of persons by broad usual principal activity status for each State/ U.T.

State/u.t	w o r k i n g				unem ployed	not in labour force				Popu lation
	self- employe d	regula r wage/ salarie d	casua l labou r	all		students	engaged in domestic duties	other s	all	
Andhra Pradesh	19.7	6.8	21.3	48	0.7	23.1	15.6	12.7	51.5	100
Arunachal Pradesh	31.1	6.3	3.8	41	1.3	29.5	15.1	12.9	57.5	100
Assam	22.8	5.2	6.2	34	2.1	23.8	25.1	14.9	63.8	100
Bihar	15.4	1.7	11.8	29	0.7	24.8	24	21.5	70.4	100
Chhattisgarh	25.8	4	16	46	0.4	26	11.3	16.6	53.8	100
Delhi	13.2	17.4	2	33	0.7	26.7	24.9	15	66.7	100
Goa	13	15.5	7.6	36	1.1	21.4	25.9	15.7	62.9	100
Gujarat	18.9	8.8	12.7	40	0.5	22.6	22.6	13.8	59.1	100
Haryana	18.6	7.8	6.4	33	1.1	26.4	22.3	17.4	66.1	100
Himachal Pradesh	30.2	7.8	5.3	43	2.1	27.6	13.3	13.6	54.6	100
Jammu & Kashmir	19.2	6.6	3.9	30	1.1	29.9	25.8	13.6	69.2	100
Jharkhand	22.7	3.1	8.6	34	1	29	19.2	16.4	64.6	100
Karnataka	19.6	7.8	18.2	46	0.7	23.5	17.7	12.6	53.8	100
Kerala	12.2	8	14	34	3.7	23.6	22.9	15.6	62.1	100
Madhya Pradesh	21.2	3.8	14.5	40	0.5	26.8	17.4	15.9	60	100
Maharashtra	18.6	9.9	14.5	43	1	24.5	17.5	13.9	56	100
Manipur	28.3	5	2.1	35	1.6	32	19	12	62.9	100
Meghalaya	23.4	5.8	11.3	41	0.8	32.7	11.6	14.3	58.7	100
Mizoram	33.2	7.3	2.7	43	1.1	31.2	13.8	10.8	55.7	100
Nagaland	31.2	9.1	0.5	41	5.4	25.3	15.5	13	53.8	100
Orissa	19.7	3.7	13.9	37	1.4	21.9	24.3	15.2	61.3	100

Punjab	15.3	9.3	8.1	33	1.3	24.3	27.1	14.6	66	100
Rajasthan	24.4	4.6	6.8	36	0.8	27.4	19.3	16.7	63.4	100
Sikkim	24.9	13	3.6	42	1.9	32.6	13.2	10.9	56.6	100
Tamil Nadu	15.9	10.1	18.6	45	1.6	22.1	18.5	13.2	53.8	100
Tripura	15.1	6	11.7	33	6.3	23.2	22.7	15.1	60.9	100
Uttarakhand	22.1	7.6	5.5	35	1.8	29.5	19.4	14	62.9	100
Uttar Pradesh	18.9	3.5	6.8	29	0.6	29.5	23	17.8	70.2	100
West Bengal	14.9	5.9	13.5	34	1.5	22	27.6	14.6	64.3	100
A & N Islands	11.4	17.4	8.1	37	3.2	24.4	22.7	12.9	59.9	100
Chandigarh	10.4	17.9	4.6	33	2	29.1	20.9	15.1	65.1	100
Dadra & Nagar Haveli										
Daman & Diu	13.8	21.2	5.8	41	0.6	20.7	24.2	13.5	58.5	100
Lakshadweep	9.6	13	5.4	28	4.3	29.5	22.9	15.3	67.8	100
Puducherry	9.9	11.4	13.8	35	3.5	26.6	20.2	14.4	61.4	100
All-India	18.8	6.1	12.2	37	1.1	25.3	21	15.6	61.9	100

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 531, P-95

Appendix 2: Proportion of never enrolled persons of age 5-29 years in different age-groups for each state/UT

State/UT	% persons never enrolled in the age-group						
	5	6-10	11-13	14-17	18-24	25-29	5-29
Andhra Pradesh	12.5	4.1	3.1	5.4	15.6	26.5	11.7
Arunachal Pradesh	48.0	14.2	7.1	9.7	23.9	34.0	18.5
Assam	43.0	5.1	2.5	4.7	10.5	14.3	8.7
Bihar	57.8	22.5	18.2	23.6	39.8	50.2	30.4
Chhattisgarh	63.0	5.5	4.8	6.6	13.2	18.1	10.8
Delhi	38.5	5.3	1.9	5.6	10.6	12.2	9.1
Goa	0.0	5.7	0.0	2.8	6.7	6.3	5.0
Gujarat	32.4	4.9	4.1	5.8	13.1	20.6	10.5
Haryana	29.2	6.5	3.1	4.8	11.8	17.1	9.7
Himachal Pradesh	14.0	0.7	0.5	0.6	3.4	8.4	3.1
J& K	44.8	4.9	2.8	7.3	14.5	24.8	11.6
Jharkhand	41.0	11.7	9.5	11.5	31.1	39.0	20.9
Karnataka	27.0	3.4	3.6	4.8	11.9	20.5	9.9
Kerala	24.5	0.9	0.0	0.3	0.6	1.1	1.4
Madhya Pradesh	41.6	7.1	4.6	8.2	18.2	26.2	13.8
Maharashtra	41.8	4.0	2.1	2.5	6.7	11.5	6.6
Manipur	41.9	4.4	1.3	4.2	11.2	16.4	8.5
Meghalaya	22.1	3.0	3.0	2.0	5.3	6.2	4.6
Mizoram	24.4	0.8	1.1	1.6	3.3	1.9	2.2
Nagaland	34.7	2.1	2.3	1.3	1.0	0.9	2.0
Orissa	31.0	7.8	6.4	9.9	19.3	27.9	15.0
Punjab	29.9	8.9	3.9	6.6	10.3	15.7	10.1
Rajasthan	31.6	9.9	8.8	11.5	27.2	38.5	18.9
Sikkim	21.6	2.2	1.0	2.8	3.9	10.5	4.6
Tamil	5.6	0.9	0.7	0.9	3.8	7.3	3.0
Tripura	87.9	7.7	4.6	4.1	9.4	16.1	11.2
Uttarakhand	29.0	5.1	4.3	5.4	11.0	17.5	9.0
Uttar Pradesh	46.9	11.8	8.8	13.0	24.0	35.8	18.7
West Bengal	47.7	6.8	4.6	7.4	16.4	24.2	13.4
A & N Islands	21.6	1.6	1.2	0.0	2.0	5.0	2.4
Chandigarh	55.6	6.1	4.0	11.1	11.4	18.9	12.4
Dadra & NH	19.2	6.8	9.7	16.4	15.7	8.5	11.1
Daman & Diu	17.5	1.4	1.3	0.0	3.0	1.8	2.0
Lakshadweep	17.4	3.5	3.1	0.9	2.6	4.2	3.2
Puducherry	7.6	0.8	0.0	0.0	3.2	3.2	1.9
All-India	38.5	8.8	6.1	8.5	16.6	24.1	13.8

Source: National Sample Survey Organization (2010a), 64th Round, Report No. 532, P-86