

India's Labour Market during the 2000s

Surveying the Changes

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The growth of gross domestic product in every sub-sector of the Indian economy accelerated during the second half of the 2000s, compared to the first half of the decade. However, employment growth in most sectors except construction decelerated. This jobless growth was partly the result of positive changes such as the reduction of "distress employment" in agriculture, created during the previous half-decade, and an expansion in the population of students. Rural wages rose and average educational levels of the workforce improved. Government interventions in rural India since the mid-2000s, particularly the Mahatma Gandhi National Rural Employment Guarantee Act, seemed to have aided these positive transformations. However, manufacturing employment in the country fell and employment growth slowed down in most constituents of the services sector. The new jobs generated were predominantly in rural construction. The slow progress in the diversification of India's employment structure has led to large-scale withdrawal of women from the labour force, with the number of women thus "missing" being as large as the population of Brazil.

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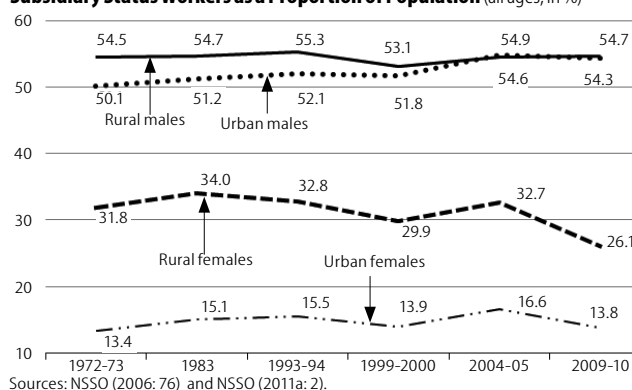
This paper examines the changes in India's labour market during the last three decades, and in the 2000s in particular. During a good part of the 2000s, India was second only to China, among the large economies of the world, in the growth of gross domestic product (GDP). The 2000s are the second decade of the wide-ranging economic reforms that India embarked on in 1991. There is greater recognition today of the potential of India's young, working-age population. It is frequently argued – notably in the western media – that the "demographic dividend" will take India to the front lines of the global economy. Given such a context, it is worthwhile to examine if India's labour force is undergoing a modernisation process that would justify the rapidly growing GDP numbers.

Development experience, especially since the mid-1950s, suggests that two features stand out during the modernisation of a country's labour market. First is the movement of "surplus labour" from the traditional (also agricultural or informal) sectors to the modern (also industrial or formal) sectors – as famously modelled by Arthur Lewis. With the exhaustion of surplus labour reserves in agriculture, the share and absolute size of the agricultural labour force fall and real wages begin to rise in the economy (Fields 2004). Fei and Ranis (1975) note that the east Asian tiger economies, Taiwan and South Korea, had reached such a turning point in development by the mid-1960s. Some observers point out that China too is now moving to a stage in which it has little surplus labour left in agriculture (Xiaobo et al 2011).

Second, modernising changes in the labour market involve an improvement in the skill and educational levels of the workforce, along with the emergence of new industries or sectors that demand higher labour skills. This was clearly witnessed in the case of east Asian economies when they began climbing up the technology ladder in the 1970s, transforming from being low-wage exporters (Fei and Ranis 1975). The significant achievements by the east Asian countries in education and human development aided these countries' industrial transformation (Amsden 1989).

In this paper, we seek to examine whether the long unchanged landscape of India's labour market is finally being reshaped by the country's rapid economic growth. The analysis is based mainly on the National Sample Survey Office's (NSSO) reports on Employment and Unemployment in India.¹ The paper finds that the much-delayed movement of the labour force away from agriculture has clearly begun in India, with the 2009-10 survey providing firm evidence on this. There has also been a noticeable improvement in the educational levels

Figure 1: Workforce Participation Rates in India: Usual Principal and Usual Subsidiary Status Workers as a Proportion of Population (all ages, in %)



of the country's workforce. However, the modernisation of the labour force in India is hitting a roadblock, given the slow rate of non-agricultural job generation. In fact, the size of the manufacturing workforce in the country declined between 2004-05 and 2009-10. Also, the large-scale withdrawal of women from the labour force is a continuing challenge for India's progressive transformation.

Section 1 of this paper discusses the broad trends in labour absorption in the Indian economy. Section 2 tries to explain the seemingly sharp divergences between the first and the second half of the 2000s in employment growth. Section 3 deals with the continuing challenges to labour market modernisation, mainly the slow diversification of the country's employment structure. Section 4 addresses the low levels of female labour participation in India, while Section 5 concludes.

1 Broad Trends in Labour Absorption

Low labour participation rates (LPR) and workforce participation rates (WPR) have been persistent characteristics of India's labour market. These are also the severest challenge to the realisation of the demographic dividend for the country. In 2008, the LPR in India was only 56% compared to 74% in China and 71% in Brazil.²

The LPR indicates the proportion of the population that is economically active, including the employed as well as those unemployed but actively seeking jobs. The proportion of the population that is employed is denoted by the WPR. Persons who are not economically active comprise those who are too young or too old to work, students, rentiers, recipients of pensions or remittances, the disabled, as well as persons attending to "domestic duties".

The expansion of the working-age population and the emergence of new economic opportunities can lead to rises in the LPR and WPR. At the same time, the increase in school and college enrolments can result in a fall in LPR. China's LPR has declined since 1990 on account of the rise in the college enrolment rate in that country (Naughton 2007: 180).

Figure 1 shows the usual principal and usual subsidiary status workers as a proportion of the total population of India over the years.³ There are two striking aspects of this data observed from the National Sample Survey (NSS) reports. First, in general, there has been very little change in India's WPR

even after the 1990s. WPR improved after 1993-94 only in the case of urban males. The second aspect is the extremely low level of female work participation (discussed further in Section 5). Even in 2009-10, only 13.8% of the total urban female population was in the workforce (Figure 1).

1.1 Estimates of Workers

The size of the workforce in India can be estimated by multiplying the WPR obtained from the NSS with the total population figures available from the Census of India. Table 1 shows the estimates of workers by various categories and Table 2 shows the net increase in employment during the different periods. All estimates of workers in this paper (unless otherwise specified) are based on the usual status of persons, considering both the usual principal and the usual subsidiary economic activities.

Table 1: Estimates of Workers in India, by Categories in Various Years
(numbers in millions)

Category	1983	1993-94	1999-2000	2004-05	2009-10
Rural male	154	188	199	219	232
Rural female	91	105	106	124	105
Urban male	47	65	76	90	100
Urban female	12	17	18	25	23
All persons	303	374	398	458	459

Population figures (based on Census of India) are from Sundaram (2007), Table 1 and NSSO (2011a), Appendix C.

Source: Estimates based on NSSO (1987, 1997, 2001, 2006 and 2011a).

Table 2: Net Increase in the Number of Workers in India
(1983 to 2009-10, in millions)

Period	All Workers	Agricultural Workers	Non-Agricultural Workers
1983 to 1993-94	71.1	32.4	38.7
1993-94 to 1999-2000	24.0	0.8	23.2
1999-2000 to 2004-05	59.5	18.5	41
2004-05 to 2009-10	1.25	-21.1	22.3
1993-94 to 2009-10	84.7	-1.8	86.5

Source: Same as Table 1.

Table 3: Annual Net Increase in the Number of Workers and Annual Rates of Growth of GDP in India (1983 to 2009-10)

Period	Annual Increase in Employment, in Millions	Annual Increase in Non-Agricultural Employment, in Millions	Annual Rate of GDP Growth, %
1983 to 1993-94	6.8	3.7	5.2
1993-94 to 1999-2000	4.0	3.9	6.5
1999-2000 to 2004-05	11.9	8.2	5.9
2004-05 to 2009-10	0.24	4.5	8.6
1993-94 to 2009-10	5.3	5.4	6.8

GDP at constant (2004-05) prices. GDP growth rates are estimated using semi-logarithmic regressions. All growth rates are significant at less than 5% level. Source: Estimates based on NSSO (1987, 1997, 2001, 2006, 2011a) and *National Accounts Statistics* (available from the Reserve Bank of India website).

Table 4: Net Increase in the Number of Workers in India, by Activity Status
(in millions)

Activity Status	1983 to 1993-94	1993-94 to 1999-2000	1999-2000 to 2004-05	2004-05 to 2009-10
All workers	71.1	24.0	59.5	1.25
Causal workers	31.4	11.5	-0.2	21.2
Casual in public works	—	—	0.4	3.7
Casual in public works*	—	—	—	5.8
Casual in MGNREGA*	—	—	—	2.5
Regular workers	8.9	7.5	11.3	5.3
Self-employed	30.7	5.0	49.5	-26.2

*Estimates based on current weekly status of persons. All other estimates in this table are based on usual (principal and subsidiary) status of persons.

Source: Estimates based on NSSO (2006, 2011a and 2011b).

Previous studies have pointed out that the 1980s were a period of relatively fast growth of non-agricultural employment opportunities in India's rural areas. This growth contributed to the rise in real agricultural wages and in the reduction of poverty during that decade (Sen 1996).

Employment growth slowed down sharply during the 1990s, especially in rural areas. As Table 2 shows, the net increase in employment in India was 71 million between 1983 and 1993-94, but fell to 24 million between 1993-94 and 1999-2000. Further, there was a predominance of casual workers in the new employment generated during the 1990s. In fact, this record of employment growth cast serious doubts on the sustainability of India's economic growth during the post-reform years (see Tables 2, 3 and 4, p 40).

During the first half of the 2000s (between 1999-2000 and 2004-05), employment growth in India revived impressively with a net increase of 59.5 million new jobs, and with a significant jump in the numbers of the self-employed (see Tables 2, 3 and 4). However, during the same period of time, the quality of employment suffered a decline (Chandrasekhar and Ghosh 2006). The average educational achievements of persons who newly joined the workforce fell between 1999-2000 and 2004-05 relative to the earlier periods (Thomas 2011a). The growth of wages slowed down and wage inequalities increased in India during the post-reform period of 1993-94 to 2004-05 (Karan and Selvaraj 2008; Sarkar and Mehta 2010). Studies also pointed to the large size of the "working poor" in the country (Papola 2008).

It was in this context that the latest (66th) round of the NSS in 2009-10 indicated that employment generation in the Indian economy declined sharply again, with only 1.25 million new jobs recorded in the country between 2004-05 and 2009-10. Notably, this slowdown in employment growth occurred during a time when the country's economic growth showed a distinct acceleration (see Tables 2 and 3). Employment generation during the second half of the 2000s also missed by a huge distance the target of 50 million new jobs set by the Eleventh Five-Year Plan (EPW 2011).

The rate of employment generation in India during the post-1991 period fell short of the employment growth record during the 1980s. New jobs were created at the rate of 5.3 million a year between 1993-94 and 2009-10 compared to the rate of 6.8

million a year between 1983 and 1993-94. It is to be noted, however, that if we consider only non-agricultural jobs, the post-1991 years have had a better record compared to the 1980s (see Table 3).

2 Explaining Jobless Growth (Second-Half of 2000s)

The exceptionally slow rate of employment generation in India between 2004-05 and 2009-10 requires some explanation. Pointers in the direction of jobless growth were emerging from the 64th round of the NSS, held in 2007-08 (EPW 2010). When the 2009-10 survey results provided further confirmation of such a tendency, the Planning Commission even questioned the methodology adopted by the NSSO in data collection (EPW 2011). The results of the survey in 2004-05 (61st round of the NSS) had been widely seen as vindication that economic reforms had finally delivered on the employment front.

However, as this paper shows, the figures on overall employment growth fail to capture the true nature of economic and employment growth in India. One of the reasons is the behaviour of agricultural employment. Agricultural employment rose in India during the first half of the 2000s alongside the stagnation in the growth of rural incomes, while agricultural employment declined during the second half of the 2000s even as the rural economy recovered somewhat. These factors that led to the slow growth of overall employment in India after 2004-05 are discussed below.

2.1 Improvement in the Rural Economy?

The marginal increase in overall employment in India, reported between 2004-05 and 2009-10, is the result of two opposing trends in labour absorption – an absolute decline of 21.1 million workers engaged in agriculture and related activities, and a modest increase of 22.3 million workers in the non-agricultural sectors (see Table 2). What explains the fall in agricultural employment growth during the second half of the 2000s?

Earlier, between 1999-2000 and 2004-05, agriculture and allied activities such as fishing and forestry contributed 18.5 million of the 59.5 million new jobs generated in India (or one-third of the total increase during the period). But GDP growth in agriculture had been statistically insignificant during the first half of the 2000s (see Table 2 and Table 5). Farmer suicides

Table 5: Net Increase in Employment and Growth of GDP in India, Sector-wise (1983 to 2009-10)

	Net Increase in Employment in Million Numbers					Growth of GDP in %				
	1983 to 1993-94	1993-94 to 2009-10	1993-94 to 1999-2000	1999-2000 to 2004-05	2004-05 to 2009-10	1982-83 to 1993-94	1993-94 to 2009-10	1993-94 to 2000	1999-2000 to 2004-05	2004-05 to 2009-10
Agriculture, hunting, forestry and fishing	32.4	-1.8	0.8	18.5	-21.1	3.1	2.7	3.3	1.6*	4.1
Mining and quarrying	0.9	0.3	-0.4	0.3	0.4			5.1		
Manufacturing	7.6	9.2	3.4	9.6	-3.7	5.2	7.0	6.8	6.1	10.5
Electricity, gas and water	-0.2	-0.1	-0.4	0.2	0.0			6.9		
Services and construction	31.1	77.8	22.1	30.7	25.0	6.5	8.6	8.1	7.8	10.5
Construction	5.3	32.0	5.4	8.4	18.1	5.5	8.5	6.3	8.8	9.6
Trade, hotels, transport and communication	12.6	29.9	13.4	12.6	3.9	5.7	9.6	9	10.0	10.5
Financing, real estate and business services	1.6	6.6	1.4	2.9	2.3	9.1	8.7	8	6.7	13.4
Community, social and personal services	11.6	9.3	2.0	6.7	0.7	5.9	6.7	8	4.8	8.0
Total employment/GDP	71.1	84.7	24.0	59.5	1.2	5.2	6.8	6.5	5.9	8.6

*Not statistically different from zero even at 10% level.

Notes and Source: Same as Table 3.

had been reported from several regions of the country during this period. Surveys conducted by the Foundation for Agrarian Studies (in 2005-06) showed that the proportions of cultivator households earning negative incomes from crop production were as high as 19% and 36% respectively in selected villages in Maharashtra and Andhra Pradesh (Ramachandran and Rawal 2010). How could agricultural employment have revived during a period of general stagnation in the growth of agricultural incomes?

2.1.1 Movement of Females Into and Out of Agriculture

The answer to the above puzzle perhaps lies in the fact that an overwhelming proportion of all persons who joined the agricultural labour force in India between 1999-2000 and 2004-05 (16.9 million of 18.5 million) were self-employed females (see Table 6). Some scholars have argued that these rural women entered the agricultural labour force to supplement the low household incomes, in response to distress conditions in the countryside (Abraham 2009).

Table 6: Net Increase in Employment in Agriculture and Related Activities in India, All Workers and Female Workers (1999-2000 and 2009-10, numbers in millions)

Period	Workers, by Status	All Workers	Female Workers
1999-2000 to 2004-05	All workers	18.5	14.4
	Self-employed workers	27.7	16.9
	Casual workers	-7.9	-2.4
2004-05 to 2009-10	All workers	-21.1	-21.8
	Self-employed workers	-23.5	-19.0
	Casual workers	2.7	-2.5

Source: Estimates based on NSSO (2001, 2006 and 2011b).

On the contrary, between 2004-05 and 2009-10, close to 22 million women left agricultural work, of which 19 million were in the self-employed category (see Table 6). Just as the steep rise in female agricultural employment during the first half of the 2000s was linked to rural distress, its equally steep decline during the second half of the 2000s was likely to be associated with some improvement in India's rural economy. The growth of agricultural incomes in India showed acceleration during the second half of the 2000s (see Table 5). The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the flagship initiative of the first United Progressive Alliance (UPA) government, has produced a substantial impact on rural employment and rural wages. NSS data shows that the number of casual workers engaged in public works (as per current weekly status) registered an increase of 5.8 million between 2004-05 and 2009-10. Of this, an increase of 2.5 million occurred due to public works carried out under MGNREGA (see Table 4).

There has been a clear upward shift in the growth of real wages in India, especially in rural areas, since the mid-2000s (see Table 7). The real wages of female casual workers (who are employed in activities other than public works) in rural areas grew at an average annual rate of 5.5% between 2004-05 and 2009-10, compared to 1.6% only between 1999-2000 and 2004-05 (see Table 7). Usami (2012) found that the real wages of agricultural workers in India remained stagnant or even slightly declined between 1999-2000 and 2006-07, but real

wages began to rise after 2007-08. Thorat and Dubey (2012) noted acceleration in the growth of consumption expenditure and in the reduction of poverty in rural India between 2004-05 and 2009-10 across households belonging to various socio-religious groups.

Table 7: Annual Average Rates of Growth of Daily Real Wages for Casual Workers (Aged 15-59 Years) Engaged in Works Other Than Public Works in India

Period	Rural Male	Rural Female	Urban Male	Urban Female
1993-94 to 1999-2000	3.8	3.4	3.1	4.2
1999-2000 to 2004-05	2.0	1.6	-0.5	-1.2
2004-05 to 2009-10	4.1	5.5	3.9	3.8

Deflated using Consumer Price Indices for agricultural labourers (1986-87 = 100) and for urban non-manual workers (1984-85 = 100).

Source: Estimates based on NSSO (2011b:93), Statement 5.13.

Table 8: Distribution of Incremental Population of Rural Females in India, by Activity Status and Household Consumption Expenditure (1999-2000 to 2009-10, in millions)

Activity Status	1999-2000 to 2004-05		2004-05 to 2009-10	
	Bottom 60%	Top 40%	Bottom 60%	Top 40%
Self-employed in agriculture	8.0	7.6	-9.3	-8.6
Attend to domestic duties only	-3.3	-2.4	16.5	8.0
Attend to domestic duties and also engage in free collection of goods (e.g., vegetables), tailoring, weaving, etc., for household use	3.6	2.1	8.2	2.0
Students	10.9	4.3	12.8	1.5
Total incremental population	12.4	13.3	20.0	1.0

The table refers to rural females belonging to the bottom 60% and top 40% of households by monthly per capita consumption expenditures.

Source: Estimates based on NSSO (2001, 2006 and 2011b).

Between 1999-2000 and 2004-05, rural women who reported their economic status as "attending to domestic duties only" declined in number, while self-employed rural females grew in strength. But this was reversed between 2004-05 and 2009-10. There was a sharp rise in the numbers of rural females who were attending to domestic duties only and a fall in the numbers of rural females who were self-employed in agriculture (see Table 8). A possible reason for the movement of women back to household work during the second half of the 2000s is the improvement in the availability of income-earning opportunities for male members of the family.

A key feature of the above-referred shifts in activity status is that they occurred for relatively poor as well as for relatively rich household groups (see Table 8). This implies that the distress-induced movement of rural females to self-employment in agriculture during the first-half of the 2000s occurred even among the better-off rural households. This is plausible because a substantial segment of even the top 40% (by consumption expenditure) of households in rural India could be surviving just above the subsistence levels. Also, opportunities for self-employment in agriculture are likely to be better for relatively rich households because of their likely possession of land and livestock.⁴

To sum up: a large part of the variation in employment in India during the 2000s occurred due to the shifts in the activity status of rural females between "attending to domestic duties only" (not part of the labour force) and self-employment in agriculture. The fall in female agricultural employment during the second half of the 2000s is possibly due to an improvement – and not a worsening – in the economic conditions in rural India.

2.2 The Rise in the Population of Students

Another reason for the slow growth of India's workforce during the second half of the 2000s was a particularly fast expansion of the population of students. According to NSS data, there has been a steady increase in the ratio of students to total population in India – from 20.5% in 1993-94 to 24.3% in 2004-05, and further to 26.6% in 2009-10. Students as a proportion of the net increase in population (aged 4+) was 51.4% between 2004-05 and 2009-10 compared to 42% only during 1999-2000 to 2004-05.⁵

Considerable expansion of primary and secondary school education in India's rural areas had, in fact, occurred during the first half of the 2000s itself (see Table 9). Between 1999-2000 and 2004-05, the ratio of students to population among rural females in the age groups of 5-9 and 10-14 years rose by 14 and 13 percentage points respectively. During the second half of the 2000s, it appears that the country registered substantial growth of education beyond the secondary level. Among rural females in the age group of 15-19 years, 47% were students in 2009-10, up from 31.5% only in 2004-05 (see Table 9). (It can reasonably be expected that a large proportion of students in the age group of 15-19 years are students who pursue senior secondary or even higher education.)

It is notable that the population of students pursuing education beyond the secondary level is much higher in rural India than in urban India. In 2009-10, the numbers of students aged 15 years and above were 52.5 million in rural and nearly 35 million in urban areas of India. Also worth noting is that among rural students aged 15 years and above, 20 million were females (see Table 10).

Table 9: Students to Population Ratio (SPR) in India (in %) in 2009-10 for Various Age-Groups, and Increases in SPR (in %) between 1999-2000 and 2009-10

Age-Group	Category	SPR in %, 2009-10	Increase in SPR, in Percentage Points	
			1999-2000 to 2004-05	2004-05 to 2009-10
5-9 years	Rural female	84.1	13.7	7.3
	Rural male	85.9	9.5	5.7
	Urban female	91.3	6.4	3.9
	Urban male	92.4	4.9	3.7
10-14 years	Rural female	86.9	12.6	10.8
	Rural male	91.0	8.1	5.2
	Urban female	93.6	5.7	5.8
	Urban male	93.6	2.5	3.8
15-19 years	Rural female	47.1	5.7	15.6
	Rural male	57.3	2.3	13.7
	Urban female	68.2	5.0	11.5
	Urban male	70.1	0.2	11.4
20-24 years	Rural female	7.5	1	3.6
	Rural male	16.6	0.5	7.5
	Urban female	23.4	-0.9	8.5
	Urban male	29.7	-0.3	8.2

Source: Estimates based on NSSO (2001, 2006 and 2011b).

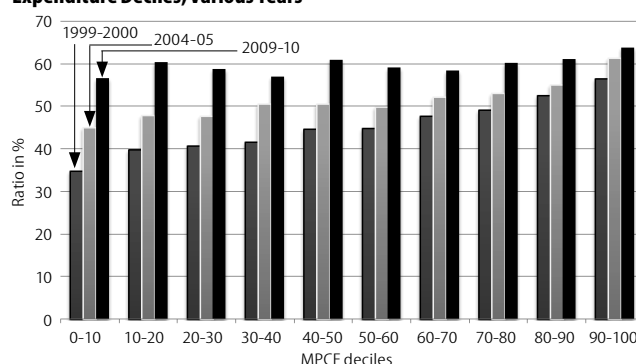
Table 10: Estimates of Students in India, by Age-Group (2009-10, in millions)

Category	5-9	10-14	15-19	20-24	25-29	Total
Rural female	35.7	38.7	17.2	2.6	0.2	94.4
Rural male	42.6	47.9	26.5	5.6	0.4	123
Urban female	12.7	14.4	10.8	3.8	0.4	42.1
Urban male	15.4	17.7	13.8	5.3	0.6	52.8
Total	106.4	118.7	68.3	17.3	1.6	312.3

Source: Estimates based on NSSO (2011b).

Another positive aspect has been the reduction of disparity in access to education. Figure 2 shows the ratio of students to population belonging to the age group of five to 24 across deciles of households with varying consumption-expenditure levels. In 1999-2000, the difference in this ratio between the richest and the poorest (in terms of consumption expenditure) deciles of households was 22%. By 2009-10, this difference narrowed down to 7% (see Figure 2).

Figure 2: Students as a Ratio of Population Belonging to the 5-24 Age-Group, among Rural Females in India, by Household Monthly Per capita Consumer Expenditure Deciles, Various Years



Source: Estimates based on NSSO (2001, 2006 and 2011b).

Other studies, too, confirm such findings. The PROBE report on elementary education in India, which is based on surveys in eight north Indian states, points to substantial improvement in student enrolment in the country between 1996 and 2006. The report attributes this positive change to public initiatives such as Sarva Shiksha Abhiyan, Supreme Court orders on mid-day meals, and also to strong public campaigns (De et al 2011).

Data on school or college enrolment do not, however, tell us much about the quality of education in India. The inadequacy of teachers and insufficient schooling infrastructure are some of the key reasons for the persistence of poor quality education in India. No teaching activity was going on in half of the government schools covered by the survey, at the time the (survey) investigators arrived, the PROBE report notes (De et al 2011). Despite the achievements in enrolment ratios reported above, the number of children in India in the age group of 6-14 years who were out of school was 22 million in 2009-10 – although this was still a big improvement from the 65 million out-of-school children in the country in 2001 (Rawal 2011). It is worthwhile to remember here that India had originally targeted to achieve the goal of providing free and compulsory education up to the age of 14 as early as 1960 (Drèze and Sen 2002).

2.3 Education-wise Profile of the Workforce

The distribution of India's workforce by educational achievements hardly presents an impressive picture. Even in 2009-10, 32% of all workers in India were illiterate (almost as large as the proportion of illiterates in India's population) (see Table 11, p 44). The levels of illiteracy were much higher among certain segments of the workforce. Thus the average rate of illiteracy among female workers was 52.5%, while in the case of female

Table 11: Distribution (in %) of the Employed, Unemployed and Total Population in India by Educational Qualifications (2009-10)

	Not Literate	Primary and Middle	Secondary, Higher Secondary and Diploma	Graduate and above	Total	Total in Millions
Population, total	32.8	45.7	16.1	5.4	100	1,174.1
Employed, total	31.2	41.5	19.2	8.0	100	459.1
Unemployed, total	4.3	29.9	38.9	28.1	100	9.6
Employed, females	52.5	33.5	9.1	5.0	100	127.4
Casual workers	44.2	45.9	9.3	0.7	100	151.3
Self-employed	30.2	42.8	21.2	6.0	100	232.3
Regular workers	8.3	29.2	32.8	30.1	100	74.9
Casual workers, rural females	65.1	31.9	3.2	0.1	100	41.7
Regular workers, urban females	16.1	20.1	22.0	42.1	100	8.9

Higher secondary and diploma denote higher secondary and diploma education.

Source: Estimates based on NSSO (2011b).

casual workers in rural areas, the illiteracy rate climbed up even further, to 65% (see Table 11).

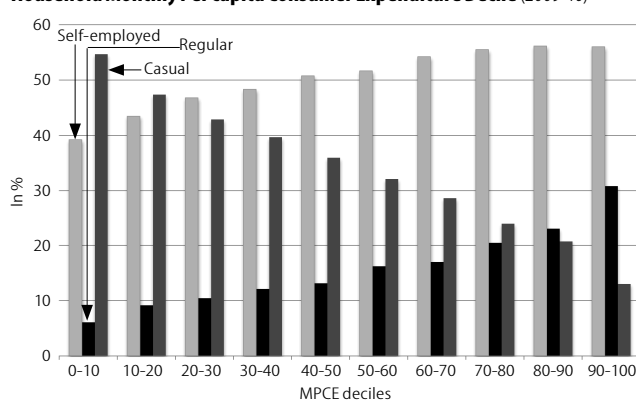
There has been a marginal improvement in the educational profile of India's workforce during the second half of the 2000s. Between 2004-05 and 2009-10, the number of illiterate workers in India decreased by a substantial 33.6 million (declining from 177 million to 143 million). In fact, the marginal increase in net employment in India (of only 1.25 million) during the second half of the 2000s was the result of such a large fall in the size of illiterate workers, on the one hand, and an increase in the size of literate workers by 34.9 million (see Appendix Table 1, p 50).

2.3.1 Activity Status and Educational Achievements

Out of India's 459 million workers in 2009-10, 233 million were self-employed, 151 million were casual workers, and only 75 million were regular employees. A major feature of employment growth in India during the first half of the 2000s was a massive increase (of 50 million) in the numbers of the self-employed. This trend was reversed during the second half of the 2000s. Between 2004-05 and 2009-10, there was a sharp decline in the number of self-employed workers (of 26 million), which was compensated in large measure by the rise (of 21 million) in the size of the casual workforce (see Table 4).

Among the three categories of workers, regular workers fare the best and casual workers the worst in terms of educational achievements and consumption expenditure levels. Illiteracy rates were 44%, 30% and 8% respectively among casual workers, the self-employed, and regular workers in India in 2009-10 (see Table 11). Casual workers belong, predominantly, to households that fall under the bottom deciles with respect to consumption expenditure (see Figure 3). In comparison, the self-employed are a more heterogeneous category, comprising workers with varied educational and consumption expenditure levels (see Figure 3 and Table 11).

Of the self-employed who joined the workforce in India between 1999-2000 and 2004-05, approximately 20% were illiterates. On the other hand, almost all of the self-employed workers who exited the labour force between 2004-05 and

Figure 3: Workers in India by Activity Status, as % of All Workers in Each Household Monthly Per capita Consumer Expenditure Decile (2009-10)

Source: Estimates based on NSSO (2011b).

2009-10 were illiterates (see Appendix Tables 1 and 2, p 50).⁶ Thus the average educational level of the self-employed category declined during the first half of the 2000s, but subsequently improved during the second half.

Similar changes occurred for regular workers too. Illiterates and persons with primary or middle-school education accounted for more than 50% of the net addition of regular workers in India during the first half of the 2000s. On the other hand, during the second half of the 2000s, illiterates and even middle-school educated regular workers declined in number. At the same time, the number of regular workers with a graduate or postgraduate degree increased by an impressive seven million in India during the second half of the 2000s.

During the second half of the 2000s, there was also an improvement in the educational level of the casual workforce. Of the net increase of 20.9 million casual workers in India between 2004-05 and 2009-10, 8.1 million had completed at least secondary school education (see Appendix Table 1).

To sum up, illiterates and persons with primary- or middle-school education accounted for a substantial share of the new employment generated in India during the first half of the 2000s. On the other hand, during the second half of the 2000s, illiterate workers declined in number. Also employment opportunities reduced for workers with only primary- or middle-school education (a net increase of six million as against 38 million during the first half of the 2000s). At the same time, the opportunities for better educated workers (with at least secondary school education) were higher during the second half of the 2000s compared to the first half (29 million as against 21 million) (see Appendix Tables 1 and 2).

3 Continuing Challenges to a Modern Labour Market

Despite the progress achieved in some areas discussed in the previous sections, the modernisation of India's labour market still has a long distance to cover. The diversification of India's employment structure has been limited and faces stiff challenges. Even in 2009-10, agriculture and allied activities continued to employ 238 million of India's 459 million workers, or 52% of the country's total workforce. At the same time, though, the share of agriculture and allied activities in India's GDP

declined considerably over the decades: from 51.0% in 1951-52 to 14.6% in 2009-10 (see Table 12 and Thomas 2011b).

The diversification of the employment structure has been much quicker in China. In 1978, both China and India had 71% of their workforce employed in agriculture. However, by 2004, India had fallen considerably behind China with respect to the proportion of non-agricultural workers in the workforce. This proportion was 43%, 53% and 92% respectively in India, China and South Korea in that year (see Table 13).

Table 12: Sector-wise Distribution of India's GDP and Employment (in %)

Sectors	Shares in GDP		Shares in Employment		Employment in Millions
	1982-83	2009-10	1983	2009-10	
Agriculture and allied activities	35.1	14.6	68.2	51.8	238
Mining and quarrying	2.8	2.4	0.6	0.6	3
Manufacturing	14.3	16.1	10.6	11.4	52
Electricity, gas and water	1.5	2.0	0.3	0.3	1
Services and construction	45.0	64.9	19.9	35.8	165
Construction	7.7	7.9	2.3	9.6	44
Trade, hotels, transport and communication	16.7	26.5	8.8	15.7	72
Financing, real estate and business services	8.3	17.2	0.7	2.2	10
Community, social and personal service	12.4	13.1	8.1	8.3	38
GDP/total employment	100.0	100.0	100.0	100.0	459

Notes and Source: Same as Table 3.

Table 13: Shares (in %) of Agriculture in Total Employment and Value Added in India, China and South Korea, Various Years

	Employment			Value Added		
	1978	1993	2004	1978	1993	2004
India	71	64	57	44	33	22
China	71	56	47	28	17	9
South Korea	34*	15	8	16*	7	4

*The figures relate to 1980.

Source: Bosworth and Collins (2008: 57); World Development Indicators, The World Bank (available with <http://data.worldbank.org/indicator>).

An absolute fall in the numbers of persons engaged in agriculture and allied activities was witnessed for the first time in India during the second half of the 2000s. Over the longer period from 1993-94 to 2009-10, persons engaged in the primary sector declined by 1.8 million even as the total employment in the country increased by 84.7 million (see Table 5). Also, since the 1980s, the proportion of the workforce engaged in primary sector activities in India declined by 16 percentage points (see Table 12).

International experience suggests that the movement of the workforce away from agriculture could be triggered by the “push” of technological change in agriculture (which limits labour absorption in that sector) or by the “pull” of non-agricultural activities (Fei and Ranis 1975). How much of the change in employment in India during the 2000s could be attributed to the “pull” of non-agricultural activities?

3.1 The Fall in Manufacturing Employment

Among non-agricultural activities, manufacturing played only a marginal role in absorbing the large labour reserves in India. In fact, between 2004-05 and 2009-10, there was an absolute decline of 3.7 million in the total manufacturing employment in the country. Of the 86.5 million new non-agricultural jobs

created in India between 1993-94 and 2009-10, only 9.2 million were in the manufacturing sector (see Table 5). In 2009-10, India's manufacturing sector employed a total of 52 million workers, which included both the organised and unorganised sector workers (see Table 12). The employment in India's factory sector, which broadly represents the organised manufacturing sector, numbered 11.8 million in the same year.⁷

On the other hand, in east Asian countries and China, it was the steady expansion of the manufacturing sector that first provided an exit out of agriculture for the vast majority of the population. Township and village enterprises (TVEs) played a pivotal role in China's early development transition since 1978. Between 1978 and 1996, employment in the TVEs increased from 28 million to 135 million, and output from the TVEs as a share of China's GDP increased from 6% to 26% (Naughton 2007: 274-75). In 2005, the Chinese manufacturing sector employed 104 million “regular” workers, which was almost double the size of India's total manufacturing workforce in that year (Ghose 2008; Thomas 2011a).

The growth of manufacturing employment in India slowed down during the post-1990 years compared to the 1980s. During 1983 to 1993-94, 7.6 million manufacturing jobs were generated compared to the 9.2 million new jobs added during the 16 years since 1993-94. Also the proportion of manufacturing jobs to all new non-agricultural jobs fell from 20% during the 1980s to 11% during the post-1990 period (see Table 5).

The growth of manufacturing employment in India exhibited relatively high volatility since the 1990s. Manufacturing employment grew rapidly between 1999-2000 and 2004-05, as 9.6 million new jobs were generated in the country during this five-year period. This growth was led largely by export-oriented industries such as garments, textiles, leather and diamond cutting (Thomas 2011a). However, between 2004-05 and 2009-10, these very industries suffered sharp declines in employment, leading to the fall in India's manufacturing workforce by 3.7 million (see Table 5 and Appendix Table 3, p 50). Manufacturing jobs were lost in most Indian states, notably Tamil Nadu (loss of more than one million jobs) and Gujarat (0.8 million jobs), two of the highly industrialised regions of the country (see Appendix Table 4, p 51).

One of the main objectives of the economic reforms in India since the 1990s was to provide a push to the growth of labour-intensive manufacturing in the country. A detailed enquiry into why such a growth failed to take off is beyond the scope of this paper.⁸ Some studies have identified the shortage of electricity, fluctuations in exchange rate, and volatility in prices of raw material (such as steel and cotton) as major hindrances to India's industrial growth during the late 2000s. Small-scale industries suffered from the inadequacy and high cost of credit. In addition, the worldwide economic slowdown since 2008-09 dealt a heavy blow to India's manufacturing units, especially those catering to export markets (Thomas 2009, 2011b).

The sharp variations in manufacturing employment during the 2000s are also a consequence of the growing share of temporary and contract workers – who could be hired and fired easily – in India's manufacturing workforce. Women accounted

for a substantial part – 3.7 million out of 9.6 million – of the new manufacturing employment created during the first half of the 2000s. At the same time, during the second half of the 2000s, 3.1 million out of the 3.7 million workers who lost jobs in manufacturing in India were females (see Appendix Table 3).

3.2 Limitations of Services-led Employment Growth

The limited transformation of India's employment structure was achieved by the movement of workers into the services sectors – particularly so during recent decades.

During the 1980s, close to 12 million new jobs were recorded in India under the broad category “community, social and personal services” (see Table 5 and Appendix Table 3). “Public administration and defence services” and “education, scientific and research services” fall within this broad category, and they contributed 2.5 million and 1.8 million respectively to employment addition during the 1980s.⁹ However, since the 1990s, considerable changes occurred in the nature of employment under the community, social and personal services rubric. In particular, there has been a net decline of jobs under public administration and defence services after 1993-94. Although, community, social and personal services recorded a jump in employment growth during the first half of the 2000s (6.7 million jobs during these five years), a substantial part of the new jobs created were for female workers employed as domestic help (see Table 5 and Appendix Table 3; see also Thomas 2011a).

During the 1990s (1993-94 to 1999-2000), trade, hotels, transport and communication together generated 13.4 million jobs, or close to 60% of the net increase in non-agricultural employment during that decade. Since the 2000s, construction became the major source of employment generation in the country. Persons employed in construction increased by only 5.3 million during the 10 years between 1983 and 1993-94, but by 18.1 million during the five-year period from 2004-05 to 2009-10 (see Table 5 and Appendix Table 3). During the second half of the 2000s, the construction sector accounted for almost all of the new employment opportunities that emerged in India's rural areas, even as rural jobs were being lost in some other sectors, mainly manufacturing (see Appendix Table 5, p 51).

Thus the chief source of services sector employment in India shifted from community, social and personal services during the 1980s, to trade during the 1990s, and to construction during the 2000s. These changes were accompanied by a decline in the productivity and, possibly, quality of new employment generated. There has been a growing dissociation in the country between sectors that generate GDP and sectors that generate employment (see Table 14). During the 1980s, the construction sector contributed a little over 7% each to total GDP growth and to total employment growth in the Indian economy. During the post-1990 years, the contribution made by construction to India's GDP growth hardly changed: 8.6% only even between 2004-05 and 2009-10. On the other hand, construction accounted for 38% of all new employment created in India between 1993-94 and 2009-10, and 81% of all new non-agricultural employment generated between 2004-05 and 2009-10 (see Table 14).

Table 14: Contribution (in %) by Sectors to the Growth of GDP and to the Growth of Employment in India (1980s and 1990s)

	1983 to 1993-94		1993-94 to 2009-10		2004-05 to 2009-10	
	GDP	Employment	GDP	Employment	GDP	Employment
Agriculture and allied activities	20.5	45.6	11.0	-2.1	9.0	–
Manufacturing	14.5	10.7	14.9	10.9	18.7	-16.6
Services and construction	57.3	43.7	64.5	91.9	74.5	112.1
Construction	7.3	7.5	8.4	37.8	8.6	81.2
Trade, hotels, transport and communication	18.7	17.7	25.3	35.3	30.0	17.5
Financing, real estate and business services	15.6	2.3	16.8	7.8	22.9	10.3
Community, social and personal services	14.8	16.3	13.3	11.0	13.0	3.1
Total employment/GDP	100	100	100	100	100	100*

*Relate to total non-agricultural employment only.

Source: Same as Table 3.

It is clear that the services-led economic growth in India is facing increasingly bigger hurdles in employment generation. The growth of GDP in every sub-sector of the Indian economy accelerated during the second half of the 2000s, compared to the first half of the decade. However, employment growth in each of these sub-sectors except construction decelerated during the second half of the 2000s, compared to the first half (see Table 5). If not for the massive expansion of construction jobs, the employment record of the 2000s would have appeared far less impressive.

3.3 Rural Construction Jobs in Less-Advanced States

It is generally understood that India's economic growth is increasingly becoming more urban-centric.¹⁰ Non-agricultural jobs were generated in larger numbers in the country's urban areas than in rural areas during the 1980s and 1990s. Given such a context, it is puzzling that, during the 2000s, more non-agricultural jobs were generated in India's rural areas than in urban areas. The net increase in non-agricultural jobs in India was 22 million in urban areas and 17 million in rural areas during the 10 years of the 1980s; and 14 million in urban areas and nine million in rural areas during (the six years of) the 1990s. But, during the 2000s, 36 million non-agricultural jobs were generated in the country's rural areas compared to only 28 million such jobs in urban areas (see Appendix Table 5).

Particularly striking is the regional spread of this employment growth. The Indian states that recorded the largest expansion of non-agricultural employment between 2004-05 and 2009-10 were Uttar Pradesh (UP), Rajasthan and Bihar. Ironically, these are three of the four “BIMARU” states, which have long been considered development laggards (see Appendix Table 4). Almost the entire increase of non-agricultural jobs in UP, Rajasthan and Bihar between 2004-05 and 2009-10 occurred in rural construction. Notably, the new employment generated during the second half of the 2000s in construction in these three states alone numbered close to nine million. This was almost half of all non-agricultural jobs (22.4 million) generated in the entire country during this period (see Appendix Table 4).

How real are the reported increases during the second half of the 2000s in the numbers of persons employed in rural

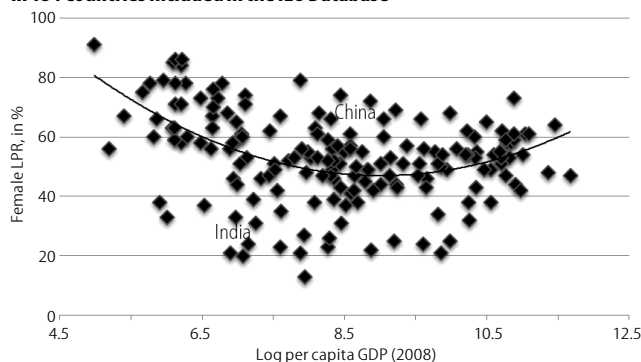
construction in states such as UP, Rajasthan and Bihar? In this connection, it may be noted here that the revival of real wages for agricultural and rural labour in India after 2007-08 was marked in the relatively poor states of Orissa, Bihar, Madhya Pradesh and UP (Usami 2012). Further research is required to investigate whether the enhancement of development expenditures by some of these state governments aided rural employment generation.¹¹ And does the impressive growth of rural employment signal a genuine turn around in the development trajectories of these states?¹² Also, the contribution made by central government initiatives such as the Pradhan Mantri Gram Sadak Yojana (PMGSY) (which claims to have built 3,41,257 km of rural roads since its inception in 2000) to rural employment growth needs to be studied (Government of India 2012: 265).

At the other end, high value-adding, urban jobs are regionally concentrated. More than 20% of all new urban jobs generated in India between 2004-05 and 2009-10 were in the state of Maharashtra. Six states – Maharashtra, Karnataka, Delhi, Gujarat, Kerala and Andhra Pradesh – accounted for 91% of the total of 2.3 million new jobs generated in the country under the category of finance and business services (including software services) during the second half of the 2000s (see Appendix Table 4).

4 Missing Women in the Indian Economy

According to Lewis (1954: 404), “the transfer of women’s work from the household to commercial employment is one of the most notable features of economic development” (quoted in Amsden 1989: 203). However, this is one aspect of labour market modernisation in which India’s record has been strikingly dismal. A low female LPR is indeed the factor that pushes India’s overall LPR to the bottom ranks. Out of 184 countries for which data were available in 2008, India was ranked 42nd in male

Figure 4: Log of Per capita GDP and Female Labour Participation Rate, 2008, in 184 Countries Included in the ILO Database



LPR of population aged 15 years and above.
Source: Based on data obtained from International Labour Organisation (ILO), available with World Development Indicators, World Bank (at <http://data.worldbank.org/indicator>).

LPR (in descending order of LPR), but 165th and 143rd in female LPR and overall LPR respectively.¹³ A plot of female LPR against per capita incomes across these 184 countries shows that India’s female LPR is considerably lower than what is predicted by the per capita income in the country (Figure 4).

The contrast with east Asia is quite marked. In 2008, female LPR (age 15+) was 33% in India, compared to 68% in both

China and Vietnam, as per the International Labour Organisation (ILO) data. Among the south Asian countries, Pakistan and Sri Lanka too have very low LPRs (21% and 35% respectively), while Bangladesh and Nepal have relatively high LPRs (63% and 58% respectively) (all in 2008) (ibid).

In India, the other side of a low female LPR is a substantially high proportion of females reporting their activity status as attending to domestic duties. In 2009-10, 34.7% of all rural females and 46.5% of all urban females in India were attending to domestic duties (Table 15).

Table 15: Females Who Attend to Domestic Duties as a Per cent of All Females, Rural and Urban India

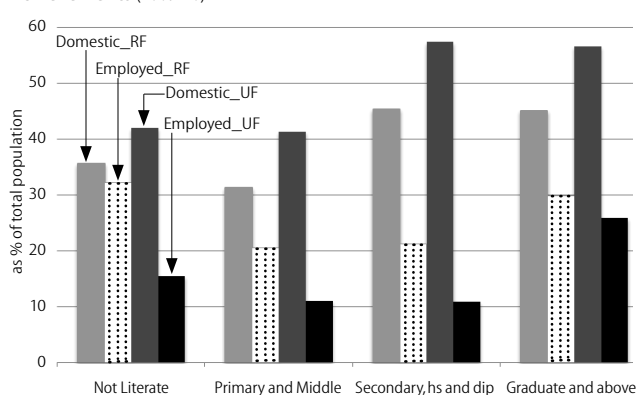
	Rural Females	Urban Females
1993-94	29.1	41.7
1999-2000	29.2	43.3
2004-05	27.2	42.8
2009-10	34.7	46.5

Source: Estimates based on NSSO (1997, 2001, 2006 and 2011b).

An important reason for the reportedly low LPRs of women is the very system of statistical reporting itself. Women’s role in reproduction and in a range of activities within their own households such as caring for the young and old, cooking, and sometimes even household industry do not find recognition in the National Income Accounting or other economic statistics (Mazumdar and Neetha 2011).

Social factors play a significant role in reducing women’s labour participation in India. These include the restrictions imposed on women’s movements outside the household as also discouragement by the husband and in-laws. However, it is striking that the proportion of females attending to domestic duties is relatively high in urban areas and among the better educated – the very segments of the female population that are likely to face less social constraints on labour participation. In 2009-10, among urban females with graduate degrees, those who were reported to be attending to domestic duties was close to 60%, which was almost twice the corresponding proportion for rural females with primary or middle-school education (see Figure 5).

Figure 5: Females Who Are Employed and Who Attend to Domestic Duties as Per cent of All Females, Rural and Urban India, by Education Achievements (2009-10)



Dom. Duties_UF refers to the proportion of urban females attending to domestic duties.
Source: Estimates based on NSSO (2011b).

There are powerful economic factors, too, that tend to reduce female LPR. In India as elsewhere, women face various forms of discrimination at the workplace, particularly in terms of wages (Srivastava and Srivastava 2010). Bardhan (1989) found significant differences between female and male wages

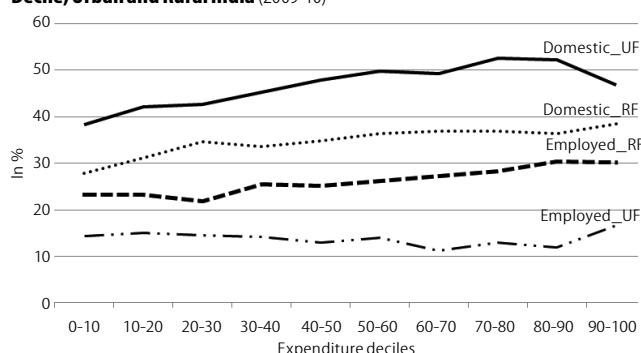
in India during the late 1970s, even after accounting for variations in factors such as age, education, skill and caste. Desai's (2010) survey in 2004-05 showed that the ratio of female to male wage earnings in India was 73% in the public sector and 53% in the private sector.

In this context, it is to be noted that female wages have been considerably lower than male wages in east Asian countries, such as South Korea and Japan, as well. In 1980, the ratio of female to male wage earnings was 44.5% in South Korea and 48.2% in Japan, notes Amsden (1989). Despite such disparities, female LPR is relatively high in these countries, unlike the case in India.

4.1 Absence of Employment Opportunities for Women

In India, it is likely that the factor that restricts female LPR the most is the sheer absence of suitable employment opportunities. Females accounted for only a small share of the relatively high quality jobs generated in India in recent years (see Appendix Table 3). Only 20% of the new jobs created in financing, real estate and business services in India during the 2000s went to females (9,00,000 out of a total of 5.2 million). In the case of computer and related activities, the female share of new jobs created during the second half of the 2000s was only 10% (only 1,00,000 of the total 9,80,000) (see Appendix Table 3). In manufacturing, women find employment increasingly as temporary or contract workers, and as shown in the previous section, women workers constituted the majority of manufacturing workers who lost jobs in India since the mid-2000s.

Figure 6: Females Who Are Employed and Who Attend to Domestic Duties, as Per cent of All Females in Each Household Consumption-Expenditure Decile, Urban and Rural India (2009-10)



'Domestic_UF' refers to the proportion of urban females attending to domestic duties, by household consumption expenditure deciles.

Source: Estimates based on NSSO (2011b).

Given the absence of adequate numbers of gainful employment opportunities, females tend to withdraw from the labour force, especially so with rising household incomes. As Figure 6 shows, the proportion of females attending to domestic duties increases with household consumption expenditures, particularly in the urban areas.

Amartya Sen has highlighted the issue of the "missing women" in the development literature. He was referring to the low female-male ratio in the population, which arises mainly on account of the disadvantages facing the female child (Sen 1999). It can be seen that parallel to the issue of the missing

Table 16: The Number of Females Who Attend to Domestic Duties in India in 2009-10 and the Increase in This Number between 2004-05 and 2009-10 (in millions)

	Not Literate	Primary and Middle	Secondary, Higher Secondary and Diploma	Graduate and Above	Total in Millions
In 2009-10	84.8	81.4	37.1	12.7	216.1
Increase between 2004-05 and 2009-10	13.0	16.8	14.4	4.6	49.4

Source: Estimates based on NSSO (2011b).

women in India's population is the phenomenon of the missing women in India's workforce, that is, the staggering numbers of women who have withdrawn from the labour force and attend to domestic duties (see also Thomas 2011a).

In 2009-10, the number of women attending to domestic duties in India was 216 million, which was even larger than the entire population of Brazil. Of these, the number of women with secondary or higher-secondary school education was 37 million – little more than the population of Canada. Women with graduate degrees or above and attending to domestic duties numbered 12.7 million in India in 2009-10, which was more than twice the population of Singapore (all population figures in 2010) (see Table 16). Clearly, the wastage of talent and the opportunity cost involved in such a massive withdrawal of women from the labour force is enormous and without parallel.

5 Conclusions

Recent NSS data indicates a sharp slowdown in the net increase in employment in India – from 59.5 million during the first half of the 2000s to 1.25 million during the second half. However, this paper argues that the "jobless growth" in India during the second half of the 2000s was partly triggered by some positive changes, especially in rural India.

First is the absolute decline in the number of workers engaged in agriculture and related activities. The distress-driven entry of rural females into self-employment in agriculture had contributed almost a third of the net increase in employment in India during the first half of the 2000s. On the other hand, rural females exited the labour force in equally large numbers during the second half of the 2000s. At least a part of this shift could be ascribed to a revival in India's rural economy after 2004-05, which appears to have benefited from some of the government initiatives. Between 2004-05 and 2009-10, casual employment in public works increased by an impressive 5.8 million, including 2.5 million jobs created due to MGNREGA. There was a clear improvement in rural wages during the second half of the 2000s, as compared to the first half.

Second, a sharp rise in the population of students also contributed to the slowdown in employment growth in India. The second half of the 2000s witnessed an expansion of higher education in the country particularly among rural females, and a noticeable reduction of disparity in access to education.

During the second half of the 2000s, the number of illiterate workers in India declined by 33.6 million, and employment

opportunities grew slowly for workers with primary- or middle-school education. On the other hand, the opportunities for better educated workers (with at least secondary school education) were higher during the second half of the 2000s as compared to the first half.

Despite the progress achieved in some areas, the limited numbers and narrow (sector-wise) range of jobs generated in the non-agricultural sectors remain a huge challenge for labour market modernisation in India. The new employment opportunities created in India during the second half of the 2000s were predominantly in rural construction, and were also largely casual in nature. A significant part of these new jobs were in UP, Rajasthan and Bihar, states that are generally considered development laggards.

At the same time, India's manufacturing employment declined by 3.7 million during the second half of the 2000s. Export-oriented industries such as textiles, garments and diamond-cutting were the ones to suffer massive job losses during this period. Manufacturing jobs were lost in most Indian states,

including Tamil Nadu and Gujarat. Women workers were the worst hit due to manufacturing job losses.

A tall hurdle for labour market modernisation in India is the extremely low rate of female labour participation. The numbers of missing women in India – women who withdraw from labour force and engage only in domestic duties – was a staggering 216 million in 2009-10, almost as large as the population of a country like Brazil. The sheer absence of gainful employment opportunities is likely to be the factor most constraining female participation in the workforce.

Recent changes in India's labour market highlight the important role that government interventions (such as MGNREGA) can play in improving the living conditions of India's rural poor. At the same time, it is increasingly clear that India's services-led economic growth is facing severe challenges on the employment front. The goal of decent work and living for the millions of poor Indians, and especially females, can be achieved only with a significant revival in manufacturing growth, particularly in rural areas.

NOTES

- 1 This study has used concordance tables to compare the industry-wise distribution of workers in the various NSS reports. The classification of industries is according to the National Industrial Classification (NIC) 1970 in the 1983 NSS report, according to NIC 1987 in the 1993-94 NSS report, according to NIC 1998 in the NSS reports for 1999-2000 and 2004-05, and according to NIC 2004 in the 2009-10 NSS report (see Thomas 2011a for details).
- 2 For population aged 15 years and above. See ILO data available with World Development Indicators, World Bank. Viewed on 26 November 2012: <http://data.worldbank.org/data-catalog/world-development-indicators>. Also available at: <http://data.worldbank.org/indicator>
- 3 The NSS defines usual principal status workers as persons who worked for a relatively longer part of the 365 days preceding the date of survey. From the rest of the population, NSS identifies usual subsidiary status workers as persons who worked for at least 30 days during the reference period of 365 days preceding the date of the survey.
- 4 It is worthwhile to enquire whether at least a part of the variations in female agricultural employment during the 2000s could be attributed to methodological changes. Could the 2004-05 survey have adopted a more inclusive definition of woman's employment – because of which some of the domestic duties were counted as self-employment in agriculture? And could the 2009-10 survey have reverted to the original classification?
- 5 Based on estimates from NSSO (2001), NSSO (2006) and NSSO (2011b).
- 6 This movement of illiterate workers into and out of self-employment during the 2000s is possibly linked to the rural females' entry into and exit out of agricultural labour force during the same period.
- 7 This is based on data from Annual Survey of Industries, Summary Results for 2009-10. Accessed on 12 March 2012: http://mospi.nic.in/mospi_new/upload/asi/asi_result_2009_10_tab1_23mar12.pdf
- 8 For a detailed discussion of these issues, see Thomas (2011b).

- 9 As Sen (1996) notes, increased government expenditure was an important stimulus to the growth in non-agricultural employment in India during the 1980s.
- 10 It is also true that the largely urban-based sectors such as financing, real estate and business services have increased their weight in India's GDP during recent decades.
- 11 Das Gupta (2010) shows that there was an improvement in Bihar's development expenditures since the mid-2000s, but this improvement was not sustained.
- 12 Ranjan (2009) noted that the growth of non-agricultural employment in UP until 2004-05 was distress-induced. Rodgers and Rodgers (2011) point out that migration – and not public employment schemes such as MGNREGA – has been the main trigger for labour market changes in rural Bihar.
- 13 See ILO data available with World Development Indicators, World Bank.

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Appendix Table 1: Distribution of Incremental Population (Age 4+) in India between 2004-05 and 2009-10, by Activity Status and Educational Qualifications (in millions)

Activity Status	Not Literate	Primary and Middle	Secondary, Higher Secondary and Diploma	Graduate and Above	Total Incremental Population
Self-employed	-28.8	-7.8	9.8	1.8	-26.0
Regular	-1.8	-2.7	3.1	7.0	5.6
Casual	-3.1	16.9	7.5	0.6	20.9
All employed	-33.6	6.0	20.3	8.6	1.2
Unemployed	-0.3	-0.8	-0.5	0.1	-1.6
Students	-6.2	27.6	21.6	3.1	46.2
Attend domestic duties	12.8	17.1	14.8	4.7	50.0
Total incremental population	-36.7	50.0	58.5	18.7	89.8

Source: Estimates based on NSSO (2006 and 2011b).

Appendix Table 2: Distribution of Incremental Population (Age 15+) in India between 1999-2000 and 2004-05, by Activity Status and Educational Qualifications (in millions)

Activity Status	Not Literate	Primary and Middle	Secondary, Higher Secondary and Diploma	Graduate and Above	Total Incremental Population
Self-employed	9.3	25.2	11.3	3.4	49.9
Regular	1.1	4.8	3.2	2.6	11
Casual	-8.4	8.3	0.5	0.0	0.4
All employed	1.7	38.1	15.2	6	61.5
Unemployed	0.1	0.4	0.7	0.6	1.6
Students	0.1	1.8	6.7	0.7	9.1
Attend domestic duties	-5.9	8.2	3.7	2.2	7.7
Total incremental population	-4.5	49.3	26.6	9.8	81.8

Source: Estimates based on NSSO (2001 and 2006).

Appendix Table 3: Net Increase in Employment in India: All Workers and Female Workers, Sector-wise (in 1,00,000 numbers)

Sectors	1983 to 1993-94		1993-94 to 1999-2000		1999-2000 to 2004-05		2004-05 to 2009-10	
	All	Females	All	Females	All	Female	All	Female
1 Agriculture, hunting, forestry and fishing	324	115	8	-11	185	143	-211	-216
2 Manufacturing	76	25	34	8	96	37	-37	-31
2a Food products, beverages, and tobacco products	23	14	12	7	-3	-1	-3	-2
2b Textiles, apparel, and leather products	-3	2	-10	-1	52	24	-16	-12
3 Construction	53	6	54	4	84	8	181	37
4 Wholesale and retail trade; and restaurants and hotels	93	10	92	15	87	9	21	-4
5 Transport, storage and communications	33	1	41	2	39	2	18	-1
6 Financing, insurance, real estate, and business services	16	3	14	0	29	5	23	4
6a Computer and related activities	x				6.1	1.2	9.8	1.0
7 Community, social and personal services	116	35	19	4	67	44	7	-3
7a Public administration and defence services	25	6	2	-1	-16	-1	10	4
7b Education, scientific and research services	18	10	11	5	41	21	3	2
7c Personal services; other service activities	48	17	-7	-7	36	23	-5	-8
All workers	711	192	240	20	595	246	12	-211
All non-agricultural workers	387	77	232	32	410	103	223	5
Share of females in net increase in non-agricultural workers		20		14		25		2

Notes and Source: Same as Table 1.

Appendix Table 4: Net Increase in Employment in India between 2004-05 and 2009-10, in Different Sectors and Female Workers, State-wise
(in 1,00,000 numbers)

	Agriculture and Allied	Non-agriculture	Rural Non-agriculture	Manufacturing	Construction	Female Workers		Agriculture and Allied	Non-agriculture	Rural Non-agriculture	Manufacturing	Construction	Female Workers
Uttar Pradesh	-27.8	37.2	32.0	-11.0	41.8	-38.4	Himachal Pradesh	-1.8	2.0	2.1	-0.5	1.3	-0.6
Rajasthan	-19.2	27.1	22.8	-6.7	26.5	-7.5	Pondicherry	-0.1	1.7	0.5	0.1	0.4	0.4
Bihar	-35.2	26.4	24.8	-1.6	20.2	-26.5	Chhattisgarh	-9.0	1.3	-0.1	0.9	-0.3	-5.9
West Bengal	-6.3	22.6	21.5	9.9	5.2	-5.9	Chandigarh	0.1	1.3	0.1	-0.1	0.3	0.2
Maharashtra	-10.8	21.8	0.4	-2.1	2.3	-20.2	Goa	-0.4	1.0	0.3	0.4	0.0	-0.4
Karnataka	-16.5	13.2	8.1	-0.5	7.2	-12.9	Meghalaya	-1.4	0.9	1.0	-0.2	0.4	-1.0
Andhra Pradesh	-12.7	11.4	9.8	2.5	13.0	-8.9	Manipur	-1.9	0.8	0.7	-0.1	0.7	-1.2
Haryana	-4.4	9.4	2.0	3.1	3.5	-3.2	Mizoram	-0.1	0.4	0.2	0.0	0.2	0.0
Jharkhand	-24.8	9.0	6.8	-3.2	9.2	-16.8	Arunachal Pradesh	-0.6	0.3	0.1	0.0	0.1	-0.4
Kerala	-7.5	8.3	6.2	-1.9	5.7	-3.6	Sikkim	-0.1	0.2	0.2	0.0	0.1	0.0
Delhi	-0.2	6.4	0.4	2.9	-0.7	-1.4	Andaman and Nicobar Islands	0.0	0.2	0.0	0.0	0.0	0.1
Jammu & Kashmir	0.5	4.6	2.8	-0.4	1.2	2.2	Lakshadweep	0.1	0.1	0.0	0.0	0.0	0.1
Assam	-4.5	4.5	3.2	0.4	1.2	-5.0	Daman & Diu	0.3	-0.1	0.0	0.1	0.0	0.0
Punjab	-6.5	4.4	1.4	-0.4	4.6	-5.6	Dadra & Nagar Haveli	-0.1	-0.1	-0.2	0.0	0.0	-0.4
Madhya Pradesh	-1.2	4.1	0.3	-4.3	10.3	-14.6	Nagaland	-1.5	-0.2	0.1	-0.2	0.2	-1.6
Uttarakhand	-3.8	3.6	2.1	0.7	2.2	-0.1	Tamil Nadu	-8.0	-5.5	-4.0	-11.0	10.6	-17.1
Tripura	-0.4	3.2	2.8	0.3	3.7	1.6	India	-208.1	223.6	139.8	-36.7	181.1	-210.2
Gujarat	-7.1	3.2	-4.2	-8.0	2.5	-14.0							
Orissa	-8.4	3.0	-0.9	-4.3	6.1	-11.6							

Notes and Source: Same as Table 1.

Appendix Table 5: Net Increase in Non-Agricultural Employment, in Urban and Rural India (in 1,00,000 numbers)

Sectors	1983 to 1993-94		1993-94 to 1999-2000		1999-2000 to 2004-05		2004-05 to 2009-10	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Manufacturing	40	36	17	17	37	59	-36	-1
Construction	29	24	32	23	66	18	149	32
Trade; restaurants and hotels	41	53	20	72	56	30	7	14
Transport, storage and communication	16	17	23	18	21	18	12	7
Financing, real estate and business services	4	12	3	11	7	23	2	21
Community, social and personal services	44	72	10	10	24	43	-4	10
Total non-agricultural employment	172	215	93	139	216	194	139	84

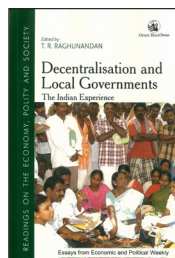
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The idea of devolving power to local governments was part of the larger political debate during the Indian national movement. With strong advocates for it, like Gandhi, it resulted in constitutional changes and policy decisions in the decades following Independence, to make governance more accountable to and accessible for the common man.

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This volume discusses the constitutional amendments that gave autonomy to institutions of local governance, both rural and urban, along with the various facets of establishing and strengthening these local self-governments.

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