

Trends of Rural Employment in India: Reflections from Recent NSS Data

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Abstract

The employment scenario of India during recent years has not been encouraging. There has been a decline in employment in the rural areas, led by a sharp fall in the employment of rural females. After economic slowdown of 2008 the female work participation in India declined in 2009-10 and reached all time low. There has been a reduction of rural female workforce in India to the extent of 19.5 million during 2004-05 to 2009-10. The entire fall of female employment has been due to the loss of female self-employment. In contrast, for rural male, employment increased by 13 million due to the increase of casual employment. Non-farm sector is the only avenue for rural workers where employment has increased gradually. The growth rate of non-farm employment improved for both rural male and female during 1993-94 to 2004-05 as compared with pre-reform period. But that growth has decelerated after economic slow down; for rural female it has negative in all sectors except construction. For rural male most of the incremental workers were also absorbed in construction. The manufacturing sector, the most important absorber of rural workers, has experienced substantial loss of jobs.

Key Words: Economic reforms, growth of employment, structural change, non-farm employment, economic slowdown, job loss

JEL Classification: J21

I. Introduction

The perception is that a rise in the rate of growth of output unless accompanied by a still greater rise in the rate of growth of labour productivity will necessarily raise the rate of growth of employment (Kaldor, 1966). When this perception is put together with another, quite plausible, perception, namely that in a situation where the unemployment rate exceeds a certain threshold rate, real wages remain tied to a certain subsistence level, so that all gains in labour productivity accrue to the capitalists. This leads to raise the share of surplus in output, and with it the savings ratio in the economy. The rise in the savings ratio, since the capital-output ratio can be taken to be a constant, raises the growth rate. This, in turn, raises the rate of growth of employment. Since the rate of growth of the workforce is given, this continuous increase in the share of surplus and hence in the growth rate of output and employment must eventually lower the unemployment rate and keep doing so until tightness develops in the labour market and wages start rising above the

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subsistence level. But the entire reasoning has been shown to be untenable in practice. In India despite high growth being maintained for years there is no sign of any tightness in the labour market and the labour market has continued to remain slack (Patnaik, 2011).

During the liberalized era the dualism in the labour market is getting further sharpened in India. A market for educated, trained and skilled job aspirants, typically characterized by new and upcoming production/marketing/management standards, significantly higher levels of productivity, wage rates and earnings, etc., is steadily expanding simultaneously with sluggishness or a steady decline in the job market for their less educated, semi- or un-skilled and untrained brethren. Employment prospects are thus getting brightened up for the more qualified while a squeezing scenario sets in for the untrained between self-employment and wage-paid jobs, and still more significantly between rural and urban areas (Chadha, 2001). Rural job aspirants, especially females among them, suffer far more severe setbacks, primarily because of their own educational and skill deficiencies. Further it has also been argued that the changes associated with reforms – technological changes, industrial relocation and the shift from subsistence production to market orientation have unleashed forces that have pushed women to a marginalised and discriminated position in the labour market (Neetha, 2009). In this context, the effect on rural female employment- be it feminisation, marginalisation, exclusion or segregation- has acquired central importance in all major discourses around economic reforms all over the world.

Against this brief background the present paper seeks to examine the magnitude, pattern and structure of rural employment in India during last three decades which would help understand the trends of rural employment.

In the present study, NSS data are used for seven points of time- 38th round (1983), 43rd round (1987-88), 50th round (1993-94), 55th round (1999-2000), 61st round (2004-05) and the latest being the 66th round survey conducted in 2009-10. All are the quinquennial round of NSSO. Our analysis uses the usual status employment and unemployment data of NSSO. In the case of usually employed, the information was collected for both principal status (ps) and subsidiary status (ss) workers. It is to be mentioned here that in NSS 38th and 43rd rounds the industry classification followed (National Industrial Classification) NIC 1970 while NSS 50th round used NIC 1987. In the 55th and 61st round survey, the industry classification followed NIC 1998. In latest round i.e., in 66th round it followed NIC 2004. The inter-rounds 38th to 66th data are comparable by making adjustment into eight industry division-i) agriculture, ii) mining and quarrying, iii) manufacturing, iv) electricity, gas and water, v) construction, vi) trade and commerce, vii) transport, storage and communications and viii) 'other services'. It is noted that the categories (ii) to (viii) are treated as non-farm sector and the corresponding employment are non-farm employment. The employment of rural workers in non-farm sector is treated as the rural non-farm employment.¹ The labour force indicators derived from the different NSS employment and unemployment surveys are generally presented as ratios. Absolute number of workers was estimated by using Census segment-wise population (male, female, rural and urban) projections and NSS segment-wise workers population ratio. Accordingly, we computed afresh the absolute number of workers for 1983, 1987-88, 1993-94 and 1999-2000. In 66th round NSSO itself estimated the absolute number of workers for the year 2004-05 and 2009-10 by using the same methodology.² To see through pre- and post-reform contrasts in employment growth and structure, we use the NSS data for the years 1983, 1993-94, 2004-05 and 2009-10. The period 1983 to 1993-94 stand in pre-reform years while the period 1993-94 to 2004-05 captures the impact of economic reforms. The global slowdown 2008 has its adverse implications on the domestic economy especially on the employment sphere. Therefore, the period 2004-05 to 2009-10 is expected to captures the changes brought about by economic

slowdown and treated as the period of economic slow down. That is, the entire post-reform period is divided into two sub-periods, 1993-94 to 2004-05 for first and 2004-05 to 2009-10 for second.³

The rest of the paper is divided into seven sections. Section II analyses the trend of rural employment through an assessment of work participation rate, magnitude and nature of employment as well as unemployment. Section III discusses the trend of farm via-a-vis non-farm employment. The dynamics of growth of employment for rural male as well as female across activities are dealt with in Section IV. Sections V deals with the trend of the share of employment by sector and makes a comparison between pre- and post- reform years. Section VI looks into the contrasting sectoral deployment of the incremental non-farm workforce during the period of economic slowdown with the earlier periods. The factors that explained the recent trends of rural employment are discussed in Section VII. Finally, section VIII gives some concluding observations.

II. Emerging Trends of Employment in Rural India

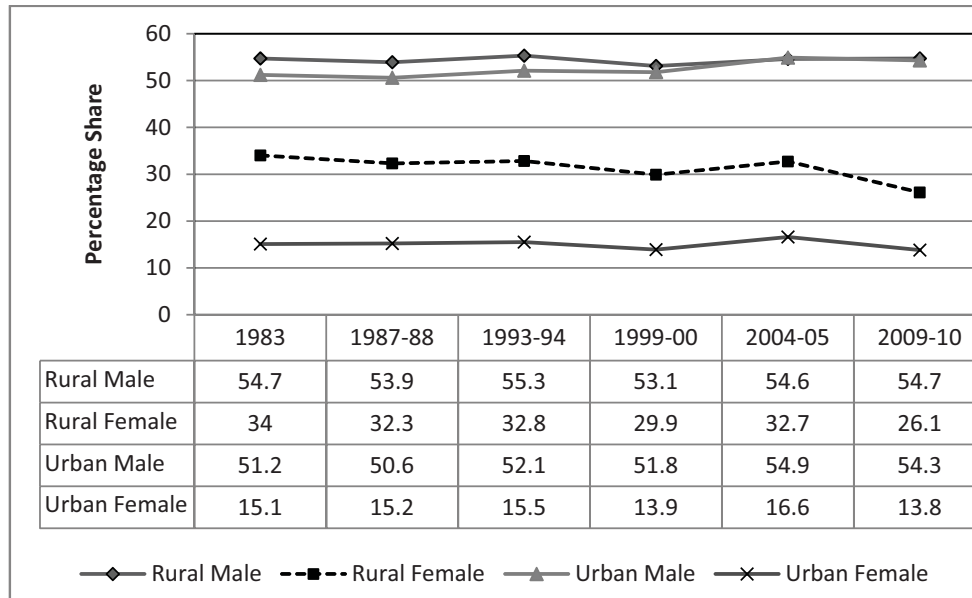
We examine here of the trends of work participation rate (WPR), magnitude of employment, status of the employment, and unemployment in rural India in comparison with urban India. Main highlights in this section are as follows.

A. *Disturbing Female Work Participation Rate*

The trend of male and female WPR⁴ in rural and urban India separately has shown in Figure 1. It is seen that more than half of all rural males reported themselves as workers. The male WPR in rural India was 54.7 per cent in 2009-10. It has fluctuated in a narrow range (53.1 per cent and 55.3 per cent) during 1983 and 2009-10. There has been no sign of decline of male WPR during the recent years. While the workforce participation rates for females are significantly lower than those of males. Rural female WPR declined from 34.0 per cent in 1983 to 29.9 per cent in 1999-2000 and thereafter the participation rate increased to 31.7 per cent in 2004-05. It may be recalled that a sharp slump in female work participation rates and a decline in the share of women in total employment had appeared as a major feature of the first decade of 'economic reforms' in India. The evidence of the 1999-2000 survey had pointed to displacement of women from employment across the 1990s, denying the then widely accepted argument that liberalization and globalization leads to feminization of labour (Mazumdar and Neetha, 2011). And it is argued that the infirmities are far more pronounced in the case of rural female workers, because they have not only compete with their male counterparts in the rural areas but also with their more qualified sisters in the urban areas (Chadha, 2002).

In 2004-05, the 61st round survey appeared to alleviate the gloomy picture by showing a seeming 'revival' in women's work participation in rural as well as in urban India. The female WPR declined again in 2009-10. But this decline is significant and reaches all time low. For example, the WPR has fallen to 26.1 per cent for rural female and to 13.8 per cent for urban female. However, the male counterpart have not experienced such fall of WPR. Therefore, it is to note that the female WPR has shown disturbing signals in general during the recent years.

Figure 1 Trend of WPR in India by Sex and Region, 1983 to 2009-10



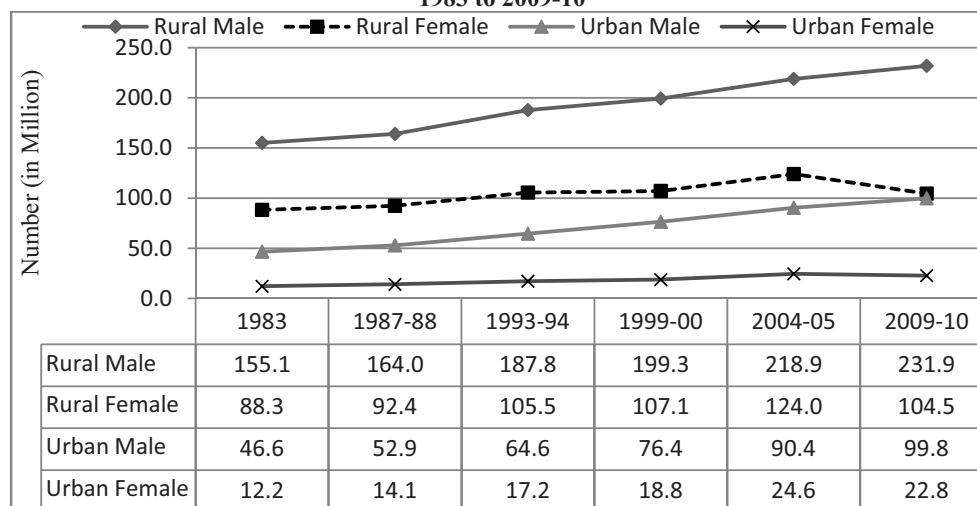
Note: Both principal status and subsidiary status workers taken together.

Sources: NSSO, *Employment and Unemployment (Situation) in India*; NSS 38th Round (1983), NSS 43rd Round (1987-88), NSS 50th Round (1993-94), NSS 55th Round (1999-2000), NSS 61st Round (2004-05), NSS 66th Round (2009-10).

B. Differential Trend of Male and Female Employment

Number of workers gradually increased during 1983 to 2004-05 for all segments in India, across region as well as across sex, although the growth of employment is decelerating for both male and female (Figure 2 and Table 1). But between 2004-05 and 2009-10, there has been hardly any change in the size of the workforce in the country. There has been a decline in employment in the rural areas led by a sharp fall in the employment of rural females. It has also been noticed that there has been marginal increase in urban employment mainly due to an increase in male employment, while female employment has come down. On one hand there has been an increase in the male employment by 22.4 million between 2004-05 and 2009-10 and on the other there has been a reduction in the female employment by 21.3 million. In total there has been an increase in employment of 1.1 million in the country. In rural India an increase of 13 million male employments along with a fall of 19.5 million female employments caused for over all decline of 6.5 million rural employments. This is the first time the Indian economy has perceived the decline of the number of female workers in contrast with the increase in their male counterpart. The decline of female workers was sharper in rural areas with compound annual growth rate -3.4 per cent in comparison to -1.5 per cent in urban areas.

Figure 2 Trend of Estimated Employment (in Million) in India by Sex and Region, 1983 to 2009-10



Note: 1. Workforce figures have been calculated using Census segment wise population projections and NSS segment wise Worker Population Ratios.

2. Both principal status and subsidiary status workers taken together.

Sources: As in Figure 1.

Table 1 Compound Annual Growth Rate of Workers in India by Sex and by Region

Period	Rural		Urban		All	
	Male	Female	Male	Female	Male	Female
1983 to 1993-94	1.9	1.8	3.3	3.5	2.3	2.0
1993-94 to 2004-05	1.4	1.5	3.1	3.3	1.9	1.8
2004-05 to 2009-10	1.2	-3.4	2.0	-1.5	1.4	-3.0

Source: Calculation is based on number of workers given in Figure 2.

C. Casualisation of Rural Workers

The 61st round National Sample Survey 2004-05 shows a revival in women's work participation, albeit primarily driven by an increase in self employment. Further analysis had highlighted a sharp rise in unpaid labour by women as a sub-category of the self-employed. Further, where the 2004-05 aggregate data on work participation rates appeared to be giving the impression of more women finding jobs or employment, the disaggregated data on employment status suggested a process of large scale substitution of paid work by unpaid labour of women (Mazumdar & Neetha, 2011). The general increases in work participation rates of 2004-05 were also countered by the argument that a real difficulty in finding paid work or wage work was the real reason for the significant increase in self-employment among both male and female workers (Ghosh, 2009).

Whatever may be the reason during 1999-2000 to 2004-05, what was important was that the proportion of self-employment grew significantly with a fall in casual employment and a marginal rise in regular-salaried employment. Number of self-employment has also increased in female as well as male workers though the increase in 2004-05 has been significantly higher for female than that of male. During 2004-05 to 2009-10 the trend was different from

Table 2 Distribution of Workers by Status of Employment in India, 1983 to 2009-2010

Employment Status & Year	Number of Workers(in Million)				Percentage Share			
	Rural		Urban		Rural		Urban	
	Male	Female	Male	Female	Male	Female	Male	Female
Self-employed								
1983	93.8	54.7	19.1	5.6	60.5	61.9	40.9	45.8
1987-88	96.1	56.2	22.1	6.6	58.6	60.8	41.7	47.1
1993-94	108.7	61.7	26.9	7.8	57.9	58.5	41.7	45.4
1999-00	109.6	61.4	31.7	8.5	55	57.3	41.5	45.3
2004-05	127.2	79.0	40.5	11.7	58.1	63.7	44.8	47.7
2009-10	124.1	58.2	41.0	9.4	53.5	55.7	41.1	41.1
Regular employees								
1983	16.0	2.5	20.4	3.1	10.3	2.8	43.7	25.8
1987-88	16.4	3.4	23.1	3.9	10	3.7	43.7	27.5
1993-94	15.6	3.0	27.2	4.9	8.3	2.8	42.1	28.6
1999-00	17.5	3.3	31.9	6.3	8.8	3.1	41.7	33.3
2004-05	19.7	4.6	36.7	8.8	9	3.7	40.6	35.6
2009-10	19.7	4.6	41.8	9.0	8.5	4.4	41.9	39.3
Casual labour								
1983	45.3	31.2	7.2	3.5	29.2	35.3	15.4	28.4
1987-88	51.5	32.8	7.7	3.6	31.4	35.5	14.6	25.4
1993-94	63.5	40.8	10.5	4.5	33.8	38.7	16.2	26.2
1999-00	72.1	42.4	12.8	4.0	36.2	39.6	16.8	21.4
2004-05	72.0	40.4	13.2	4.1	32.9	32.6	14.6	16.7
2009-10	88.1	41.7	17.0	4.5	38	39.9	17	19.6

Notes and Sources: As in Figure 2.

that during the earlier period. The proportion of self-employment has decreased, and it is lowest proportion for all workers since 1993-94. The decline of self-employment is the highest for females as compared with males. During 2004-05 to 2009-10 entire fall of female employment has been due to the fall of self-employment. For example, rural female self-employment has declined at the extent of 20.8 million that leads to total fall of 19.5 million female workers. For regular salaried workers, there has been a marginal increase for both female and male. On the other, the

increase of casual workers has been witnessed in all segments; the increase has been significant for rural male. The entire increase of employment for rural male has been due to the increase of casual employment and it increased by 16.1 million during 2004-05 to 2009-10. The proportion of casual labour has also been increased for both rural male and female and reaches all time high in 2009-10 (Table 2). Therefore, in respect of the status of the rural workers, a sharp casualisation has been noticed during the recent years.

D. Marginalization and of Rural Workers

Now we look at the trend of marginal (subsidiary)⁵ employment for rural male and female. The process of marginalization is analysed by the trend of the percentage of marginal (subsidiary) employment to total employment. Table 3 provides data in respect of principle status and subsidiary states employment. The share of marginal employment to total (ps+ss) employment for rural male has relatively low and it has shown a downward trend. That share declined from 4.42 per cent in 1983 to 1.80 per cent in 2009-10. Thus the increased participation of rural male is largely accounted by the increase in male workers in principle category. But for females the share of marginal employment has substantially high as compared with males. And it has fluctuated between 41.24 per cent and 28.69 per cent during 1983 and 2009-10. The increased participation of women (as explained before) in rural areas is largely accounted by the increase in women workers in subsidiary category. During the recent years, i.e., during 2004-05 and 2009-10 the principal status as well as subsidiary status work having lost ground, it appears that relatively more durable work as well as shorter bursts of temporary employment has become less available to women. Thus it is apparent for rural male workers that there has no evidence of marginalisation. For rural female a significant employment has marginal in nature.

Table 3 Number of PS and SS Workers and Percentage Share of SS Workers by Sex, 1983 to 2009-10

Year	Number of Workers (in Million)				Percentage Share of SS workers to Total Workers (PS+SS)	
	Male		Female		Male	Female
	PS	SS	PS	SS		
1983	148.5	6.6	66.1	22.2	4.42	33.62
1987-88	158.1	5.9	70.6	21.8	3.73	30.90
1993-94	182.7	5.1	74.7	30.8	2.77	41.24
1999-00	195.2	4.1	81.7	25.4	2.10	31.12
2004-05	214.3	4.6	91.6	32.4	2.15	35.37
2009-10	227.8	4.1	81.2	23.3	1.80	28.69

Note: PS = principal status and SS = subsidiary status workers.

Sources: As in Figure 1.

E. Trend of Rural Unemployment

As far as unemployment rate⁶ is concerned, during the post-reform period, the trend is clearly rising unemployment rate (up to the year 2004-05) both by usual (ps+ss) and daily status for both

rural male and rural female, although faster by daily status and for female. The unemployment rate decreased in 2009-10 compared to 2004-05 in all sphere, though the decline has marginal for rural workers. During 2004-05 to 2009-10 the number of unemployment for rural female also declined—0.7 million in usual status and 2.0 million in daily status (Table 4). This trend seems to be paradoxical, because number of rural female employment declined at the tune of 21.3 million during the same period. The decrease in unemployment, however, was not an increase in employment, rather it is a result of a decrease in the number of women offering themselves for work. The issue is discussed in little latter. Now we move to analyse the trends of rural employment by sectors.

Table 4 Unemployment Rate and Number of Unemployment in Rural India by Sex, 1983 to 2009-10

Year	Unemployment Rate				Number of Unemployment (in Million)			
	Male		Female		Male		Female	
	PS+SS	CDS	PS+SS	CDS	PS+SS	CDS	PS+SS	CDS
1983	1.4	7.5	0.7	9.0	2.3	11.0	0.5	5.3
1987-88	1.8	4.6	2.4	6.7	3.1	7.3	2.3	4.3
1993-94	1.4	5.6	0.9	5.6	2.7	10.2	1.0	4.2
1999-00	1.7	7.2	1.0	7.0	3.4	13.8	1.1	5.3
2004-05	1.6	8.0	1.8	8.7	3.6	16.8	2.3	8.0
2009-10	1.6	6.4	1.6	8.0	3.8	14.9	1.6	6.0

Note: PS = Principal Status and SS = Subsidiary Status, CDS = Current Daily Status.

Sources: As in Figure 1.

III. Trend of Farm vis-à-vis Non-Farm Employment

Total workers are segregated into farm workers and non-farm workers and the estimated workers of these two categories for male and female in rural, urban and all India are given in Table 5. At all India level during the last three decades starting with 1983, the absolute number of male workers gradually increased in both farm and non-farm sectors. Non-farm employment gradually and substantially increased and during the recent years it has out numbered as compared with the farm employment for male. While in case of females the farm employment has declined in the recent NSSO round 2009-10 and it reaches all time low during the post-reform years. Whereas female non-farm employment gradually increased though the rate of expansion is relatively low. For female, farm employment has out numbered as compared with non-farm employment but it has not increased gradually, rather there have been ups and down turns across the year. The reduction in the overall female workforce by 21.3 million between 2004-05 and 2009-10 has come from a fall of 21.6 million from the farm with a marginal rise of 0.3 million from non-farm sector. As we note before, the female self-employment has also declined 23.1 million during the same period. Now there is no doubt that the entire fall of farm employment has been due to the loss of female self-employment.⁷ In their male counterpart the numbers of employment in farm as well as non-farm sector have been increasing over time during entire period.

Table 5 Number (in Million) of Farm and Non-Farm Workers in India by Sex and Region, 1983 to 2009-10

Sector and Sex	1983	1987-88	1993-94	1999-2000	2004-05	2009-10
<i>Male</i>						
Rural India						
Farm	120.8	122.2	139.2	142.3	145.6	145.6
Non-Farm	34.3	41.8	48.6	57.0	73.3	86.3
<i>Female</i>						
Farm	76.6	78.3	90.9	91.5	103.2	82.9
Non-Farm	11.7	14.1	14.6	15.6	20.8	21.6
<i>Male</i>						
Urban India						
Farm	4.8	4.8	5.8	5.0	5.5	6.0
Non-Farm	41.8	48.1	58.8	71.4	84.9	93.8
<i>Female</i>						
Farm	3.8	4.1	4.2	3.3	4.5	3.2
Non-Farm	8.4	10.0	13.0	15.5	20.1	19.6
<i>Male</i>						
All India						
Farm	125.6	127.0	145.0	147.3	151.1	151.6
Non-Farm	76.1	89.9	107.4	128.4	158.2	180.1
<i>Female</i>						
Farm	80.4	82.4	95.2	94.8	107.6	86.0
Non-Farm	20.1	24.1	27.5	31.1	41.0	41.3

Notes: 1. Workforce figures have been calculated using Census segment-wise population projections and NSS Segment-wise Worker Population Ratios.
 2. Both principal status and subsidiary status workers taken together.
 3. Compound Annual Growth Rate is calculated.

Sources: As in Figure 1.

In both rural and urban India the trend of farm and non-farm employment for male is quite same as it has witnessed at the all India level. The contrasting feature is that in rural India farm employment has out numbered than non-farm employment. In the latest year (i.e., in 2009-10) the number of male employment was 145.6 million in farm sector and 86.3 million in non-farm sector. For female the number of employment in non-farm sector gradually increased from 11.7 million in 1983 to 21.6 million in 2009-10. They have also greater participated in farm sector and their numbers had been increasing from 76.6 million in 1983 to 103.2 million in 2004-05 and thereafter there was a sharp decline. During 2004-05 to 2009-10 the female workers declined to the tune of 20.3 million in farm sector of rural India. During the same time the urban female employment declined marginally (1.3 million in farm and 0.5 million in non-farm). What was important was that the fall of 21.3 million female employments has been mainly the fall of employment in rural farm sector.

IV. Growth of Employment in Rural Areas by Sectors

The proponents of economic reforms would make us believe that employment was expected to pick up primarily because the output growth was likely to pick up after economic reforms took roots. These reforms may lead to increase in installing a more capital intensive technology in many branches of production, which make many believe that employment would not grow in the same proportion in which output would grow. Since technological changes are likely to come about only in selected production sectors, and labour-intensive technologies are likely to dominate in many others, a mixed overall picture on employment growth was likely to emerge for some years after the arrival of the reforms.

Highly disparate trends that are discernible for employment growth of male and female during 1983 to 1993-94, 1993-94 to 2004-05, and 2004-05 to 2009-10 in various sectors of the rural (and urban) economy (as shown in Table 6a and 6b) are explained as follows: *Firstly*, the growth rate of rural female employment in non-farm sector was higher during the post-reform period than that during the pre-reform period. It was 2.2 per cent per annum during 1983 to 1993-94 and 3.3 per cent during 1993-94 to 2004-05. Growth rate of rural male non-farm employment has also improved during the latter period. The growth rate of female RNFE was also higher than that of male during the post-reform period. During the period of economic slow down, i.e., during 2004-05 to 2009-10, the growth rates of employment declined in all segments, irrespective of region and sex.

Table 6a Growth Rate of Employment by Sex in Rural India, 1983 to 2009-10

Sector	Male			Female		
	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10
1. Farm (Primary)	1.4	0.4	0.0	1.7	1.2	-4.3
2. Mining & Quarrying	1.9	0.0	7.2	4.8	-1.1	-3.4
3. Manufacturing	1.6	2.5	-1.3	1.9	3.2	-5.5
4. Electricity-Gas-Water	6.1	-2.3	1.2	N	N	N
5. Construction	4.1	8.6	12.0	1.8	6.3	23.9
Secondary (2-5)	2.4	4.4	5.7	2.0	3.3	1.4
6. Trade-Commerce	4.2	5.3	0.9	2.3	3.1	-1.1
7. Transport-Storage Communication	4.0	6.6	2.7	1.8	8.1	-3.4
8. Other Services	2.6	0.4	0.1	2.8	3.0	0.3
Tertiary (6-8)	4.6	3.3	1.0	2.6	3.2	-0.3
Non-Farm (2-8)	3.6	3.8	3.3	2.2	3.3	0.8
Total (1-8)	1.9	1.4	1.2	1.8	1.5	-3.4

Notes & Sources: As in Table 5 (Compound annual growth rate is calculated)

Table 6b Growth Rate of Employment by Sex in Urban India, 1983 to 2009-10

Sector	Male			Female		
	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10
1. Farm (Primary)	1.9	-0.5	1.7	1.0	0.5	-6.6
2. Mining & Quarrying	4.2	-0.3	-3.0	3.5	-6.5	6.8
3. Manufacturing	2.0	3.1	0.5	2.4	4.8	-1.7
4. Electricity-Gas-Water	4.2	-0.6	-0.7	7.8	-0.4	13.1
5. Construction	6.1	5.8	6.5	6.4	2.6	2.8
Secondary (2-5)	2.9	3.5	2.1	3.0	4.3	-1.0
6. Trade-Commerce	4.0	5.4	1.3	4.0	5.2	-1.7
7. Transport-Storage Communication	3.2	3.9	1.4	2.0	4.0	-1.5
8. Other Services	4.0	0.9	3.1	6.2	3.5	0.3
Tertiary (6-8)	3.8	3.3	2.0	5.6	3.9	-0.2
Non-Farm (2-8)	3.5	3.4	2.0	4.5	4.1	-0.5
Total (1-8)	3.3	3.1	2.0	3.5	3.3	-1.5

Notes & Sources: As in Table 3

Secondly, for both rural male and rural female workers construction, manufacturing, transport-storage-communication and trade-commerce were clearly cheering spots, while agriculture, mining, utilities (electricity-gas-water) and other services showed negative growth or slow-down in employment during 1993-94 to 2004-05 over 1983 to 1993-94. But during the period of economic slow down the growth of male employment was deteriorated in most of sectors. For female the growth rate was negative in all sectors except construction.

Thirdly, growth rate of employment in the construction sector for rural female increased from 1.8 per cent per annum during pre-reform period to 6.3 per cent during the post-reform period, it again substantially increased to 23.9 per cent per annum during 2004-05 and 2009-10. The growth of construction sector has been highest among all other sectors for both male and female. But it has been relatively low for urban female during two post-reform periods. The benefits of improved employment growth rate in the construction sector are duly shared, albeit unevenly, by female and male workers, primarily because of the convenient locale of the construction activities.⁸

Fourthly, the benefit of improved employment growth rate during the first sub-period of post-reform years (i.e., 1993-94 to 2004-05) has also been witnessed in manufacturing sector for both rural male and female. For male (female) that growth steeply declined to -1.8 (-5.5) per cent during 2004-05 to 2009-10 from 2.5 (3.2) per cent during 1993-94 to 2004-05. Trend was similar for urban males and females. Among other two activities of the secondary sector, namely electricity-gas-water and mining & quarrying, for rural female, the first one has negligible (N) employment and the second one has witnessed a decline of employment. For rural male, in contrast, the growth rate has improved in both the sectors. As a whole the rural secondary sector

has positive growth rates during two post-reform periods, though the growth has expanded for male and decelerated for female. During the period of economic slow down the expansion of rural female employment in construction has outnumbered the fall of employment in minning & quarrying and manufacturing. The resultant outcome is the positive growth rate of the secondary sector. But the trend reversed for urban female and growth of secondary sector as a whole was negative during 2004-05 and 2009-10.

Fifthly, while employment for both rural male and female workers in the transport-storage-communication sector increased sizably during 1993-94 to 2004-05, after that it witnessed a steep decline for male and became negative for female. The fast pace of expansion that this sector has witnessed has generally been more conducive to male job seekers, partly because of the physical labour involved and partly because of the shifting locale of the underlying activities. The growth of rural male as well as female employment in trade-commerce and other services increased during 1993-94 to 2004-05 and deteriorated thereafter. On the whole, the growth of employment in tertiary sector for rural female became negative during 2004-05 and 2009-10. The same story unfolds itself for urban female. The growth of tertiary sector has deteriorated for male though it was still positive in rural as well as urban areas.

V. Trends of Sectoral Distribution of Rural Employment

The percentage share of employment in different sectors to total rural employment helps us identify the relative importance of different activities. Table 7a and Table 7b, based on usual status NSS estimates give a 30-year long history of sectoral distribution of rural male and female workers. Analysis of the data by sector in terms of the percentage share reveals the following trends: *First*, in rural India, the proportion of male workers engaged in primary sector has been steadily declining from 77.9 per cent in 1983 to 62.8 per cent in 2009-10. On the other hand, the proportion of employment in the secondary, tertiary and total non-farm sectors has witnessed a steady increase. This uninterrupted trend of development has also been witnessed in their female counterparts as well as in both sexes of urban India. The share of rural female employment in the non-farm sector gradually increased from 13.3 per cent in 1983 to 16.8 per cent in 2004-05 and further to 20.7 per cent in 2009-10. Though agriculture is the main stay of employment for rural female and about 80 per cent of rural female are engaged in farm sector, the share of non-farm employment was relatively high for their male counterpart and substantially high for both male and female in urban India.

Second, the share of rural secondary employment to total rural employment for males increased from 10.7 per cent in 1983 to 19.3 per cent in 2009-10. For females the share was relatively low, and it also expanded from 8.2 per cent to 13.0 per cent during the same period. The expansion of the secondary employment was relatively high during the two sub-periods of post-reform years for both male and female. The share of employment of the tertiary sector to total rural male employment was 11.4 in 1983, which also increased to 19.3 in 2009-10. For rural females, on the other, the share of tertiary employment was low and increased marginally from 5.1 per cent in 1983 to 7.7 per cent in 2009-10. It is evident that the share of both secondary and tertiary employment for rural male was higher than that of rural female. Within non-farm economy higher proportion of female workers has engaged in the secondary sector than that in the tertiary sector.

Third, the share of employment in manufacturing was highest not only within the secondary activities but also within the overall non-farm activities for both rural male and female workers.

That share for female was 6.9 per cent in 1983 which increased to 8.4 per cent in 2004-05 and fell thereafter to 7.5 per cent in 2009-10. For rural male the share has also

Table 7a Distribution of Male and Female Employment by Sector in Rural India, 1983 to 2009-10

Sector	Male				Female			
	1983	1993-94	2004-5	2009-10	1983	1993-94	2004-5	2009-10
1. Farm (Primary)	77.9	74.1	66.5	62.8	86.7	86.2	83.2	79.3
2. Mining & Quarrying	0.7	0.7	0.6	0.8	0.3	0.4	0.3	0.3
3. Manufacturing	7.2	7	7.9	7	6.9	7.0	8.4	7.5
4. Electricity-Gas-Water	0.2	0.3	0.2	0.2	0	0.1	0	0
5. Construction	2.6	3.2	6.8	11.3	0.9	0.9	1.5	5.2
Secondary (2-5)	10.7	11.2	15.5	19.3	8.2	8.4	10.2	13
6. Trade-Commerce	4.4	5.5	8.3	8.2	2	2.1	2.5	2.8
7. Transport-Storage Communication	1.8	2.2	3.8	4.1	0.1	0.1	0.2	0.2
8. Other Services	6.2	6.6	5.9	5.6	3	3.3	3.9	4.7
Tertiary (6-8)	11.4	14.7	18	17.9	5.1	5.5	6.6	7.7
Non-Farm (2-8)	22.1	25.9	33.5	37.2	13.3	13.8	16.8	20.7
Total (1-8)	100	100	100	100	100	100	100	100

Note: Both principal status and subsidiary status worker were taken together.

Sources: As in Figure 1.

Table 7b Distribution of Male and Female Employment by Sector in Urban India, 1983 to 2009-10

Sector	Male				Female			
	1983	1993-94	2004-05	2009-10	1983	1993-94	2004-05	2009-10
1. Farm (Primary)	10.3	9	6.1	6	31.4	24.6	18.1	13.9
2. Mining & Quarrying	1.2	1.3	0.9	0.7	0.6	0.6	0.2	0.3
3. Manufacturing	26.8	23.5	23.5	21.8	26.7	24.1	28.2	27.9
4. Electricity-Gas-Water	1.1	1.2	0.8	0.7	0.2	0.3	0.2	0.4
5. Construction	5.3	6.9	9.2	11.4	3.1	4.1	3.8	4.7
Secondary (2-5)	34.4	32.9	34.4	34.6	30.6	29.1	32.4	33.3
6. Trade-Commerce	20.6	21.9	28	27	9.5	10	12.2	12.1
7. Transport-Storage Communication	9.9	9.8	10.7	10.4	1.5	1.3	1.4	1.4
8. Other Services	24.8	26.4	20.8	22	27	35	35.9	39.3
Tertiary (6-8)	55.3	58.1	59.5	59.4	38	46.3	49.5	52.8
Non-Farm (2-8)	89.7	91	93.9	94	68.6	75.4	81.9	86.1
Total (1-8)	100	100	100	100	100	100	100	100

Note and Sources: As in Table 5a

declined for male in 2009-10. It may be recalled that the manufacturing sector has been seriously affected by the process of economic slow down of 2008 and as a result the employment has declined for both rural male and female.

Fourth, construction, trade-commerce and transport-storage-communication were dynamic sectors for rural male workers as the share of employment of these sectors to total rural male employment expanded significantly. For rural female workers, construction was only the dynamic sector where employment share increased from 0.9 per cent in 1993-94 to 5.2 per cent in 2009-10. The expansion of the construction employment has substantially high during the recent years, specifically during 2004-05 and 2009-10.

The following points need to be underlined to mark the pre-reform and post-reform contrast. *Firstly*, the inter-sector shifts were sharper during the post-reform period than during the pre-reform period. Whereas in nineties, there was a substantial slowdown of the process of weaning away of rural male workers from agriculture, it was a complete halt, not a reversal, in the case of rural female workers. This seems to be happening primarily because of the halting pace of inter-sector shift, both into the secondary and tertiary sectors, and for both male and female workers (Chadha 2002). *Secondly*, one general critic of the above argument is that it is a very short period phenomenon. During 1993-94 to 2004-05, there was a substantial decline of the share of employment of agriculture and consequently the share of non-farm employment increased by 7.6 percentage points for rural male workers and by 3 percentage points for rural female workers. During the later period, i.e., during 2004-05 and 2009-10, the share of non-farm employment also expanded about 4 percentage points for both rural male and female. *Lastly*, after some years of introduction of economic reforms opportunity of construction, business and transport & communication work is opening. These opening opportunities mainly go to male rural workers and partly to the female counterpart. The relative incapability of rural female workers constrained themselves for gaining access to these jobs.

VI. Incremental Rural Non-Farm Workers by Sectors

The percentage distribution of incremental rural non-farm workers (RNFW) among non-farm sectors helps us analyze temporal change in relative importance of different non-farm activities. The percentage distribution of incremental RNFW among different non-farm activities during the pre-reform period (i.e. 1983 to 1993-94) and the two post-reform periods (i.e. 1993-94 to 2004-05 and 2004-05 to 2009-10) is shown in Table 8. The important points that emerged are as follows:

First, as regards incremental RNFW during the pre-reform period, i.e., 1983 to 1993-94 the importance of secondary sector was higher than that of the tertiary sector for rural female workers. That is, female incremental RNFW were much more absorbed in the secondary sector than in the tertiary sector. In their male counterpart, the incremental RNFW was mainly absorbed in the tertiary sector.

Second, during the post-reform period the incremental RNFW was more absorbed in the secondary sector as compared to the tertiary sector for both male and female. About 60 per cent for female and 52 per cent for male incremental workers have been absorbed in the secondary sector during 1993-94 to 2004-05. The absorption of incremental RNFW in the secondary sector significantly increased during the later sub-period. For rural female the share was 117.2 per cent in secondary sector and negative (-17.2 per cent) in tertiary sector. That is the new jobs have been created only in the secondary sector along with a loss of job in the tertiary sector.

Table 8 Distribution of Incremental Rural NFW by Sector for Male vis-à-vis Female in India, 1983 to 2009-10

Sector	Male			Female		
	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10	1983/ 1993-94	1993-94/ 2004-05	2004-05/ 2009-10
1.Mining& Quarrying	1.6	0.0	4.2	5.6	-0.8	-7.3
2.Manufacturing	13.8	16.8	-8.2	45.9	48.3	-322.5
3.Electricity-Gas-Water	1.8	-0.5	0.2	3.7	-1.7	0.0
4.Construction	13.8	35.9	87.5	5.5	14.5	447.0
Secondary (1-4)	30.9	52.2	83.7	57.6	60.4	117.2
5.Trade-Commerce	24.4	31.8	6.5	16.0	14.1	-21.8
6.Transport-Storage Communication	9.3	17.0	9.2	0.6	2.3	-4.9
7.Other Services	19.3	2.1	0.6	29.6	21.6	9.4
Tertiary (5-7)	69.1	47.8	16.3	46.2	38.0	-17.2
Non-Farm (1-7)	100.0	100.0	100.0	100.0	100.0	100.0

Note and Sources: As in Table 5

Third, the incremental RNF was unevenly distributed among the sectors of non-farm activities. During pre-reform period share of incremental rural males workers was highest in trade-commerce workers (24.4 per cent), followed by 'other services' (19.3 per cent), manufacturing and construction (13.8 per cent each). For females the share of incremental RNF was highest in manufacturing (45.9 per cent), followed by 'other services' (29.6 per cent) and trade-commerce (16.0 per cent).

Fourth, during 1993-94 and 2004-05 construction and trade-commerce were important absorber for rural male in contrast with manufacturing and other services for rural female. But during 2004-05 to 2009-10 incremental male and female workers have been absorbed in construction sector. The manufacturing sector, the most important absorber of female workers, has experienced substantial loss of jobs for female. The same phenomena have been experienced by rural male workers.

VII. Factors that Explain Recent Trends of Rural Employment

A number of factors explain the trend of rural employment which are now discussed.

A. Economic Slowdown

The global slowdown of 2008 has its adverse implications in most of the sectors of Indian economy. During the last three years (prior to 2008) Indian Economy grew at an average annual rate of 8.6 per cent. The economy has shown signs of deceleration and grew at 7.8 per cent in the first two quarters (April-September) and 7.0 per cent in the last quarter (January-March) of 2008-09. The service sector, is reported to be slowing down, mainly in the transport, communication, trade, and hotels & restaurants sub-sectors. The industrial growth has decelerated sharply during encompassing all the constituent sectors. In manufacturing sector, the growth came down to 4.0 per cent in 2008-09 as compared to 9.8 percent in the last year. It is seen that the employment declined every month during this period Decline was prominent in exporting units as well as in non-exporting units. The most affected sectors were Gems & Jewellery, Metals, Textiles (where women have been working in large numbers), Transport (manufacturing), and Automobiles (Das,

2010). The rural women who have lost their jobs perhaps could not be re-absorbed in the labour market. Manufacturing sector has accounted a loss of employment for both rural male and rural female; nearly three million females and one million males have lost their jobs during 2004-05 and 2009-10.

B. Decline of LFPR

It is seen that the labour force participation rate (LFPR) for rural males increased marginally in 2009-10, compared to 2004-05, while for urban males it actually declined. The most interesting observation, however, is that there has been a drastic decline in LFPR for women workers both in the rural and urban areas. The 66th round survey of NSSO reported that, for rural female, LFPR declined from 33.3 per cent in 2004-05 to 26.5 per cent in 2009-10. In fact, the LFPR is the lowest since 1993-94 for both rural and urban women. The fall in the LFPR leads to a decline in the size of the labour force. In case of rural female, the fall of LFPR was much higher than the fall of WPR. The fall of female WPR indicates a fall of female employment and the excessive fall of LFPR compared with WPR indicates the fall in the female unemployment rate in 2009-10 compared with 2004-05.

C. Falling Employment Opportunity

It is seen that the LFPR for rural females has also decreased for all ages above the age of 24 (but not in the case of the males). The decline in the LFPR for women, irrespective of age, might be because of a decline in overall employment opportunities. In 2004-05, there had been an increase in female LFPR, compared to earlier rounds of the NSSO survey. But subsequently, with a fall in employment opportunities overall, these women could not find employment and withdrew from the labour market. In this regard, social orthodoxy may have played a role in pushing out women rather than men from the labour force.

D. Income Effect

The LFPR may also turn up/down due to purely economic reasons. The most important among them is described as the income effect. That is, households have a certain reservation on level of living and if income of the household falls below this, they tend to push their reserve labour force, mainly women, children (including adolescents) and elderly into the labour force to supplement household income. This, Tendulkar and Sundaram argue, is the main explanation for female labour supply behaviour both in rural and urban areas. This is commonly observed in the case of a severe calamity such as a drought and in agrarian distress. Female workforce participation rates tend to increase in times of distress, either natural ones such as droughts or manmade such as the deceleration in the growth rates of agricultural output and wages during 1999-2000 and 2004-05. Consequently, rural female employment phenomenally increased in 2004-05 as compared with 1999-2000. The general features of such distress employment are that along with the increase in WPR, it is also accompanied by an increase in unemployment rate and consequently the LFPR. This is primarily because all the women who enter the labour market may not get jobs and a small percentage of them will also add to the pool of unemployment leading to an increase in LFPR. However, these changes are purely temporary and a recovery in economic conditions also leads to withdrawal to the reserve household's labour force, leading to a decline in workforce participation rates (Himangshu, 2011). During 2004-05 to 2009-10 earnings of the rural workers have improved. Average daily real wage rate for casual workers increased from Rs. 55.03 in 2004-05 to Rs. 67.29 in 2009-10 for rural male and from Rs. 34.94 to Rs. 45.69 for rural female. It has also

increased for regularized salaried person – for rural male from Rs. 144.93 to Rs. 165.13 and for rural female from Rs. 85.53 to Rs. 103.31 (Chowdhury, 2011). That is, there has been the evidence of positive income effect that tends to pull back the distress labour force back into to non-work. Consequently, female LFPR reduced in 2009-10 as compared with 2004-05.

E. Expansion of Education

It is, indeed, the case that more persons belonging to the age groups of 15-19 and 20-24 have reported attending educational institutions as their usual activity in 2009-10, compared to 2004-05. The percentage of people attending educational institutes in the age group 15-24 increased from 52.7 to 73.9 for rural male and from 35.4 to 54.6 for rural female. As more rural females were pursuing higher education, there was a decline in LFPR for female. But rural males have not experienced the decline in LFPR because the males from other (specifically higher) age groups have entered in to the labor market.

F. Decline in Land-man Ratio and Tractorisation in Agriculture

During the course of economic growth more and more land has been transferred for the use of industry or infrastructure. In India per capita net sown area as well as per capita gross cropped area has also declined gradually. Side by side there has been the process of tractorisation (more and more of use of machine) in Indian agriculture. All these aspects go against to the rural females entering into the labour force. And hence 21.6 million females have loss jobs in the farm sector during 2004-05 to 2009-10.

VIII. Conclusions

In the first five years of the present decade, the rural employment increased by 36.5 million, whereas in the second half it decreased by 6.5 million. This decline has due to the sharp fall in the employment of rural females. During 2004-05 to 2009-10 the over all reduction of female workforce by 21.3 million has been mainly the fall of female self-employment. In contrast, for rural male employment increased by 13 million and the entire increase of employment has been due to the increased of casual employment. As unemployment rate is concerned, it has declined in 2009-10 compared to 2004-05 for both rural male and female. For rural female the decrease in unemployment, however, as per NSS data, is not because of an increase in employment, rather it is a result of a decrease in the number of women offering themselves for work.

For rural workers non-farm sector is the only space where employment, for both male and female, has expanded. The growth rate of employment in non-farm sector has improved for both rural male and female during 1993-94 to 2004-05 as compared with pre-reform period and the growth rate for female is higher than that of male. For both rural male and rural female workers construction, manufacturing, transport-storage-communication and trade-commerce were clearly cheering spots, while agriculture, mining, utilities (electricity-gas-water) and other services showed negative growth or slow-down in employment during 1993-94 to 2004-05 over 1983 to 1993-94. But during the period of economic slow down (2004-05 to 2009-10) the growth of rural male employment was deteriorated in most of the sectors. For rural female the growth rate was negative in all sectors except construction.

Agriculture is the main stay of employment for rural female and about 80 per cent of rural female still engaged in the farm sector. Within rural non-farm economy relatively higher proportion of female workers has been engaged in the secondary sector than in the tertiary sector. Construction, trade-commerce and transport-storage-communication were dynamic sectors for rural male

workers as the share of employment of these sectors to total rural male employment expanded significantly. For rural female workers, construction was only the dynamic sector. Manufacturing sector, an important absorber of rural workers, was seriously affected by the process of economic slow down of 2008 and as a result the employment has declined for both male and female. The inter-sector shifts were relatively sharper during the post-reform period than during the pre-reform period. After some years of introduction of economic reforms opportunity of expansion of construction, business and transport & communication work is opening. These opening opportunities mainly go to rural male workers and partly to the female counterpart. The relative incapability of rural female workers constrained themselves for gaining access to these jobs and increased the dependency on manufacturing and construction work.

As regards incremental rural non-farm workers during the pre-reform period the importance of secondary sector was higher than that of the tertiary sector for rural female workers. In their male counterpart, the incremental rural non-farm workers were mainly absorbed in the tertiary sector. During the post-reform period the incremental rural non-farm workers were more absorbed in the secondary sector than in the tertiary sector for both male and female. For female the new jobs have been created only in the secondary sector (particularly in construction) along with a loss of job in the tertiary sector during 2004-05 and 2009-10. Most of the incremental male workers were also absorbed in construction. The manufacturing sector, the most important absorber of female workers, has experienced substantial loss of jobs for female. The same phenomena have been experienced by rural male workers.

The expansion of education among rural youth along with economic slow down, fall of employment opportunity, and declining labour absorption in agriculture are accounted for reduction of labour force participation rate during recent years. And the resultant outcome is the reduction (though it is marginal) of rural unemployment rate. But this is not encouraging. There has been millions and millions young people putting themselves through more education in the hope of being able to access better jobs. If this sluggish pace of job creation continues, there will be even larger gaps between aspiration and reality in India's labour markets. The point of worry is that when these youth offer themselves in the job market, open unemployment in the country might increase, if the employment-generating potential of the economy remains low. That such a combination is a recipe for enhanced social tensions and political unrest is well known and has been reinforced by recent experience across the world. A course correction is needed.

Notes

1. All references to rural employment imply such employment for rural workers/households, not necessarily located in the rural areas themselves (Chadha, 2001).
2. The similar methodology has also been used by a number of authors (Vasari 1995, Sundaram 2001, Chadha, 2001).
3. The intermediate data set for 1987-88 and 1999-2000 is not used. Weather-wise, the years were not a normal one and was likely to throw up avoidable distortions in rural employment scenario many times more than in urban areas (Chadha, 2001), and, the pre- and post- reform periods need not be shortened (to 1987-88/1993-94 and 1993-94/1999-2000) when data of 1983 and 2004-05 are available.
4. *Workforce participation rate* (WPR) is defined as the ratio of the employed persons to total population.
5. According to the *NSSO* the activity status on which a person spent relatively longer time during the 365 days preceding the date of survey is considered as the usual *principal activity status* (*ps*) of the person. A person whose usual principal status is determined on the basis of the major time criterion

could have pursued some economic activity for a shorter time throughout the reference year of 365 days preceding the date of survey. The status in which such economic activity is pursued was the *subsidiary economic activity status (ss)*. Here the subsidiary employment is treated as *marginal* employment.

6. *Unemployment rate* is the ratio of the number of unemployed persons to total labour force (employment and unemployed).
7. The phenomenon has been explained by the withdrawal of unpaid family helpers from the workforce comparison with paid women workers. For detailed see Majumder & Neetha, 2011.
8. The increase of the construction employment during the post-reform periods may be explained in terms of real estate development in urban areas and in terms of implementation of National Rural Employment Guarantee Programme in rural areas.

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