

Developments in the Workforce between 2009-10 and 2011-12

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After a disappointing performance between 2004-05 and 2009-10, the Indian labour market showed some improvement between 2009-10 and 2011-12. During this two-year period, around 11 million jobs were created at an annual growth rate of around 1.1% per annum. Both rural and urban India witnessed a sharp decasualisation of employment, especially of females, and a significant improvement in the creation of regular wage employment as compared to previous rounds of the National Sample Survey. There was a faster decline in the share of workers in the farm sector during this period, while manufacturing and service sectors witnessed high growth rates in employment.

In 2013, the National Sample Survey Office (NSSO) released key results of its 68th round sample survey on employment and unemployment conducted between July 2011 and June 2012. NSSO usually conducts large sample employment surveys on a quinquennial basis. The last such survey was conducted between July 2009 and June 2010 (66th round). The results of the 66th round surprised many observers because it painted a grim picture on many parameters related to employment. The labour force and workforce both showed low growth rates between 2004-05 (61st round) and 2009-10 (66th round) as compared to previous rounds. Also, for the first time since 1973, in the history of these surveys, the female workforce showed a decline (negative growth) between 2004-05 and 2009-10. As 2009-10 was considered an unusual year because of the drought and global recession, the NSSO decided to conduct another large sample employment survey within a span of two years, as against the usual five, in 2011-12. In this article, we try to analyse the results of the 68th round and draw some conclusions.

The article is organised in five sections. Section 1 starts with the methodology used to derive the estimates of labour force and workforce. Section 2 analyses the trends over various NSSO rounds and draws attention to some positive developments in the aggregate labour force, workforce and unemployment rate in the latest (68th) round. Section 3 deals with changes in the sectoral composition of the workforce. Section 4 talks about possible reasons for the decline in the female labour force and workforce. In Section 5, we make some concluding remarks.

1 Methodology

The NSSO uses different methods (in terms of major time criteria) to measure

labour force and workforce participation rates. These are the usual principle status (UPS), usual principle and subsidiary status (UPSS), current weekly status (CWS) and current daily status (CDS). Of these four measures, the UPSS is the most widely used measure to discuss employment trends. In this article we use this measure.

The estimates of total labour force, workforce and unemployed persons are arrived at by multiplying the NSSO estimates for the labour force participation rate (LFPR) and worker population ratio (WPR) with the population of the corresponding year as on 1 January (the mid-point of the survey period). Population is calculated using census data and its growth rates (Shaw 2013a). To estimate the population for the years 2004-05, 2009-10 and 2011-12 we have used the rural-urban gender-wise annual growth rate of population between 2001 and 2011 Census.

2 Trends over Various Rounds

The results of the NSSO 61st round (2004-05) surprised many observers as it showed a reversal of the declining trend of LFPR seen in the previous round. The employment growth rate had increased sharply between 1999-2000 and 2004-05. Contemporary literature has termed this phenomenon as "distress employment". This trend got reversed in the next quinquennium. The next period, i.e., between 2004-05 and 2009-10, showed a decline in the LFPR (Table 1). The decline was sharper in the female LFPR as compared to the male LFPR. This declining trend in the LFPR was in line with the trend revealed by the small sample, annual surveys during this period. The increase in the workforce was not very significant. The

Table 1: LFPR (%) by Gender and Rural-Urban Location (UPSS)

NSSO Round	Rural		Urban	
	Male	Female	Male	Female
1993-94, 50th round	56.1	33.0	54.3	16.5
1999-2000, 55th round	54.0	30.2	54.2	14.7
2004-05, 61st round	55.5	33.3	57.0	17.8
2009-10, 66th round	55.6	26.5	55.9	14.6
2011-12, 68th round	55.3	25.3	56.3	15.5

Data Source: NSSO surveys.

The views expressed are personal.

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very low growth of employment in this period is difficult to explain because this was the period when the economy grew at an average growth rate of 9% per annum.

Reversing some of the earlier trends, the results of the latest 68th round conducted between July 2011 and June 2012 revealed some positive developments in the Indian labour market. The labour force increased from 472.32 million in 2009-10 to 483.75 million in 2011-12. There was a net addition of

Table 2: Labour Force, Workforce and Unemployed (UPSS)

	1993-94	1999-2000	2004-05	2009-10	2011-12	1993-94 to 1999-2000	1999-2000 to 2004-05	2004-05 to 2009-10	2009-10 to 2011-12
	In million					CAGR (%)			
Labour force	381.94	406.85	468.73	472.32	483.75	1.06	2.87	0.15	1.20
Workforce	374.45	397.88	457.56	462.49	472.91	1.02	2.83	0.21	1.12
Number of unemployed	7.49	8.97	11.17	9.84	10.84				
Unemployment rate (%)	2.0	2.2	2.4	2.1	2.2				

Data source: 1 NSSO surveys.

2 Employment in 1993-94 is as per the Report of the Task Force on Employment Opportunities (Planning Commission).

11.43 million people into the labour force during these two years. The workforce also increased substantially from 462.49 to 472.91 million in this same period and around 11 million additional jobs were created (Table 2).

There was a significant improvement in the compound annual growth rate (CAGR) of the labour force and workforce between 2009-10 and 2011-12 as compared to between 2004-05 and 2009-10. Both the labour force and workforce grew at a rate of around 1.2% per annum from 2009-10 to 2011-12 as compared to a low rate of around 0.1-0.2% per annum from 2004-05 to 2009-10. But this is still way behind the growth rate of around 3% per annum, observed between 1999-2000 and 2004-05.

Unemployment increased from 9.84 million to 10.84 million despite the creation of 11 million new jobs in these two years, which is nearly five times the number of jobs added in the previous quinquennium. The crucial fact, nonetheless, is the substantial addition of 11 million people to the workforce in two years. If we ignore the 66th round and look at the change between 2004-05 (61st round) and 2011-12 (68th round), there is an addition of around 2 million jobs per annum. Employment grew at the rate of 0.5% per annum during this seven-year period.

The casualisation of employment that happened between 2004-05 and 2009-10 was reversed between 2009-10 and 2011-12. In rural India, between 2009-10 and 2011-12 the number of casually employed males declined at an annual rate of 2.6% as against an increase of 4.1% per annum in the period 2004-05 to 2009-10. In urban India, the decline was much higher at 3.7% between 2009-10 and 2011-12 as against an increase of 5.6% per annum between 2004-05 and 2009-10. The trend is similar

for the female workforce engaged in casual employment. During the latest two-year period, rural and urban India witnessed a sharp decline of 7.5% per annum and 9.2% per annum, respectively, in the number of casually employed females as compared to an increase of 0.6% and 2.2% per annum between 2004-05 and 2009-10.

There was a sharp increase in regular wage/salaried (rws) employment between 2009-10 and 2011-12 as compared to previous rounds of NSSO. For both males and females, irrespective of rural and urban, the share of rws workers in the total workforce increased. The share of rws employment amongst total rural male workers witnessed a reversal of the declining trend observed in the last two rounds and reached 10.1% after an increase of 1.5 percentage points.

For urban males the share increased from 41.8% to 43.4%. There was a sharp increase in the share of female workforce in the rws category. For rural females this share increased by 1.4 percentage points and reached 5.6% and for urban females, this share increased from 39.1% to 42.9%. The number of rural and urban male workers in rws category grew at high rates of 9.4% and 4.9% per annum between 2009-10 and 2011-12 as compared to relatively low rates of 0.7% and 3.0% respectively between 2004-05

and 2009-10. For females the growth rates are even higher between 2009-10 and 2011-12. These are 14.2% and 11.2% for rural and urban respectively. For the same period, Shaw (2013b) also observed the same phenomenon of decasualisation of labour force and increasing share of rws happening in the UPS category of employment.

Similarly, a declining trend that was observed in previous rounds in the share of self-employed workers was reversed between 2009-10 and 2011-12, especially for females and rural males. The rural and urban female workers in the self-employed category grew at the rate of 1.9% and 8.3% respectively in the same period. On the other hand, rural self-employed male workers grew at 1.8% per annum between 2009-10 and 2011-12.

3 Sectoral Composition

In 2011-12, for the first time in the history of the Indian labour market; the share of employment in the farm sector fell to below 50%. It has declined from 59.9% in 1999-2000 to 48.9% in 2011-12. The share of industry and services increased continuously and reached 24.3% and 26.9% respectively in 2011-12. The withdrawal of workers from the farm sector at 1.7% per annum between 2004-05 and 2009-10 accelerated to 3.0% per annum between 2009-10 and 2011-12.

The manufacturing sector, which showed a negative growth (-1% per annum) in employment creation between 2004-05 and 2009-10 grew at a high growth rate of 8.2% per annum between 2009-10 and 2011-12. The service sector also showed acceleration (4.2% per annum) in employment creation during the latest two-year period compared to the previous period (1.9% per annum). Within the service sector except trade and public administration and defence, all the sectors showed higher annual growth rates of employment creation between 2009-10 and 2011-12. There is a decline in the annual growth rate of employment in construction activities between 2009-10 and 2011-12. In this period employment in construction sector grew at 6.3% compared to 11.6% from 2004-05 to 2009-10.

This decline was mainly because of a reduction in construction activities in urban India. Considering the withdrawal of employment from the farm sector and decasualisation of employment both in rural and urban India, we may infer that people are withdrawing from casual wage employment in the farm sector (Table 3).

In rural India, both males and females showed a tendency to withdraw from the agricultural sector and moved to industry and services. This tendency is sharper for females. Around 29 million females withdrew from agriculture between 2004-05 and 2011-12. Rural India witnessed a sharp increase of employment in manufacturing, construction and services sectors between 2009-10 and 2011-12. In rural India, male employment in manufacturing and construction grew at a high rate of 8-9% per annum while the number of men employed in service sector increased at an annual rate of 3% during this period.

There was a sharp increase in the number of rural female construction workers from 5 million to 11 million (growth of 45% per annum) between 2009-10 and 2011-12. Manufacturing absorbed around 3 million rural females (at 13% per annum) in the two-year period. In contrast to the rural sector,

urban India showed a slight decline in employment creation for both males and females in the construction sector. Rural India witnessed stagnation in the creation of female employment in the services sector between 2004-05 and 2011-12. Urban India, however, saw female employment in the services sector grow at a rate of 3% per annum during this period. Shaw (2013b) found similar trends in sectoral employment by analysing NSSO data for usual principal status. In his analysis, for UPS, the decline in the share of employment in agriculture between 2009-10 and 2011-12 seems to be much sharper as compared to our analysis for UPSS.

4 Withdrawal of Rural Females

After reaching a peak of 33% in 2004-05, the share of females in the total labour force has been declining continuously and reached 27% in 2011-12. Historically, due to certain traditional and cultural reasons, female participation in the labour force in India has been very low when compared to other developing countries like Brazil and China. Looking at the various rounds of NSSO employment surveys, it is seen that from 1977-78 to 2004-05, rural female LFPR hovered around 33% (except in one round). But, surprisingly, from 2004-05 to 2009-10 it came down significantly and reached

26% and came down further to 25% between 2009-10 and 2011-12.

Urban India also witnessed a decline in the female LFPR from 18% to 15% during the period 2004-05 – 2009-10, but showed a slight improvement in between 2009-10 and 2011-12 when it reached 16%. As compared to the period 2004-05 – 2009-10, in the latter period, the withdrawal rate of rural female labour force has slowed down to 1.1% per annum from 3.3% per annum witnessed in the quinquennium of 2004-05 – 2009-10. Interestingly, unlike the decline observed in the period 2004-05 – 2009-10, urban India witnessed an increase of 6.1% per annum in the female labour force between 2009-10 and 2011-12.

Reasons for Decline

Even though there was an improvement in employment creation during 2009-10 to 2011-12, a disturbing fact observed in both the 66th and 68th rounds of NSSO was the continuous decline of females in the rural labour force and workforce. It is very hard to explain this phenomenon because during this period gross domestic product grew at an average rate of 8% per annum and female population grew at around 1.2% per annum. There seems to be two plausible reasons for the withdrawal of rural women from the labour force on such a large scale.

In recent years, women's participation in education has increased tremendously. The number of girls enrolled in secondary and senior secondary education increased from 16 million to 23 million between 2005-06 and 2010-11 and more than doubled in higher education from 5.5 million to 12 million during the same period. So the first reason for the fall in the female labour force can be partly explained by the "education effect" as argued by Rangarajan et al (2011). NSSO data also shows the same trend in education. In 1999-2000, around 18% of rural women were opting for education; this percentage increased to 25% in 2011-12. In the younger age group of 5-24 years, the increase is sharper and the share reached 63% in 2011-12 from 43% in 1999-2000. So we cannot ignore the role of increasing education on the

Table 3: Sectoral Composition of Workforce (UPSS)

Industry	Sector-wise Employment (%)				Sector-wise Employment (Million)			
	1999-2000	2004-05	2009-10	2011-12	1999-2000	2004-05	2009-10	2011-12
(1) Agriculture, forestry and fishing	59.9	58.5	53.2	48.9	238.3	267.7	246.0	231.3
(2) Mining and quarrying	0.5	0.6	0.6	0.5	2.2	2.7	2.8	2.6
(3) Manufacturing	11.1	11.7	11.0	12.6	44.2	53.5	50.9	59.6
(4) Electric, gas and water supply	0.3	0.3	0.3	0.5	1.1	1.4	1.4	2.5
(5) Construction	4.4	5.6	9.6	10.6	17.6	25.6	44.4	50.1
Industry	16.4	18.2	21.5	24.3	65.1	83.3	99.4	114.7
(6) Trade, hotels and restaurant	10.4	10.3	10.8	11.0	41.4	47.1	49.9	51.8
(6.1) Trade	9.2	9.0	9.5	9.3	36.7	41.2	43.9	44.1
(6.2) Hotels and restaurants	1.2	1.3	1.3	1.6	4.6	5.9	6.0	7.8
(7) Transport, storage and communication	3.7	3.8	4.3	4.8	14.7	17.4	19.9	22.8
(8) Financing, insurance, real estate and business services	1.2	1.5	2.1	2.6	4.9	6.9	9.7	12.2
(8.1) Banking and insurance	0.6	0.6	0.8	0.9	2.3	2.7	3.7	4.3
(8.2) Real estate, ownership of dwellings, business and legal services	0.7	0.9	1.3	1.7	2.7	4.1	6.0	7.9
(9) Community, social and personal services	8.4	7.7	8.1	8.5	33.5	35.2	37.5	40.2
(9.1) Public administration and defence	2.6	1.8	2.1	1.7	10.5	8.2	9.7	7.9
(9.2) Other services	5.8	5.9	6.0	6.8	23.0	27.0	27.7	32.3
Services	23.7	23.3	25.3	26.9	94.5	106.6	117.0	127.0
All	100.0	100.0	100.0	100.0	397.9	457.6	462.5	472.9

Source: Various NSSO surveys.

declining labour force participation of rural females.

Second is the “income effect” due to rising average rural incomes. If we take per capita household expenditure as a proxy for the income level, the latest two rounds of NSSO household consumption expenditure surveys clearly show a sharp increase of around 3% per annum in the real per capita consumption expenditure between 2004-05 and 2011-12 as compared to only 0.2% per annum between 1999-2000 and 2004-05. With the rise in the level of income in rural India, rural females engaged in casual work/unpaid work in agriculture are, perhaps, withdrawing from the labour force and getting engaged in the domestic activities. Abraham (2013) suggested the quest for social status and social mobility, with rising incomes, seems to be associated with domestication of women and discouragement of women’s participation in the labour market.

Kannan and Raveendran (2012) do not support the hypothesis that the withdrawal of women could be due to improved economic conditions. They question Rangarajan et al (2011) that if rising income levels are the reason for the withdrawal of females from the labour force, then why is the decline more among rural women engaged in such low-earning activities as self-employed and casual labour and not among others.

There are several factors contributing to the decline in female participation in the labour force, particularly in the rural areas. It is not unreasonable to expect that even in low income households, as income increases the female members of the households withdraw from the labour force.

In fact, changes in women’s participation in labour force in the course of economic development have been well-documented in various developed countries as well. Researchers have observed that the relationship between economic development and women’s labour force participation is u-shaped, i e, female labour participation first declines and then increases as the country develops. Goldin (1994) observed that in the United States (us) the participation rate of married females was 12.9% in 1890 and

reached around 3%-6% in 1920. This is believed to be the lowest end of the u-shaped curve in the us, after which, with the increase in white collar jobs, women’s participation started increasing, and reached 20.7% in 1950, 38.5% in 1970 and 49.3 % in 1980. Goldin explains this phenomenon thus: once the role of female labour force decreases in farm activities, a strong social stigma restricts poorly educated woman from doing manual work outside the home and family farm. Further rise in income induces families to provide education to their girls. This is also aided by the extension of publicly provided education. As a result, the female LFPR falls. However at higher stages of economic development, with improvement in education, women find white collar jobs. Goldin says that at this stage, the strong social stigma which restricts poorly educated women to do manual work outside the home and family farm does not come into play for educated women who opt for white collar work. This results in an increase in female participation in the labour market.

In the Indian context also, the rise in income of the family has, without doubt, forced women to withdraw from the labour force (Abraham 2013). At the same time, their skill level does not match the available work opportunities and social stigma forces them to remain confined to domestic work. Meanwhile, the increasing emphasis on education of girl children due to various government schemes has resulted in many girls getting educated. It is only in the more advanced stage of economic development when female education levels increase beyond the elementary school level and when there are enough work opportunities in the organised sector that female participation in the labour force tends to increase. The increasing participation of urban woman in the rws category clearly shows that women prefer to work in the organised sector.

As per Tilly and Scott (1978), “the counter-cyclical tendency in women’s employment behaviour is stronger in households that face a greater risk of consumption inadequacy in the wake of income shocks”. Sonia Bhalotra and

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Marcela Umana-Aponte (2010) observed that in Asia and Latin America, insurance motive forms the basis for the dynamics of women's work participation. This is mainly related to women's marital status, the education of her husband (if married), household wealth, landownership, rural location and the presence of young children. The authors suggested that it is important to understand the dynamics of employment to understand the dynamics of poverty

Problems with Measurement

The education and income effects mentioned above do not fully explain the decline in female LFPR, especially in rural areas. There may be some other reasons related to survey methodology responsible for this decline. Indira Hirway (2012) argued that the missing labour force is not really missing or moving out of the labour market, it has merely moved to sectors like low-productivity and subsistence-employment sectors that are difficult to measure through NSSO surveys. It is also suspected that the NSSO may have missed a part of employment in the rural areas due to some response errors following the introduction of questions related to MGNREGA in schedule 10 of NSSO's 66th and 68th round surveys.

Departing from the earlier rounds, in the 66th round, NSSO put some questions related to the participation of the households in the National Rural Employment Guarantee Act (NREGA) scheme. By way of illustration, it asked whether the household has an NREGA job card and whether the household got work in NREGA works during last 365 days. It also sought information on the number of days worked and the mode of payment of the wages earned in NREGA work. Following this, after enquiring about a holding of NREGA job cards and number of days worked under NREGA, there is a high probability that the respondent may hide his/her actual working status because of the fear that he/she might not get NREGA works/benefits in future, and report "not working"/"doing domestic duties". Since the NREGA scheme is meant only for rural India and its penetration is more in the rural females, it is speculated here that this response error may have

caused a sudden decline in female workers in the 66th and 68th rounds. Even though, this argument is strengthened by the fact that the maximum withdrawal happened in rural India, mainly in self-employed category of workers in agriculture (in the case of 66th round) and those casually employed in agriculture (in the case of 68th round). These are the categories that had a greater chance to participate in NREGA works. It may be useful to note that in the 66th and 68th rounds there is a wide difference of around 18 million and 20 million, respectively, in the estimated figures of rural female workforce as compared to Census 2011. It is true that the employment figures from the census and NSSO are strictly not comparable due to the methodological differences but we also cannot ignore the fact that the difference between the two has never been that significant in the previous rounds of NSSO and the corresponding census figures. The reduction in the female workforce due to the response error may be difficult to estimate. It requires further scrutiny to establish the impact of introduction of these questions in the NSSO schedules on the rural LFPR, especially on female LFPR.

5 Conclusions

After a very disappointing performance between 2004-05 and 2009-10, the Indian labour market showed some improvement between 2009-10 and 2011-12. During this two-year period, around 11 million jobs were created at an annual growth rate of around 1.1% per annum as compared to a very low growth rate of 0.2% per annum in the quinquennium of 2004-05 – 2009-10. Between 2009-10 and 2011-12, both rural and urban India witnessed a sharp decasualisation of employment, especially of females. The number of casually employed women declined at the rate of 7.5% per annum and 9.2% per annum respectively in rural and urban India. At the same time there was a sharp increase in RWS employment between 2009-10 and 2011-12 as compared to previous rounds of NSSO. This is an important development. The declining trend in the share of farm sector employment continued as a faster rate during this period,

while the manufacturing and service sectors witnessed high growth rates in employment. The increase in the rural income and significant improvement in the participation of rural women in education are possible reasons for the recent decline in the rural female LFPR. One of the positive things emerging from the analysis of the 68th round is that more and more women are opting out of casual employment, especially in the farm sector. This phenomenon of withdrawal of females from the labour market has been witnessed in the early stages of economic development in many developed countries as well. Female participation in labour force tends to follow a U-shaped pattern, first declining and then increasing as development picks up. In the initial stages of development, with the increase in income, more and more women get educated. This leads to an initial fall in women's participation in the labour force. But as they acquire skills and as more opportunities open up due to economic development, their participation in the labour force increases. India may also be following this pattern.

REFERENCES

- Abraham, Vinoj (2013): "Missing Labour or Consistent 'Defeminisation'?", *Economic & Political Weekly*, 48(31).
- Bhalotra, Sonia and Marcela Umana-Aponte (2010): "The Dynamics of Women's Labour Supply in Developing Countries", IZA, Discussion Paper 4879.
- Goldin, Claudia (1994): "The U-Shaped Female Labour Force Function in Economic Development and in Economic History", working paper no 4707, *National Bureau of Economic Research*, Cambridge, April.
- Hirway, Indira (2012): "Missing Labour Force: An Explanation", *Economic & Political Weekly*, 47(37).
- Kannan, K P and Raveendran G (2012): "Counting and Profiling the Missing Labour Force", *Economic & Political Weekly*, 47(8).
- National Sample Survey Office (2006): "Employment and Unemployment Situation in India 2004-05", Part I and Part II, 61st round.
- (2011): "Key Indicators of Employment and Unemployment in India 2009-10", 66th round.
 - (2013): "Key Indicators of Employment and Unemployment in India 2011-12", 68th round.
- Rangarajan, C, Padma Iyer Kaul and Seema (2011): "Where Is the Missing Labour Force?", *Economic & Political Weekly*, 46(39).
- Shaw, Abhishek (2013a): "Comparing NSSO's Employment Surveys: A Methodological Note", *Economic & Political Weekly*, 48(30).
- (2013b): "Employment Trends in India: An Overview of NSSO's 68th Round", *Economic & Political Weekly*, 48(42).
- Tilly, L A and J W Scott, (1978): *Women, Work and Family* (New York: Holt, Rinehart and Winston).