

Changes in Rural Economy of India, 1971 to 2012

Lessons for Job-led Growth

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The transition in the rural economy in the last four decades is examined based on the analysis of growth and composition of output and employment.

A reduction in the share of agriculture, and a dominance of non-farm activities in the rural economy is noted from 2004–05 onwards. However, agriculture continues to be the predominant source of employment. Employment in the construction sector increased substantially, but was not large enough to absorb workers leaving agriculture, resulting in a decline in rural employment after 2004–05. A serious imbalance has emerged in output and employment in different sectors in rural areas requiring urgent attention to create jobs in manufacturing, services, and construction. Creation of jobs in rural areas requires a complete rethink of rural industrialisation.

India is predominantly a rural country. As per the 2011 Census, 68.8% of the country's population and 72.4% of the workforce reside in rural areas. However, steady transition to urbanisation over the years is leading to the decline in the share of population residing in the rural areas. Between 2001 and 2011, India's urban population increased by 31.8% as compared to 12.18% increase in the rural population. Over 50% of the increase in urban population during this period was attributed to rural–urban migration and reclassification of rural settlements into urban (Pradhan 2013). Population projections indicate that India will continue to be predominantly rural till 2050, after which, urban population is estimated to overtake rural population (United Nations 2012).

It is often felt that unplanned rural to urban migration, particularly in search of better economic opportunities, is putting severe pressure on urban amenities and forcing a large number of low wage migrants from rural areas to live in unhygienic and deprived conditions. Thus, to check unplanned migration from rural to urban areas and to improve socio-economic conditions of a vast majority of the population in the country, there is a need to make rural economy stronger and create employment opportunities in rural economic activities. The improvement in economic conditions of rural households is also essential for reducing the disparity in per capita rural and urban income that has remained persistently high. This requires significantly higher growth in rural economy.

Traditionally, agriculture is the prime sector of rural economy and rural employment. The transformation in the composition of output and occupation from agriculture to more productive non-farm sectors is considered to be an important source of economic growth and transformation in rural economy. Several scholars have observed that such transition is taking place in the Indian economy (Aggarwal and Kumar 2012; Maurya and Vaishampayan 2012; Papola 2012). This paper examines the nature of growth in rural economy and analyses its effect on job creation and occupation structure spanning over a period of the last four decades. An attempt is made to identify the reasons for mismatch in growth in output and employment in various non-farm activities. The findings are used to suggest pro-employment rural growth strategy.

The paper discusses the changing contribution of rural areas in India's total output and employment since 1970–71. It examines the trend in rural–urban disparity in worker productivity and documents the changes in rural–urban distribution of output and employment in various economic activities. Then it

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provides empirical evidence on the performance and changing composition of rural output and employment during the past four decades. After 2004–05, the rural areas have witnessed negative growth in employment in spite of high growth in output. We then explore the reasons for growth in jobs not keeping pace with the growth in output, and dissect the performance of different sectors and explain the asymmetric changes between output and employment.

Data Sources

The data on rural and urban net domestic product (NDP) is available for the years 1970–71, 1980–81, 1993–94, 1999–2000, 2004–05 and 2011–12 at current prices. For estimating growth rates, nominal values of NDP were expressed in real terms using sector-specific implicit price deflators (2004–05=1) for national output. The information on different aspects of employment in the country was extracted from the unit level data of quinquennial employment and unemployment surveys (EUS) conducted by National Sample Survey Office (NSSO). The first quinquennial NSSO-EUS was carried out during 1972–73 to assess the volume and structure of employment and unemployment in the country. Thereafter, these surveys were repeated in 1983, 1993–94, 1999–2000, 2004–05, 2009–10, and 2011–12.

The performance of rural economy in terms of output and employment was studied during three distinct periods chosen on the basis of the major changes in the Indian economy during the past four decades. These periods are 1970–71 to 1993–94, 1993–94 to 2004–05, and 2004–05 to 2011–12, which can be termed as the pre-reform period, the post-reform period, and the period of economic acceleration, respectively.

Contribution of Rural Areas in Indian Economy

The contribution of the rural areas in economy of India for the period 1970–71 to 2011–12 is seen from its share in national output and employment (Table 1). The rural areas engaged 84.1% of the total workforce and produced 62.4% of the total NDP in 1970–71. Subsequently, rural share in the national

Table 1: Share of Rural Areas in Total NDP and Workforce, and Rural–Urban Disparity in Worker Productivity

Year	Economy	Workforce	Worker Productivity at 2004–05 Prices (₹/worker)		
			Rural	Urban	Disparity
1970–71	62.4	84.1	16,779	53,415	3.2
1980–81	58.9	80.8	17,935	52,702	2.9
1993–94	54.3	77.8	25,351	76,234	3.0
1999–2000	48.1	76.1	30,763	1,08,094	3.5
2004–05	48.1	74.6	37,273	1,20,419	3.2
2011–12	46.9	70.9	62,859	1,74,525	2.8

Source: As mentioned in "Data sources".

Table 2: Share of Rural Areas in Total NDP and Workforce across Different Sectors (%)

Year	Agriculture		Manufacturing		Construction		Services		Non-agriculture	
	NDP	Employment	NDP	Employment	NDP	Employment	NDP	Employment	NDP	Employment
1970–71	96.2	96.8	25.8	51.5	43.2	64.6	32.8	42.1	32.4	47.3
1980–81	94.9	95.9	31.8	48.1	45.6	58.8	34.0	41.7	35.0	44.9
1993–94	93.9	95.8	29.8	51.3	45.1	57.2	33.6	42.3	34.8	46.6
1999–2000	93.2	96.6	41.6	51.5	43.3	57.6	27.1	40.7	31.8	45.8
2004–05	94.1	96.1	42.5	49.6	45.5	64.4	32.7	41.9	36.7	47.2
2011–12	95.1	95.9	51.3	47.4	48.7	74.6	25.9	39.6	35.3	48.7

Non-agriculture includes manufacturing, construction, services, and other sectors.

Source: Same as Table 1.

income declined sharply till 1999–2000. Rural share in total employment also witnessed decline but its pace did not match with the changes in its share in national output or income. The declining contribution of rural areas in national output without a commensurate reduction in its share in employment implies that a major portion of the overall economic growth in the country came from the capital intensive sectors in urban areas without generating significant employment in the period under consideration. Notwithstanding, the difference between the rural share in output and employment increased from 22 percentage points in 1970–71 to 28 percentage points in 1999–2000.

The asymmetry between the output and employment shares of rural areas in national economy is reflected in the persistent disparity in per worker productivity in rural and urban areas. As can be seen from Table 1, an urban worker continued to earn around three times or more the income of a rural worker.

After 1999–2000, growth rate of rural economy picked up pace and was at par with the growth rate of urban economy. This led to stabilisation in rural contribution in total NDP at around 48%. The rural share in national NDP dropped slightly from 2004–05 to 2011–12 despite acceleration in growth rate.

Based on these evidences, we can conclude that the urban economy has overtaken rural economy in terms of output but urban employment is less than half of the rural employment. Higher dependency for employment in rural areas has serious implications such as wide disparities in worker productivities between rural and urban areas. The gap in per worker productivity was ₹36.63 thousand in 1970–71, and it crossed ₹1.11 lakh during 2011–12 at 2004–05 prices. In relative terms, the disparity in productivity of urban and rural workers narrowed down after 1999–2000, but still an urban worker produces 2.8 times the output of rural worker.

Share in output and employment across sectors: The sector-wise disaggregation shows significant changes in the contribution of rural areas in the national economy. Besides producing almost all agricultural produce, rural areas contributed around one-third of non-farm output and 46% of total employment in the country (Table 2). The contribution of rural areas in different sectors of non-farm economy revealed large variation and interesting patterns.

The most striking change in rural share was observed in the case of manufacturing sector. Between 1970–71 and 2011–12, the share of rural areas in output of the manufacturing sector doubled and exceeded the manufacturing production in urban areas. Rural areas contributed 51.3% of manufactured output in 2011–12. However, this sharp increase in share in output did not fetch any increase in employment share. On the contrary, rural share in total manufacturing employment in the country declined by 4.1 percentage points during the 40 years preceding 2011–12. Clearly, manufacturing sector was shifting to rural areas but without commensurate increase in the employment. In the same period, the share of rural areas

in construction sector output increased by 5.5 percentage points, while employment share increased by 10.0 percentage points. In the case of services sector, rural areas lost to urban areas in a big way after 2004–05 and accounted for 35% of services output in the country in 2011–12. These changes indicate that rural employment has risen at a much faster rate in relatively low paid construction activities. The underlying reasons and implications of these changes are discussed in the later sections of the paper.

Structural Changes in Rural Economy

From 1970–71 to 2011–12, India’s rural economy expanded from ₹229 billion to ₹34,167 billion at current prices and from ₹3,199 billion to ₹21,107 billion at 2004–05 prices. In the same period, employment expanded from 191 million to 336 million. Thus, despite almost seven times increase in output in rural India, employment could not even double in this long period of four decades.

The growth rates in output and employment show large variations across sectors and over different periods, which is useful in understanding the transition in rural economy in the country. The sector-wise growth rate in NDP and employment during the three sub-periods are presented in Table 3, and sectoral composition is presented in Table 4.

The period 1970–71 to 1993–94 witnessed 2.57% annual growth in the NDP of agriculture sector as compared to 5.7% annual growth in non-farm sectors (Table 3). As a consequence, the share of agriculture in the rural NDP declined from 72.4% to 57% by 1993–94 (Table 4). Among the non-farm sectors, manufacturing, construction, and services sectors experienced

5.18%, 3.94%, and 6.1% annual growth respectively, and their share in rural NDP increased by 2, 2 and 10 percentage points during the pre-reforms period, respectively.

During the post-reform period (1993–94 to 2004–05), growth in the agricultural sector decelerated to 1.87%, whereas growth rate in non-farm economy accelerated to 7.93%. The effect of the slowdown in agriculture on rural economy was offset by significantly higher growth in non-farm sectors which accelerated growth rate in rural economy to above 5% as compared to 3.72% during the pre-reforms period. These changes further reduced the share of agriculture in rural economy from 57% in 1993–94 to 39% in 2004–05. Thus, the rural economy became more non-agricultural than agricultural by 2004–05. Among the non-farm sectors, services, manufacturing, and construction sectors constituted 37.3%, 11.5% and 7.8% share in rural output in 2004–05, respectively (Table 4).

During 2004–05 to 2011–12, the agriculture sector witnessed revival and registered impressive annual growth rate of 4.27%. Similarly, non-farm sectors growth accelerated to 9.21%. Based on acceleration in growth in both agriculture and non-farm sectors, this period is termed as the “period of economic acceleration.” Annual growth in the overall rural economy during this period was 7.45%. It is worth pointing that this witnessed a much higher increase in agricultural prices as compared to non-agricultural prices, and growth rate in agriculture and non-farm sectors at current prices was almost the same. Therefore, the share of agriculture in rural NDP did not decline further and stood at a marginally higher level of 39.2% in 2011–12 over 2004–05.

Within non-farm sectors the growth in services sector output decelerated to 3.48% after 2004–05 as compared to 8.55% during the preceding decade. Manufacturing and construction sectors witnessed impressive growth of 15.87% and 11.49% respectively between 2004–05 and 2011–12. Consequently, in these seven years, the share of services sector declined from 37.3% to 27% whereas the share of manufacturing in rural economy increased from 11.4% to 18.4% and construction sector share increased from 7.8% to 10.5%.

Growth pattern in various sectors reveal a sizeable diversification of the rural economy towards non-farm sectors. From the economic development point of view, a similar trend and pattern should be reflected in employment. This was examined from employment data in successive NSSO rounds corresponding to the years for which rural–urban distribution of national income was provided.¹

A perusal of Table 3 shows that growth in rural employment and output followed different patterns. Rural employment showed 2.16% annual growth rate during the pre-reform period, which decelerated in post-reform period to 1.45% and turned negative (-0.28%) in the period of economic acceleration. The output growth rate in the same sub-periods accelerated.² Thus, employment increased at a much lower rate compared to output and even declined in the wake of high growth in output post 2004–05.

The main reason for this sluggish growth followed by negative growth in employment in rural areas is that the

Table 3: Growth Rates of NDP at 2004–05 Prices and Employment in Rural Areas (%)

Period	Agriculture	Manufacturing	Construction	Services	Non-agriculture	Total
Net domestic product (at constant prices)						
1971–94	2.57	5.18	3.94	6.10	5.70	3.72
1994–05	1.87	8.38	7.92	8.55	7.93	5.06
2005–12	4.27	15.87	11.49	3.48	9.21	7.45
Employment (usual status)						
1973–94	1.72	3.55	4.82	4.51	4.22	2.16
1994–05	0.74	2.79	8.32	3.25	3.70	1.45
2005–12	-2.04	0.67	12.09	1.35	3.65	-0.28

Source: Same as Table 1.

Table 4: Sectoral Share in NDP and Employment in Rural Areas, 1970 to 2012 (%)

Year	Agriculture	Manufacturing	Construction	Services
Share in rural NDP (at current prices)				
1970–71	72.4	5.9	3.5	17.1
1980–81	64.4	9.2	4.1	20.6
1993–94	57.0	8.2	4.6	26.8
1999–00	51.4	11.1	5.6	28.6
2004–05	38.9	11.5	7.8	37.3
2011–12	39.2	18.4	10.5	27.0
Share in rural employment				
1972–73	85.5	5.3	1.4	7.3
1983	83.6	6.2	1.3	8.8
1993–94	78.4	7.0	2.4	11.4
1999–00	76.3	7.4	3.3	12.5
2004–05	72.6	8.1	4.9	13.9
2011–12	64.1	8.6	10.7	15.5

Shares do not sum up to 100 as some minor sectors are not included in the sectoral classification.

non-farm sectors could not absorb the labour force leaving agriculture. The results presented in Table 3 also imply that employment elasticity in rural areas declined over time and have turned negative after 2004–05. The employment insensitive growth raises serious concerns over the capacity of the rural economy to provide productive jobs to the rising population and workforce moving out of agriculture. Among non-farm sectors, deceleration in employment growth was experienced in manufacturing and services sector; but construction sector witnessed sharp acceleration in employment expansion with the passage of time.

Changes in Rural Employment after 2004–05

After 2004–05, rural areas witnessed negative growth in employment despite 7.45% annual increase in output. It is pertinent to explore whether the decline in rural workforce between 2004–05 and 2011–12 was on account of rising unemployment or due to change in the labour force itself. It would also be interesting to know the status of the persons who left the workforce, and the sectors where these changes took place. These aspects are analysed by examining household-type and gender-wise changes in labour force participation and workforce distribution across sectors, and by tracking the activity status of “not in labour force” population between 2004–05 and 2011–12.

During the period of high output growth and falling employment (2004–05 to 2011–12), rural population increased by 62 million, distributed equally between male and female (Table 5). As indicated by labour force participation rate (LFPR), the proportion of male population joining the labour force remained almost unchanged (55%) and 16 million out of 31 million incremental male population joined the labour force between 2004–05 and 2011–12. However, female labour force participation declined significantly from 33% in 2004–05 to 25% in 2011–12, resulting in decline in the female labour force by 22 million. This led to a net decline of about 7 million in rural labour force (male + female) between 2004–05 and 2011–12. Interestingly, NSSO data did not show any change in unemployment (based on usual status) during this period, and it showed that workforce in rural areas reduced by a similar magnitude as in the labour force. These evidences imply that the decline in labour force and in its subset (workforce) was primarily due to the withdrawal of female workers during the period under consideration.

It is worth noting that the withdrawal of female workers from the labour force happened across all types of households

Table 5: Changes in Population and Economically Active Persons in Rural Areas between 2004–05 and 2011–12 (million)

Particulars	Male		Female		Persons	
	2004–05	2011–12	2004–05	2011–12	2004–05	2011–12
1 Population	401	432	379	410	780	842
2 LFPR (%)	56	55	33	25	45	41
3 Labour force	223	239	126	104	349	342
4 Workforce	219	235	124	102	343	336
4.1 Agriculture	146	139	103	76	249	216
4.1.1 Cultivators	93	92	67	49	160	141
4.1.2 Agriculture labour	53	48	37	27	89	75
4.2 Non-farm	73	95	21	26	94	121

in the rural areas. This is clearly visible from the increase in “not in labour force” to population ratio³ for female workers; this ratio in agricultural labour, cultivator, and non-farm households, increased by 8.49, 6.05 and 4.63 percentage points between 2004–05 and 2011–12 respectively (Table 6). These evidences also show that withdrawal of female workers from the labour force was highest among agricultural labour households followed by cultivators and non-farm households both in percentage and absolute terms. In the case of male workers, withdrawal from work force was found only among the agricultural labour households.

Many scholars have provided plausible reasons for the withdrawal of women from the labour force (Mazumdar and Neetha 2011; Rangarajan et al 2011; Kannan and Raveendran 2012; Abraham 2013; Rangarajan et al 2013; Chand and Srivastava 2014). One of the reasons for the fall in female LFPR is reported to be the increased participation in educational activities (Rangarajan et al 2011). The rising enrolment of female in education is seen from the increasing share of “not in labour force” female population in the category of education across all household types between 2004–05 and 2011–12 (Table 6).

Among the household-types, the increase in the share of education in total “not in labour force” female population was 3 percentage points for agricultural workers as compared to 1.4 percentage points for non-farm households. Similarly, male “not in labour force” population in education witnessed substantial increase across all household types during the period under consideration.

Increasing enrolment for education is a desirable trend in terms of improvement in education level and skills of the persons. But the real challenge will be to create employment opportunities for those educated persons who join the labour force after acquiring education in the near future. Most of the employment opportunities have to be created in non-farm sector as the natural choice of the educated youth would be to join the more productive non-farm sectors instead of agriculture.

It is interesting to note that education accounted for one-third of the entire reduction in female labour force whereas the withdrawal of male counterparts from labour force (from agriculture) was same as the increase in education. A large number of female, withdrawn from labour force, confined themselves to household activities as shown by the increasing share of “not in labour force” female population in the category of domestic activities during the period under consideration (Table 6). The highest increase in the proportion of females withdrawing from farm work and staying back at home is reported in the case of agricultural labour households. Further, increase in proportion of females in domestic activities is also noticed in the case of non-farm rural households. This is a puzzle as to why women of labour households, whose economic conditions are not very good,⁴ chose to withdraw from workforce, and stay back in households.

One argument is that high growth in agricultural output and resulting terms of trade for agriculture during 2004–05 to 2011–12 resulted in high rate of increase in income of farmers and agricultural labour⁵ in this period, which in turn, led to

withdrawal from farm work. This seems to be a part explanation which can hold in the case of some households who realised substantial increase in their income. Some scholars argue that the female withdrawal from the labour force might be due to the reversal of an exceptional increase in female labour force caused by agrarian distress from 1999–2000 to 2004–05 (Abraham 2009; Thomas 2012). However, empirical evidences refute such arguments because the reduction in female LFPR was not confined to only agricultural households but was across all household types in rural areas.

Some other reasons for reduction in workforce seem to be: (i) rising mechanisation of farm operations; (ii) increase in reservation wage and non-availability of suitable work at that wage rate; (iii) manufacturing jobs away from the place of the habitation, discouraging females to go for it; (iv) lack of skill to get well-paid non-farm jobs; and (v) rising tension between labour and employer in agriculture due to changing social relationship between them (Chand and Srivastava 2014).

Apart from withdrawal of labour force/workforce, sizeable shifts in workforce across sectors was also observed between 2004–05 and 2011–12. Out of the 33 million workers who left agriculture, 27 million (81%) were female and 6 million (19%) were male (Table 5). Further, outgoing workforce from agriculture comprised both cultivators and agricultural labours with their respective shares of 56% and 44%. It is worth mentioning that out of 27 million female workers who left agriculture, only 5 million joined non-farm sectors and the rest withdrew from labour force itself. On the other hand, 6 million male workers who left agriculture as well as the 16 million incremental labour force, joined non-farm sectors between 2004–05 and 2011–12. Based on these evidences it can be concluded that from 2004–05 to 2011–12, (i) rural workforce witnessed defeminisation; and (ii) employment diversification towards non-farm sectors was biased against females.

Sector-wise Changes in Rural Economy

Agriculture: The results presented in the earlier sections show that contribution of agriculture in rural output gradually declined. This is considered a desirable change for the progress in economic development. However, overdependence on agriculture for employment emerged as a major challenge. Between 2004–05 and 2011–12, India for the first time witnessed a reduction in the workforce in agriculture. The rate of decline was 2.04%. Despite this, agriculture employed 64% of the total rural workforce who produced only 39% of the total rural output in 2011–12. It is estimated that for bringing convergence between the share of agriculture in total output and employment, 84 million agricultural workers were required to be shifted to non-farm sectors in rural areas in 2011–12. This amounts to almost 70% increase in non-farm employment, which looks quite challenging.

The overdependence on agriculture is the cause for the large difference in worker productivity between farm and non-farm sectors. Per worker productivity (at 2004–05 prices) in the farm sector was only ₹30,912 as compared to ₹1,19,512 in non-farm sectors in 2011–12 (Table 7). This shows that non-farm sectors in rural areas provided 2.88 times more productive employment than the farm sector. Due to decline in agricultural workforce after 2004–05, disparity in per worker productivity between farm and non-farm sectors declined by 1% per annum.

Manufacturing: Manufacturing output in rural areas registered annual growth rate of 5.18% between 1970–71 and 1993–94. The post-reform period (1993–94 to 2004–05) witnessed higher growth rate of 8.38%, which further accelerated sharply to 15.87% during 2004–05 to 2011–12 (Table 3). Significantly higher growth in manufacturing compared to other sectors raised its share in rural NDP from 5.9% in 1970–71 to 18.4% in 2011–12 (Table 4) pointing to a clear trend towards industrialisation in rural areas.

However, the signs of industrialisation were not visible through the changes in the employment structure. Between 1972–73 and 1993–94, manufacturing sector added 10.29 million jobs (29% of incremental non-farm jobs) and its share in total rural employment increased from 5.3% in 1972–73 to 7% in 1993–94. During the next decade (post-reform period) the sector added 7 million jobs (23.4% of incremental non-farm jobs) and its share in total rural employment increased only by 1 percentage point to 8.1% in 2004–05. Between 2004–05 and 2011–12, employment in the manufacturing sector increased merely by 1.2 million (4.9% share in incremental non-farm

Table 6: Reason-wise Distribution of 'Not in Labour Force' Population in Rural Areas (%)

Household Type	Education		Domestic Activities		Others*		Not in Labour Force (%)	
	2004–05	2011–12	2004–05	2011–12	2004–05	2011–12	2004–05	2011–12
Male								
Cultivator	62.9	71.3	0.8	0.8	36.3	27.9	44.3	44.1
Agricultural labour	53.7	67.9	1.1	0.9	45.2	31.2	43.2	42.5
Agricultural worker	59.5	70.2	0.9	0.9	39.6	29.0	43.9	43.5
Non-farm	58.9	63.4	0.9	1.0	40.2	35.6	48.1	47.8
Rural worker	59.3	67.1	0.9	0.9	39.8	32.0	45.4	45.3
Female								
Cultivator	29.1	31.5	48.3	52.2	22.7	16.3	74.9	80.9
Agricultural labour	28.1	32.5	42.7	49.0	29.2	18.6	65.3	73.8
Agricultural worker	28.8	31.8	46.3	51.1	25.0	17.0	71.2	78.5
Non-farm	27.9	29.3	48.1	51.9	24.0	18.8	81.7	86.3
Rural worker	28.4	30.7	47.0	51.5	24.6	17.8	75.1	81.9
Person								
Cultivator	42.2	46.3	29.9	33.1	27.9	20.6	59.1	61.8
Agricultural labour	38.5	45.5	25.9	31.2	35.7	23.2	54.1	58.0
Agricultural worker	40.9	46.0	28.5	32.5	30.7	21.5	57.2	60.5
Non-farm	39.5	41.6	30.4	33.5	30.0	24.9	64.8	66.8
Rural worker	40.3	44.0	29.2	33.0	30.4	23.0	59.9	63.2

*Others include children of age 0–4 years, pensioners, disabled persons, beggars, prostitutes, etc.

Table 7: Trend in per Worker Productivity in Farm and Non-farm Sectors

Particulars	Real Productivity (₹/worker)				Compound Growth Rate (%)		
	1970–71	1993–94	2004–05	2011–12	1970–71 to 1993–94	1993–94 to 2004–05	2004–05 to 2011–12
1 Farm	13,841	17,629	19,933	30,842	1.06	1.12	6.43
2 Non-farm	34,128	53,453	82,990	1,19,685	1.97	4.08	5.37
3 Ratio: 2/1	2.47	3.03	4.16	3.88	0.90	2.92	-1.00

Sector specific implicit price deflators (2004–05=100) were used to deflate NDP.

jobs). Growth rate in manufacturing employment declined from 3.55% in the first period to 2.79% in the second period and to 0.65% in the third period (Table 3).

The results further reveal that rural areas contributed 58% of the incremental manufacturing sector output in the country as compared to only 25% share in incremental employment (5.3 million) between 2004–05 and 2011–12. This leads to the inference that the manufacturing sector in the rural areas used more capital intensive production technology as compared to the urban areas. As the new industry in rural areas relied much more on capital than labour, it failed to address the goal of employment generation for rural labour force.

The employment scenario in the manufacturing sector is totally in contrast with the construction sector where employment increased by more than 12% a year and at a higher rate than growth in output (Table 3).

Within the manufacturing sector, wearing apparel, tobacco products, textile, non-metallic mineral products, and food products and beverages are the major employment generating sub-sectors (Table 8). Most of these sub-sectors witnessed

Table 8: Sub-sector wise Changes in Employment (Usual Status) in Manufacturing and Services Sectors

Sub-sectors	Employment: Usual Status (million)		Compound Growth Rate (%)	Share in Total Manufacturing Employment (%)	
	2004–05	2011–12		2004–05	2011–12
Wearing apparel	3.4	4.2	2.9	12.3	14.5
Tobacco products	3.4	3.6	0.8	12.3	12.5
Textile	4.5	3.6	-3.2	16.0	12.3
Non-metallic mineral products	3.4	3.6	0.8	12.3	12.5
Food products and beverages	3.4	3.4	0.0	12.3	11.8
Machinery, metal products and transport equipment	2.1	3.0	5.7	7.4	10.4
Wood and wood products	4.1	2.8	-5.4	14.8	9.6
Furniture	1.7	1.5	-2.1	6.2	5.1
Chemical products	0.7	0.6	-2.6	2.5	2.0
Rubber and plastic products	0.3	0.4	1.1	1.2	1.3
Paper and printing, etc	0.3	0.3	-0.3	1.2	1.2
Leather and related products	0.3	0.3	-1.8	1.2	1.0
Others	0.0	1.7	-	0.0	5.8
Manufacturing sector: Subtotal	27.6	29.0	0.67	100	100
Wholesale and retail trade; repair of motor vehicles	18.5	18.8	0.3	38.9	36.0
Transport, storage and communication	8.6	10.0	2.3	18.0	19.2
Education	5.5	7.0	3.4	11.5	13.3
Hotel and restaurants	2.4	2.9	2.9	5.0	5.6
Public administration, defence and compulsory social security	2.7	2.7	-0.5	5.8	5.1
Health and social work	1.4	1.6	2.0	2.9	3.0
Financial intermediation	0.7	1.1	7.1	1.4	2.1
Others	7.8	8.2	0.7	16.4	15.7
Services sector: Subtotal	47.6	52.3	1.4	100	100

Table 9: Education Level (General and Technical) of Usually Employed Rural Workers (Age Group 15–59 Years) (%)

Rural Workers	Male		Female		Persons	
	2004–05	2011–12	2004–05	2011–12	2004–05	2011–12
Secondary education and above	19.7	27.1	6.8	11.8	14.9	22.3
With technical education	1.7	1.6	0.7	0.7	1.3	1.3
With vocational training	14.2	15.4	13.0	12.7	13.8	14.6

Source: Authors' estimation based on unit level NSSO data on employment and unemployment survey.

either stagnation or fall in employment between 2004–05 and 2011–12.

The lack of skills and technical knowledge appear to be the main barrier for rural workers from entering the manufacturing sector. The NSSO surveys show a depressing picture of the level of education and technical skills possessed by the rural workers. More than three-fourths of the total rural workforce of age group 15–59 years were not qualified even up to secondary level in 2011–12 (Table 9). Further, only 1.3% of the rural workforce of the age group 15–59 years possessed technical education.⁶ Similarly, only 14.6% of the rural workforce of this age group received vocational training that aims to develop competencies (knowledge, skills, and attitude) of skilled or semi-skilled workers in various trades. Gender-wise disaggregation reveals that female workers possess relatively low level of education and technical training as compared to male counterparts. These facts suggest that setting up of industries and improvement in infrastructure are necessary but not sufficient conditions for increasing employment in rural areas. Improvement in industrial infrastructure in rural areas must be accompanied by effective human resources development programmes to impart necessary skills and training to rural youth to match the job requirement in the manufacturing sector.

Service sector: Service sector was found to be the second largest contributor of output and employment in rural areas (Table 4). The sector contributed about 27% of the total rural output and engaged 15.5% of the rural workforce in 2011–12. According to National Accounts Statistics, services sector registered 5.94% and 6.1% annual growth in its real NDP during the pre-reform period in urban and rural areas, respectively; growth accelerated to 8.94% and 8.55%, respectively during the post-reform period. Between 2004–05 and 2011–12, urban areas maintained its growth in services sector output at 8.42%, but its growth in rural areas dropped to 3.48%.

Services sector has played a major role in the structural transformation of the Indian economy, but its achievements during the recent years were mainly concentrated in urban areas.

Wholesale and retail trade, and repair of motor vehicles constituted 27% share in total service sector NDP in 1993–94. This increased to 37% in 2004–05 on account of impressive annual growth of 11.7% in this sub-sector (Table 9). This along with the remarkable growth in other sub-sectors such as hotel and restaurants, transport, storage and communication, and financial services, resulted in 8.5% annual growth in overall services sector in rural areas between 1993–94 and 2004–05.

During 2004–05 and 2011–12, NDP from trade and hotel and restaurants activities declined by 4.8% and 2.5% per year, respectively. Although the reduction in output of these sectors was offset by the significant growth in financial services, transport, storage and communication, and public administration and social security activities, the growth in overall services sector output decelerated to 3.4% per annum between 2004–05 and 2011–12.

One of the reasons for decline in output of some services in rural areas could be the “shopping” behaviour of the rural households towards urban centres. Improved road connectivity and transport, and rise in ownership of private vehicles have facilitated frequent visits to nearby urban localities for shopping and other requirements for the rural population. Although a consumer gets wider choices in urban localities, this adversely affects trade and other businesses in rural areas.

The slowdown in output of the service sector after 2004–05 caused deceleration in employment growth. Employment in the service sector increased only by 1.35% per year between 2004–05 and 2011–12 as compared to growth rate of 3.25% during the previous period (Table 3). The service sector, which offers relatively decent and comfortable jobs, constituted merely 15% share in 27 million new jobs created in the non-farm sectors between 2004–05 and 2011–12. As in the case of output, wholesale and retail trade including repair services for motor vehicles was the largest sub-sector and accounted for 36.2% of employment in services in 2011–12 (Table 8). But this sub-sector witnessed stagnation in job creation from 2004–05 to 2011–12, resulting in deceleration in overall service sector employment. Notwithstanding other sub-sectors such as financial services, hotels and restaurants, education, and transport, storage and communication services gained momentum in creating employment in rural areas during the same period. Between 2004–05 and 2011–12, two sub-sectors, namely education, and transport, storage and communication constituted 62% of the about 5 million jobs created in services sector in the rural areas.

Construction: Rural areas are characterised by poor infrastructure and civic amenities. Similarly, a large percentage of

houses are in need of upgradation. These facts indicate considerable scope for the growth of the construction sector in rural areas.

The real GDP of construction sector increased at the annual rate of 3.94% between 1970–71 and 1993–94. During the successive periods, 1993–94 to 2004–05 and 2004–05 to 2011–12, growth rate in the sector’s output accelerated to 7.92% and 11.49%, respectively (Table 3). Consequently, the share of the construction sector in rural output increased from 3.5% in 1970–71 to 10.5% in 2011–12 (Table 4).

Employment in the construction sector increased 13 times during the past four decades, leading to a significant increase in its share in total rural employment from 1.4% in 1972–73 to 10.7% in 2011–12. It is interesting to note that this sector absorbed 74% of the new jobs created in non-farm sectors in rural areas between 2004–05 and 2011–12.

These trends indicate that rural areas witnessed a construction boom after 2004–05, which is desirable in terms of creation of necessary infrastructure for economic development. Further, growth in employment in the construction sector was higher than output growth during both the periods under consideration. One of the reasons for the much higher growth in rural workers in construction over manufacturing or services sectors is lesser requirement of skills and education in construction activities.

Conclusions and Policy Lessons

Despite fast expansion of cities and towns, and much better amenities and economic opportunities in urban areas, more than two-thirds of the population in India still resides in rural areas. Based on population projections, it is estimated that even in 2050, more than half of India will be living in rural

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areas. Therefore, transformation of the rural economy is essential for overall and inclusive development of the Indian society. The main concern about rural India is the low level of per capita income due to high dependence on low productivity and low-paying employment in agriculture. A worker in rural India generated less than one-third of the income generated by an urban worker. As a consequence, wide disparity persisted in per capita income in rural and urban areas. What is more worrying is that rural-urban disparity did not show significant change despite much higher growth in the industry and construction sectors in rural areas as compared to urban areas.

Rural economy has now turned more non-agricultural with the share of agriculture in rural income reducing to less than 39%. The second major change witnessed in rural economy is that its share in manufacturing sector output doubled between 1970-71 and 2011-12, and exceeded that of urban areas. However, this change was not accompanied by a similar change in employment, and rural share in manufacturing employment declined. The period 2004-05 to 2011-12 turned out to be the best for growth in rural NDP but the worst in terms of growth in rural employment. Manufacturing sector has shown the worst performance in rural employment. An annual growth rate of 15% in manufacturing output failed to increase employment even by 1% making this period a classic case of jobless growth. Further, employment in manufacturing sector in rural India reveals strong bias against women.

For various reasons, female workers withdrew from agriculture work in large numbers and most of them are staying back in households. The withdrawal from farm work is highest in the case of labour households where incidence of poverty is high. Some evidences indicate that non-availability of suitable employment rather than a lack of willingness for outside work is the reason for de-feminisation of rural workforce.

Workers who moved out of agriculture and those who entered the rural labour force largely got absorbed in construction activity, as employment growth in manufacturing and service sector in rural areas decelerated sharply after 2004-05. Rural manufacturing adopted more capital intensive production as compared to the urban manufacturing and it failed to address the goal of employment generation for rural labour force.

The lack of required skills and technical knowledge are the main barriers for rural workers to enter the manufacturing sector. Setting up of industries and improvement in infrastructure are the necessary but not sufficient conditions for increasing rural employment that require effective human resources development programmes to impart necessary skills and training to rural youth to match the job requirement in the manufacturing sector.

Services sector in rural areas witnessed deceleration in output as well as employment after 2004-05. An important reason for this is the increased reliance of rural consumers on service providers located in urban areas. Rural areas have comparative advantage in services like post-harvest value addition on farm storage, primary processing, grading, and so on.

Linking processing to production through efficient value chain, contract farming, and direct linkage between the factory and the farm offers considerable scope for rural employment generation as well as raising farmers' income.

Transformation of rural economy must include strong measures for employment generation and shifting workers out of agricultural sector towards non-farm sectors. As conventional manufacturing has failed to generate rural jobs, despite high growth in output, India needs to look for a different type of manufacturing in rural areas. Labour-intensive, micro, small and medium enterprises seem to be an appropriate alternative for rural employment generation.

NOTES

- 1 Except for the years 1972-73 and 1983 where output data corresponds to 1970-71 and 1980-81, respectively.
- 2 From 1972-73 to 1993-94, rural employment increased only by 53% (from 191 million to 293 million) as compared to 132% increase in real rural NDP. Subsequently, during the post-reform period, the increase in rural employment was only 17% (293 million in 1993-94 to 343 million in 2004-05) as compared to 72% increase in real rural NDP. The recent period of economic acceleration witnessed a decline in rural workforce by 7 million (from 343 million in 2004-05 to 336 million in 2011-12) despite 65% increase in real rural NDP.
- 3 Indicates the proportion of population who do not offer themselves for any economic activity.
- 4 It is estimated that 38.3% of agricultural labour households in rural areas were under poverty in 2011-12.
- 5 According to Chand et al (2015), income per cultivator and agricultural labour in this period increased by 63.6% and 75.86%, respectively which are 2.6-3.3 times the rate of increase during earlier period of 1993-94 to 2004-05.
- 6 Post-secondary courses of study and practical training aimed at preparation of technicians to work as supervisory staff.

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