



Sectoral Dynamics of Employment in India: Trends since Nineties

Pooja Kaushal¹

Doctoral Research Scholar
Department of Applied Economics
University of Lucknow, Lucknow
poojakaushal37@gmail.com

Rachna Mujoo²

Head & Professor
Department of Applied Economics
University of Lucknow, Lucknow
rachnatikoo@rediffmail.com

ABSTRACT

Indian economy is passing through a very critical phase of its employment growth as it registered a sharp fall in post-2012, fallout of a severe crisis in demand side of the labour market. This paper is trying to explore the factors responsible for this falls including a brief analysis on past employment trends. The study entirely based on unit-level data of National Sample Survey of various rounds on 'Employment and Unemployment Surveys' & 'Periodic Labour Force Survey' of 2017-18. It is observed that structural transformation has witnessed a break since 2012 due to slow growth of non-agricultural jobs. Consequently, unemployment increased unprecedentedly at a 45-year high, notably for educated and skilled workers. The present paper throws light on the structural transformation in terms of employment movement from agriculture to non-agriculture sector since mid-nineties. It also explores reasons behind the recent employment crisis and its ramifications on income growth.

Keywords: Employment Trends, Unemployment, Structural Transformation, Female Employment, Indian Labour Market.

INTRODUCTION

To provide productive and decent work to all women and men by 2030, a target of Sustainable Development Goals (SDGs) 8.5 cannot be achieved without producing more jobs, especially in the non-agriculture sector. The survey report of 2017-18 reveals that agricultural employment declined sharply and non-agriculture sector has slowed down its capacity to generate sustained and productive employment in post-2004. Manufacturing employment decreased along with a decelerated increasing pace of employment in construction, resulting in service-led growth in non-farm sector. Moreover, an inverse relationship also observed between growth of income and employment during the study period. These trends of income and employment raise important questions on various policies initiated



by official agencies like Niti Aayog on the ability to create decent jobs to achieve the set agenda of inclusive growth.

In this background, the present paper throws light on the structural transformation in terms of employment movement from agriculture to non-agriculture sector since mid-nineties. It also explores reasons behind the recent employment crisis and its ramifications on income growth.

METHODOLOGY

The analysis is based on the unit level data of various reports of 50th, 55th, 61st, 64th and 68th National Sample Survey (NSS) rounds on ‘Employment and Unemployment Surveys’ (EUS) & ‘Periodic Labour Force Survey (PLFS)’ of 2017-18. Here it is noted that EUS and PLFS are comparable because both the surveys have collected data by using a similar schedule, followed by same multi-stage stratified random sampling method. They are also following same criteria on population size and have covered a wide range of households across the states and Union Territories (UTs) of the country (Mehrotra & Parida, 2019). Further, All the estimates are based on usual status (ps+ss) which are projected with corresponding population censuses ^[1] to obtain absolute figures by using exponential growth rates for each round (Shaw, 2013).

The paper is organized into four different sections. Followed by introduction and methodology, third section presents results and discussions, which traces employment trends and explores structural transformation of the workforce in detail. It also focuses on an explanation of the recent employment crisis in wake of economic slowdown and subsequently throws light on the increasing unemployment of the country. Further, the last section presents conclusions and suggestions.

RESULTS AND DISCUSSION

Employment Trends in India: 1993-94 to 2004-05

It can be observed from table 1 that during the twenty-four years from 1993-94 through 2017-18, labour force in India has increased from 381 million to 499 million, an increase of 118 million; but only 80 percent of this increased labour force could be provided employment. It stated that every year on an average 5 million additional peoples are joining labour force; but only 4 million are provided jobs. This means that over this two out of ten job seekers are unemployed in India.



Table 1

Sector wise Total Workforce, Labour Force and Unemployment in India from 1993-94 to 2017-18 (in millions)

YEARS	1993-1994	1999-2000	2004-2005	2009-2010	2011-2012	2017-2018
Rounds	50 th	55 th	61 st	64 th	68 th	PLFS
Agriculture & allied*	246	248	272	251	234	210
Manufacturing	39	43	54	51	60	57
EG&WS**	1	1	1	1	2	3
Construction	12	17	26	44	50	55
Non-Manufacturing	13	18	27	46	53	58
Services	77	90	108	118	127	146
Non-Agriculture	130	152	189	215	240	261
Total Workforce	376	400	461	465	474	471
Total Labour force	381	409	471	475	485	499
Unemployment (Open)	5.1	9.1	9.6	9.8	10.8	29.0
Unemployment Rate (%)	1.3	2.2	2.0	2.1	2.2	5.8

Source: Author's estimation based on NSS reports, various rounds.

* Mining & quarrying has been taken as a part of agriculture & allied sector.

** Electricity Gas & Water Supply

61st round of National Sample Survey (NSS) is very interesting. It suggests that during 1999-00 to 2004-05 employment increased markedly by 61 million stated 12 million jobs were generated every year. It was a reverse transformation of the previous employment trend after the “Jobless Growth” of the early nineties. Government and policymakers have celebrated this unprecedented growth as a positive implication of economic reforms and assumed that unemployment would be stamped out from the Indian economy by 2012 (Himanshu, 2011). Data on gross value added reveals that during 1999-00 to 2004-05 agricultural & allied sectors' growth has decelerated to 1.9 percent per annum (Table 3); whereas the employment has increased by 24 million (Table 1); attributing rural distresses. The Psychological law of consumption had driven people, especially to the bread earners towards non-agricultural sector to compensate household consumption.

Data also suggests that during the period 38 million persons have been employed in non-agriculture sector; out of which manufacturing and constructions together have engaged about 20 million workers, particularly the low-skilled rural workers. But on the other hand, surprisingly agricultural



employment also increased by 24 million. This happened because in absence of the bread earners, assumed to be men in Indian patriarchal society, females have taken this responsibility to work on family farms to supplement household income. However, working on agricultural land is a part of their household responsibilities. Thus income earned from the family farm and husbandry cannot perceive as a source of her independent earnings; which is a strong factor to determine autonomy of women in the society at large.

It is evident that during first leg of the twenties, total 26 million women had joined the workforce which was only 2 million during 1993-00 (table 2, figure 1); in fact, this 26 million increase in employment of women comprised 17 million for agriculture & allied sector alone. This led to a spurt in employment to 61 million persons in overall employment during 1999-00 to 2004-05. Similar trends in employment are observed by Thomas (2014), Himanshu (2011), and Mehrotra et al. (2014).

Employment after 2004-05: A Lewisian Turning Point

It has been noted above that during 1993-94 to 1999-00, 24 million new jobs had increased in total, in which agriculture & allied sector comprising only 2 million workers. But during next period of 1999-00 to 2004-05 unexpectedly 24 million additional workers have joined this sector; even at the time when agricultural value-added was least growing. It stated that till 2004-05 there is no any evidence of structural transformation in terms of movement of workers towards non-farm sector. However, thereafter employment trend has been changed historically. It can be observed by the table 1 that during 2004-05 to 2011-12, a decline has registered in farm employment from 271 million to 234 million, mentioned a reduction of 38 million workers in agriculture sector. It reveals that almost 5.4 million agriculture labours have abandoned the sector every year. This trend continued thereafter; so that in literatures the year 2004-05 has been termed as ‘Lewisian Turning Point’. Meanwhile, non-agricultural employment registered a sharp increase of almost 50 million, stated yearly 7.2 million workers had added in the non-farm sector. These shifts happened in accordance with the pre-determined goal as outlined in the beginning. But, whether this pattern of structural transformation was really inclusive? For this purpose let’s have a look on output data.

India’s growth in gross value added witnessed a continuously upward trend since 1993-94 and during 2004-05 to 2009-10 its growth has attained its peak of about 9 percent annually (table 3). At the same time, net employment of the country has recorded a sharp decline and increased only by 4 million (table 1), stating the period of “Jobless Growth” (Thomas, 2014). The declining agricultural workforce due to mechanization and increasing enrolment of boys and girls in secondary and higher



level of education were the main factors responsible for this downfall; the pace of enrolment was even higher for girls (Mehrotra et al., 2014).

Further, it can be evident from table 2 that over the period of late twenties there was a significant withdrawal of about 21 million female labours from the total workforce. It was in contrast to the first half of the decade as outlined above (Figure 1). With the agricultural growth picking up household income has increased and once the income resumed females abandoned the workforce; resulting in a serious downturn in aggregate employment during this period. Thus, the unprecedented employment growth attained during 1999-00 to 2004-05 was not sustainable. This decreasing trend of female workers has continued for further periods also.

Moreover, shrinking demand for workers and mechanization of production processes notably in agriculture, resulting in a remarkable increase in productivity not only of this sector but for the economy as a whole (Himanshu, 2011; Mehrotra et al., 2014). All the sectors have registered appreciable rise in their GVA growth (table 3). However, the growth was not inclusive because it was not equally distributed among all socio-economic groups of the people.

Table 2

**Gender wise Absolute Change in Total Workforce from 1993-94 to 2017-18
(in million)**

Periods	Male	Female	Persons
1993-94 to 1999-00	22	2	24
1999-00 to 2004-05	35	26	61
2004-05 to 2009-10	25	-21	4
2009-10 to 2011-12	9	-1	9
2011-12 to 2017-18	18	-22	-4

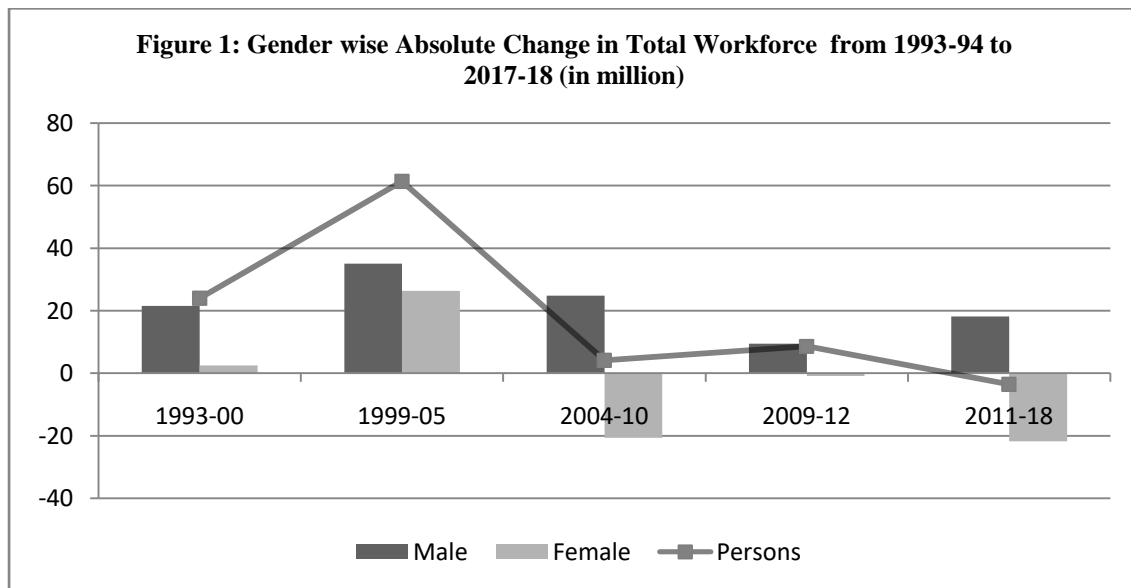
Source: Author's calculation based on NSS data.

Therefore, slowing down the employment growth from 12 million per annum during 1999-00 over 2004-05 to 2 million per annum during 2004-05 over 2011-12 have received much attention from scholars and policymakers. The empirical literature has also shown that 12 million per annum growth in workforce was a consequence of the jobless growth during mid-80s (Himanshu, 2011), whereas, the steep decline to 2 million per annum was the outcome of mechanization of agricultural production,

increasing enrolment of young population (boys & girls) into secondary and higher education, and declining child labour as well (Mehrotra et al., 2014). Other than this, decreasing participation of women from labour force was the key factor for this sharp downfall of the employment growth (Mehrotra & Parida, 2017).

Employment Crisis after 2011-12

The Indian economy is entering into a peculiar phase of its employment growth in recent years. As discussed above, a large number of workers especially women have withdrawn from the workforce due to an increasing pace of enrolments at each level of education during late twenties. However, a reduction of employment in farm sector has to be compensated by an increase in employment after 2012; notably of the non-farm sector besides providing for increases in the labour force. But, contrariwise the table 1 stated that almost 4 million workers have lost employment during 2011-12 and 2017-18; indicating total employment fell first time in Indian history.



Source: Table 2

Along with this, during the same time, 22 million female workers again withdrawn from the total workforce; while 18 million additional male workers have joined this (table 2, figure 1), resulting in a net decrease in overall employment during this period. It is also noted that a continuous declining trend of female workers has taken place since 2004-05; this has created a big question mark on the financial autonomy of women as their leading dignified life in this patriarchal Indian society is very difficult. If this trend sustains, participation of women at household, community and national level will be undermined.



Moreover, the non-agricultural sector also witnessed a significant decline in net employment increase. Between seven years duration of 2004-05 to 2011-12 net increase employment was about 7.2 million per annum; went down to 4 million per annum during 2011-12 to 2017-18 (table 1). Thus, all these circumstances do not present a rosy scenario either for a sustainable structural transformation or for inclusive growth as well. Now, it is essential here to explore sectors wise factors responsible for this decline.

It was observed from table 1 that during 2011-12 to 2017-18 almost 25 million (4 million pa) additional agricultural workers have withdrawn from the *Agriculture & allied sector*. As workers are persistently migrating from this sector since 2004-05; the trend was inevitable to sustain structural transformation which had begun after 2004-05. The percentage share of agriculture & allied also evident this fact, as its share in total employment decreased from 49 percent in 2011-12 to 44 percent in 2017-18 (table 4).

However, the *Manufacturing Sector* is not able to provide enough job opportunities commensurate to this shift. As noted from the table 1, this sector witnessed an unexpected fall of about 3 million workers during the same period. The share of manufacturing employment was 12.6 percent during 2011-12, decreased up to 12.1 percent in 2017-18 (table 4). This unprecedented decline is not only against the goal of SDGs, even for 'Make in India' and 'Aatmnirbhar Bharat' as well.

A recent study done by Mehrotra & Parida (2021) suggested that labour-intensive industries are more responsible for these unwarranted job losses in the manufacturing sector. Various factors contributed to this decline. Generally, labour-intensive industries are micro and small businesses with a low-technical base, mainly falls into the unorganised sector. Demonetization implemented in late 2016 and Goods and Service Tax (GST) of 2017 created unfavourable environment; which might be responsible for an adverse impact on economic activities of these industries.

However, this study also found out that capital-intensive industries contributed significantly to the growth in manufacturing employment; even though its percentage share in total employment is very low. These industries often demand relatively skilled and trained workers. Thus, increase in jobs in these industries is augurs well as it may be possible to boost regular and formal manufacturing employment. But, the same trend in long term may difficult due to a steep increase in capital deepening in these industries. These conditions have also adversely affected the growth of manufacturing value-added as its yearly growth declined at 7.5 percent per annum between 2011-12 and 2017-18, as compared to 8.1 percent in 2009-10 to 2011-12 (table 3).



Table 3

Sector wise Growth Rates in Gross Value Added of India from 1993-94 through 2017-18 (at 1993-94 prices)

YEARS	1993-94 to 1999- 00	1999-00 to 2004- 05	2004-05 to 2009- 10	2009-10 to 2011- 12	2011-12 to 2017- 18	1993-94 to 2017- 18
Agriculture & allied*	3.1	1.9	3.3	6.3	3.5	3.2
Manufacturing	7.3	6.5	10.0	8.1	7.5	7.8
EG&WS**	6.9	4.2	7.1	6.8	6.2	6.2
Construction	6.4	9.2	9.1	8.2	3.7	7.0
Non-Manufacturing	6.5	7.7	8.6	7.9	4.4	6.8
Services	8.8	7.6	10.3	8.1	8.6	8.8
India	6.6	5.9	8.7	7.8	7.3	7.2

Source: Author's calculation based on NAS data.

* Mining & quarrying has been taken as a part of agriculture & allied followed by NAS definition.

** Electricity Gas & Water Supply.

As already mentioned, the employment in the *Non-manufacturing* sector has increased in absolute terms; but, its net increase has slowed down over the time period. It is observed from table 1 that from 2004-05 through 2011-12 the sector was producing about 4 million employment every year; it managed to create only 0.8 million per annum during 2011-12 to 2017-18. It is also seen from table 1 that construction is the highest employment generating sub-sector of the non-manufacturing sector. This sector is contributing about 55 million jobs (95 %) alone, out of 58 million of total non-manufacturing employment in 2017-18. But, over the period of time, its net increase in employment declined, resulting in a contraction of total non-manufacturing employment. Except this, electricity, gas & water supply contributes remaining 3 million (5%) of the total non-manufacturing jobs.

Growth data also reveals this fact that the growth of gross value added was slowing down after 2010, from its dreamed level of about 9 percent per annum between 2004-05 and 2009-10 (table 3); it has adversely affected the investment to GDP ratio particularly the infrastructure investment (Mehrotra & Parida, 2021). Consequently, a steep fall in the growth of construction employment has occurred during the period. Despite this the construction is one of the largest sector proving jobs to the unskilled and low-skilled migrated labours; particularly from the agriculture sector. This sector also is a major contributor towards reduction in rural poverty, wage gap and inequality. But the decline in net



employment of this sector raised a further question about being increasing enough job opportunities for these people; which are mandatory to deal with absolute poverty.

Table 4

**Sector wise Percentage Share of Total Workforce of India
from 1993-94 through 2017-18**

Years	1993- 1994	1999- 2000	2004- 2005	2009- 2010	2011- 2012	2017- 2018
NSS Rounds	50 th	55 th	61 th	64 th	68 th	PLFS
Agriculture & allied	65.5	62.1	59.0	53.8	49.4	44.5
Manufacturing	10.4	10.7	11.7	11.0	12.6	12.1
EG&WS	0.4	0.2	0.3	0.2	0.5	0.6
Construction	3.2	4.3	5.6	9.5	10.6	11.7
Non-Manufacturing	3.5	4.6	5.9	9.8	11.1	12.3
Services	20.5	22.6	23.4	25.4	26.9	31.1
Total Workforce	100.0	100.0	100.0	100.0	100.0	100.0

Source: Author's calculation based on NSS data, various rounds.

Apart from above, the *Services* was the only sector which registered an increase in both absolute and net employment over the period of time. Table 1 reveals that the sector was generating 2.8 million per annum jobs during 2004-05 to 2011-12, which increased up to 3.1 million per annum during 2011-12 to 2017-18. This sector also has been able to sustain its value-added growth of above 8 percent per annum after the year 2010; although it is lesser than its peak of about 10 percent per annum during 2004-05 to 2009-10 (table 3). Since the sector demand relatively skilled and trained workers; so if employment in service sector continues to be robust and can be boosted further the absorption of skilled personnel will be possible. And as we have mentioned above, enrolment of young population (both boys and girls) had sharply increased in post-2004 and the government is implementing various policies for skill enhancement; if the employment generation is sustained in services then formal and regular jobs can be provided. However, it also should be noted that the pace of increasing net employment is much slower than pace of increasing educated workforce. This stated that either the sector might have not enough capacity to absorb all the educated workers or there may be some skill issues due to poor quality of education and trainings; therefore skilled unemployment bound to increase.



Unemployment: Challenges & Issues

Mounting skilled unemployment in the Indian economy is a cumulative consequence of these circumstances as mentioned above. In recent years, this is one of the main challenge in front of government and policymakers. From the table 1 it can be observed that over the study period open unemployment has witnessed an increasing trend notably due to slow growth in non-agricultural employment. It stated that till 2011-12 unemployment increased at a constant rate of over 2 percent; registering a sharp increase of 5.8 percent in 2017-18.

Open unemployment increased almost thrice from 10.8 million to 29 million, which was again unexpectedly at 45-years high; a result of almost 3 million per annum (18 million in total) additional rise during 2011-12 to 2017-18, led to an increase of unemployment rate to almost 6 percent. This may further lead a huge increase in discouraged workers ^[2] in the country. This result also substantiated with the study done by Mehrotra & Parida, 2021.

CONCLUSIONS & POLICY IMPLICATIONS

Indian economy is passing through a very critical phase in terms of development as its economic growth has been slowing down after reaching its peak in 2009-10, which caused a decline in overall as well as sectoral employment. Agricultural employment has fallen; but, due to a decline in net increase of employment in non-agricultural sector, structural transformation has been impeded since 2012. In addition, negative growth in manufacturing employment along with slow growth of construction sector jobs has raised the further question of absorbing low-skilled and unskilled labours migrated from the agricultural sector.

The fruits of a significant demographic dividend have not been reaped by the Indian economy. This coupled with a severe reduction of female workers since 2004; may create serious socio-economic imbalances in future. Moreover, massive increase in open unemployment, notably skilled unemployment, has widened stock of discouraged labour force. However, increasing jobs in services are very crucial for educated and skilled people, but these are not enough to absorb all new additions every year.

The country is entering into a recession and seems will continue for some time due to covid-19 shocks. These are the challenges that the current government is facing; which, cannot be overcome without implementing a structured and employment-oriented industrial policy. In any case, the non-



agricultural employment opportunities have to increase for addressing the problem of additional labour force and agrarian transformation.

In manufacturing, promoting micro and small enterprises is need for the hour because they are labour-intensive in nature and still generating highest number of employment in the unorganized sector. Since these units are the prime destination of low-skilled workers, it will increase real wages by reducing income poverty leading to increase in domestic demand; which is so essential to overcome the recessionary shocks. Moreover, the non-manufacturing sector (i.e. constructions and EG&WS) has forward and backward linkages with the manufacturing sector, a holistic industrial policy would also improve employment growth in non-manufacturing sector. To address skill issues, level of education and training has to be improved through implementing universal and skill based education policy. Although, the current government already has taken some initiatives such as ‘Aatmnirbhar Bharat’ and ‘Vocal for Local’ to become self reliant and promote local goods and services, which can become competitive in relation to foreign brands so that they have a global presence. However, there is still a need for a comprehensive action if the target of inclusive growth is to be realised before 2030.

Acknowledgement:

Our thanks are due to the P. Aparna, Assistant Professor, Centre for Economic and Social Studies (CESS), Hyderabad (India) for the data and methodological support throughout the study.

Notes

1. Census data of 1991 including J & K has been used for projecting population figures for the year of 1993 and 1999. Report titled "Census of India 1991, Paper 2 of 1992, Final Population Totals: Brief Analysis of Primary Census Abstract" page no. 78.
2. Discouraged workers those who are neither in education, training nor in the labour force looking for work.

References

1. Himanshu. (2011). Employment Trends in India: A Re-examination. *Economic & Political Weekly*, XLVI(37), 43–59.
2. Mehrotra et al., 2014. (2014). *Explaining Employment Trends in the Indian Economy : 1993-94 to 2011-12*. xlix(32), 49–57.
3. Mehrotra, S., & Parida, J. K. (2017). Why is the Labour Force Participation of Women Declining in India ? *World Development, Elsevier*, 98, 360–380.



4. Mehrotra, S., & Parida, J. K. (2019). India's Employment Crisis: Rising Education Levels and Falling Non-agricultural Job Growth. In *Working Paper 2019-04, Centre for Sustainable Employment, Azim premji University* (Issue October).
5. Mehrotra, S., & Parida, J. K. (2021). Stalled Structural Change Brings an Employment Crisis in India. *Indian Journal of Labour Economics*, 64(2), 281–308.
<https://doi.org/10.1007/s41027-021-00317-x>
6. Shaw, A. (2013). Comparing NSSO 's Employment Surveys - A Methodological Note. *Economic & Political Weekly*, July, 48(30).
7. Thomas, J. J. (2014). *The Demographic Challenge and Employment Growth in India*. xlix(6), 2012–2014.