

STRUCTURAL AND COMPOSITIONAL CHANGE IN INDIAN LABOUR MARKET: DURING PRE AND POST WTO PERIOD

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ABSTRACT

This paper investigates the structural and compositional changes in the Indian labour market during the pre and post WTO periods. The Indian economy has been growing at unparalleled rates but, it has been characterized by a jobless growth and this paper tries to assess the intensity of output growth on employment through the examination of the employment elasticity. The paper reveals that during the post WTO period there has been a shrinkage in employment opportunities with the employment elasticity showing a 0.017 percent during the post WTO period compared to a 33.55 percent during the pre WTO period. The study also shows that there has been a structural shift from the primary sector to the tertiary sector but, creation of non-agricultural jobs has been a challenge to meet the growing population. While the composition of the Indian labour market has grown during post WTO period, the paper reveals that there has been less workers absorbed in the labour market which has led to an increase in unemployment rates. It is therefore essential to implement good policies to increase agricultural dependent opportunities thus promoting employment in agricultural sector.

Keywords: employment elasticity, labour market, structural changes, unemployment

INTRODUCTION

The labour market in an economy functions with demand and supply of labour, and refers to the supply of those people who are willing and able to work at prevailing wage rates. Labour is an important factor of production because it supplies the capability, manpower, and service needed to turn raw materials into finished products and services. The demand for labour is determined by different factors like the demand for goods and services, labour productivity level, salaries and wages, rate of investment, the available technology, labour laws, government policies and developmental projects implemented by the government. The quality and effectiveness of the labour in production depends on the workforce's skills, education, and motivation. The supply of labour is dependent on factors such as the total population, labour force participation rate, level of

real wages, level and quality of education, female participation rate, labour laws, and government employment policies.

The size of the labour force depends not only on the number of adults, but also how likely they feel they can get a job. Labour force is therefore considered as the number of people in a country who are employed plus those that are unemployed, but willing and looking for employment. The structure of the labour market, patterns of employment growth and labour-market institutions play an important role in shaping development patterns and outcomes. Today, India is counted among the most important emerging economies of the world but employment conditions in the country still remain poor (Acharya *et al*, 2000). One of the major objectives of economic development is to reduce unemployment, achieve economic stability, and increase the standard of living for all citizens.

The pace of economic development, political stability as well as the peace and the prosperity of a nation heavily depend on the active participation and involvement of its youth population. It also has implications for their careers; whether at the beginning stage, during the building stage, or in the final stage (Charner, 1988). Slow growth of employment has been a remarkable feature of economic change in India during the post-liberalization period (Usami and Rawal, 2018).

The change in structure of output and occupation from agriculture to more productive non-farm sectors is considered an important source of economic growth and transformation in rural and total economy. The service sector is the backbone of the Indian economy; contributing the most in Indian GDP at 54.40 percent of India's Gross Value Added (GVA), followed by the industrial sector at 29.73 percent (Ministry of Statistics and Programme Implementation, 2018- 19). The declining percentage of the agriculture and allied sector in the Indian GDP is the cause of concern for the policy makers because this sector still provides livelihood to around 53 percent of the country's population, but its contribution to the economy continues to decline year by year.

Structural change in an economy is generally related with the changes in sectoral composition of output, employment and changes in the rural-urban composition of employment. In India, a shift in the sectoral composition of output and employment is towards the service sector although it was started in earlier decades, but its pace has accelerated in the post WTO period. Currently, the service sector has developed as the largest and fastest growing sector of the economy with around more than fifty percent contribution to the GDP. This paper tries to show the scenario of employment during the post WTO period and to trace out the changes pre WTO throughout India.

MATERIALS AND METHODS

Secondary data on annual employment and sector wise contributions to the Gross Domestic Product (GDP) were collected from various Economic Survey and Union Budgets published by Ministry of Finance, Government of India for the study period that is from 1981 to 2012 were obtained. Averages and percentages were worked out for both periods. The annual growth rates were calculated for employment and GDP changes in the economy.

Employment elasticity is defined as the percentage change in employment caused by the percentage change in the Gross Domestic Product. Employment elasticity was calculated for the pre and post WTO period, with the pre WTO period being from 1981 to 1995 while the post WTO period is from 1996 to 2012. Employment elasticity implies that with every one percentage growth in the GDP there is a one percent growth in employment. Employment elasticity is estimated using two measures that is the arc elasticity and the point elasticity. For this study both measures are used to provide a comparison between the two measures.

$$\epsilon_t = \left(\frac{(E_t - E_{t-1})/E_{t-1}}{(GDP_t - GDP_{t-1})/GDP_{t-1}} \right) = \frac{\Delta E_t}{\Delta GDP_t} \frac{GDP_t}{E_t} \quad (1)$$

The second method is the point elasticity of employment which is defined as follows

$$\epsilon_t = \left(\frac{\% \Delta L}{\% \Delta GDP} \right) \quad (2)$$

$$\% \Delta L = \left(\frac{L_2 - L_1}{L_1 + L_2} \right) * 2 \quad (3)$$

$$\% \Delta GDP = \left(\frac{GDP_2 - GDP_1}{GDP_1 + GDP_2} \right) * 2 \quad (4)$$

RESULTS AND DISCUSSION

In this section results related to employment elasticity and sector-wise changes in employment and the relationship between sector-wise growths in employment and the GDP are presented and discussed.

Employment elasticity

Employment elasticity during the pre and post WTO period in Table 1 using the point and arc elasticity of employment, show that during the pre WTO period, the difference between the two methods was minimal but, during the post WTO period, there was a significant difference between the two methods with the point elasticity having a negative elasticity compared to the arc elasticity. In the pre WTO period the average elasticity for point and arc elasticity is 33.55 percent and 33.94 percent, which indicated that a 100 point increase in the GDP led to 33.55 change in the employment opportunities for the point elasticity, while, the results of arc elasticity indicated that there was 33.94 percent change in employment opportunities during the pre WTO period. During the post WTO period, when using the point elasticity it could be stated that during that period a 100 point increase in the GDP led to a negative change in employment opportunities by 0.017 percent. This estimation is in contrast to the arc elasticity which shows that for a 100 point increase in the GDP there is a positive change in employment opportunities by 0.017 percent for that period, but despite the positive change in employment it implies that the impressive economic growth is not accompanied by similar growth in employment.

From the Table 1, we could state that during the post WTO period, while the country witnessed an increase in the GDP growth that growth did not translate into more employment opportunities as compared to the pre WTO period. The employment elasticity thus provide an argument that in the post WTO period, there was a jobless economic growth and the idea of jobless growth in the Indian economy has been argued by Thomas(2012), and he stated that there was a slowdown in the employment in the 2000's. Thomas stated that the jobless growth in India was due to the positive changes in rural India through government schemes such as MGNREGA, an increase in rural females exiting the labour force, and an increase in the student population also led to a slowdown in the employment growth in India. The positive changes in quality of life like education and female participation in employment were the causes for less elasticity during post WTO period.

Sector-wise growth rates during pre and post WTO periods

Changes in employment during pre and post WTO period across different sectors of the economy is shown on Table 2 and from the table during the pre WTO period, total employment increased from 228.7 lakhs to 275.41 lakhs at an annual growth rate of 1.36 percent. Among the sectors community, social and personal services employed the most workers followed by the manufacturing sector in both the periods. The finance, insurance, real estate sector had the highest growth rates among the sectors growing at an annual rate of 4.46 percent. During the post WTO period, it could be seen from Table 2 that from 1996 to 2011, there was a stagnant growth in employment with the employment growing at 0.17 percent annually during that period. The most change in employment growing an annual rate of 5.89 percent was observed in Finance,

insurance, real estate sector while the construction sector experienced a negative growth rate at -1.35 percent which saw employment declining from 12.12 lakhs to 9.50 lakhs. The wholesale and retail trade sector also experienced a significant growth in those employed in that sector, with the sector experiencing an annual growth rate of 3.14 percent. The agriculture, manufacturing and electricity, gas, water sectors all registered negative growth in employment for the post WTO period.

Dhas and Helen (2008) found that there was a declining growth rate trend in employment despite an increase in those that are employed. Their study also stated that sectors such as agriculture, mining and quarrying, electricity, gas and water recorded negative growth rates in employment.

Anju (2015) studied the employment generation by the secondary sector in the Indian economy from 1991 to 2012 and they stated that the manufacturing sector has shown that the public sector has had a negative growth rate while the private sector has had a positive growth rate, with the public sector growing at -3.172 percent while the private sector grew at 0.461 percent. They also found that in the electricity, gas and water supply sector there was a similar trend of high growth rates in the private sector compared to the public sector from 1991 to 2012. The construction sector also showed that the private sector continues to employ more people in comparison to the public sector.

Sector-wise growth in employment v/s Sector-wise GDP Growth

Table 3 compares the changes that occurred between employment and the GDP for the pre and post WTO periods among different economic sectors. From Table 3, it could be seen that during the pre WTO period finance, insurance, real estate sector had the highest growth rate in employment (3.76%) with an annual growth rate of 8.74 percent in GDP. The sector composing of manufacturing, construction, electricity, gas and water supply had the lowest growth rate in terms of employment but, had a higher growth rate in the GDP compared to the agriculture, forestry and fishing, mining and quarrying sector as well as the community, social and personal services sector which had a higher growth in the employment but a lesser growth in the GDP.

It could also be observed from Table 3 that during the post WTO period, the manufacturing, construction, electricity, gas and water supply sector and the trade, hotels, transport & communication sector both had a negative growth rate in employment but, had a significant contribution in the GDP as indicated by rise in annual growth rate to 12.41 and 9.28 percent respectively. The agriculture, forestry & fishing, mining and quarrying sector also had a decline in its growth rate to employment at 0.18 annual growth, but the sector managed to have an increased contribution to the country's GDP with a 10.27 percent annual growth rate for the post WTO period. The finance, insurance, real estate sector had the most growth rate among the

sectors in both the employment and GDP during the post WTO with an annual growth rate of 4.71 and 13.70 percent respectively.

Papola (2012) found that the employment growth in Indian economy has been in a declining trend for a longer period but that growth has in shorter periods fluctuated. The study found that during the 1972-73 and 1987-88 period the employment growth was as high as 2.6 percent and post reform period the growth decelerated to about one percent but increased to

2.8 percent during the period of 1999-2000 and 2004-05. He also stated that the deceleration in employment growth occurred during a time when there was an acceleration in the country's GDP which grew at about 5 percent to 6.3 percent and rose to 9 percent during the 2004-05 and 2009-10 period when there was a stagnation in employment.

The study by Mukherjee (2013) revealed that the Indian service sector was the largest and fastest growing sector that had the highest labour productivity, but has not been able to match its share in the gross domestic product with the number of jobs needed. The study also revealed that in the financial year of 1993 the agricultural sector employed close to 63 percent of the population compared to only 22 percent by the service sector. Mukherjee also found that over time there was a decline in the people employed in the agricultural sector with an increased employment in the service sector particularly the increase in employment in the wholesale and retail trade. Singh (2014) stated that the agriculture sector was negatively affected by the formation of WTO as it affected the international trade of India as there were concerns to the performance of the sector and food security.

Sector-wise contribution to employment during pre and post WTO regime

Table 4 presents a comparison of three sectors in the economy pertaining to employment and their contribution to employment for the study period; the sectors are Agriculture and allied, industry and service. The industry sector encompasses the mining and quarrying, manufacturing, electricity, gas, water, and construction, while the service sector includes the wholesale and retail trade, transport, storage and communications, finance, insurance, real estate and community, social and personal services. It could be seen from the table that the agriculture and allied sector contributed the lowest with 5.44 percent of those employed while the services had the most contribution to employment with 57.70 percent of those employed in the service sector. Within the Industry sector the manufacturing sector had the most contribution to employment with 24.59 percent of people employed in that sector while in the service sector more people were employed in the community, social and personal services with 39.15 percent of people employed.

During the post WTO period, the agriculture and allied sector saw a decline in their contribution to employment with the sector now contributing 5.14 percent. The industry sector also had a

decline its contribution to employment with a significant decline from 36.86 percent to 33.89 percent while the service sector had an increase in its contribution to employment with an increase in the employment from 57.70 percent to 60.97 percent.

Table 1: Employment elasticity during pre and post WTO regime

Year	Total employment (in Lakh person)	Gross domestic product at factor cost (in Crore Rupees)	Point Elasticity of employment	Arc Elasticity
Pre WTO				
1981	228.79	798506	-	-
1982	234.44	843426	0.439	0.446
1983	240.09	868092	0.824	0.826
1984	242.15	936270	0.109	0.113
1985	245.79	973357	0.379	0.384
1986	250.58	1013866	0.468	0.473
1987	253.88	1057612	0.305	0.310
1988	257.57	1094993	0.411	0.415
1989	259.02	1206243	0.055	0.058
1990	263.44	1280228	0.278	0.284
1991	267.35	1347889	0.281	0.286
1992	270.56	1367171	0.839	0.840
1993	271.78	1440504	0.084	0.086
1994	273.75	1522344	0.128	0.131
1995	275.41	1619694	0.095	0.098
Average	255.64	1158013	33.55%	33.94%
Post WTO				
1996	279.41	1737741	-	-
1997	282.43	1876319	0.136	0.140
1998	281.67	1957032	-0.063	-0.064
1999	281.13	2087828	-0.029	-0.030
2000	279.63	2254942	-0.067	-0.070
2001	277.90	2348481	-0.149	-0.153
2002	272.06	2474962	-0.390	-0.405
2003	269.47	2570935	-0.246	-0.251
2004	264.43	2775749	-0.235	-0.246

2005	264.58	2971464	0.008	0.008
2006	266.44	3253073	0.074	0.077
2007	269.48	3564364	0.119	0.124
2008	271.22	3896636	0.069	0.072
2009	277.66	4158676	0.353	0.361
2010	282.38	4516071	0.198	0.205
2011	287.10	4918533	0.188	0.194
2012	292.70	8106946	0.030	0.039
Average	276.45	3262927	-0.017%	0.017%

Source: Various Economic Survey Reports and Union Budgets

Table 2: Sector-wise growth rates during pre and post WTO periods

Pre WTO Regime					
SECTOR	Workers (in Lakhs)		Inter-censal Growth	Average Annual Growth Rate	CAGR
	1981	1995			
Agriculture	13.21	14.33	8.48	0.57	0.006
Mining & quarrying	9.48	11.19	18.04	1.20	0.012
Manufacturing	60.47	64.62	6.86	0.46	0.005
Electricity, gas, water	7.18	9.93	38.30	2.55	0.023
Construction	11.61	12.17	4.82	0.32	0.003
Wholesale and retail trade	3.94	4.70	19.29	1.29	0.013
Transport, storage and communications	27.69	31.64	14.27	0.95	0.010
Finance, insurance, real estate	9.44	15.76	66.95	4.46	0.037
Community, social & personal services	85.77	111.07	29.50	1.97	0.019
Total employment	228.79	275.41	20.38	1.36	0.013
Post WTO Regime					
SECTOR	1996	2011	Inter-censal Growth	Average Annual Growth Rate	CAGR
Agriculture	14.59	14.00	-4.04	-0.25	-0.003
Mining & quarrying	11.00	12.20	10.91	0.68	0.007
Manufacturing	67.87	64.20	-5.41	-0.34	-0.004

Electricity, gas, water	9.88	9.00	-8.91	-0.56	-0.006
Construction	12.12	9.50	-21.62	-1.35	-0.016
Wholesale and retail trade	4.79	7.20	50.31	3.14	0.028
Transport, storage and communications	31.52	25.70	-18.46	-1.15	-0.014
Finance, insurance, real estate	15.86	30.80	94.20	5.89	0.045
Community, social & personal services	111.78	114.50	2.43	0.15	0.002
Total employment	279.41	287.10	2.75	0.17	0.002

Source: Various Economic Survey Reports and Union Budgets

Table 3: Sector-wise growth in employment v/s Sector-wise GDP Growth

SECTORS	Average Annual Growth Rates (%)				Compound Annual Growth Rates (%)			
	Employment		GDP		Employment		GDP	
	Pre WTO	Post WTO	Pre WTO	Post WTO	Pre WTO	Post WTO	Pre WTO	Post WTO
Agriculture, forestry & fishing, mining and quarrying	0.85	0.18	3.73	10.27	0.84	0.12	3.64	8.13
Manufacturing, construction, electricity, gas & water supply	0.65	-0.51	5.55	12.41	0.64	-0.54	5.51	11.16
Trade, hotels, transport & communication	1.00	-0.25	5.99	9.28	1.00	-0.28	5.98	9.26
Finance, insurance, real estate	3.76	4.71	8.74	13.70	3.73	4.63	8.71	12.69
Community, social & personal services	1.87	0.18	5.33	10.60	1.86	0.17	5.31	9.94

Source: Various Economic Survey Reports and Union Budgets

Table 4: Sector-wise contribution to employment during pre and post WTO regime

Sectors		Pre-WTO (%)	Post-WTO (%)
Agriculture and allied		5.44	5.14
Industry	Mining & Quarrying	4.13	4.01
	Manufacturing	24.59	22.74
	Electricity, gas, water	3.39	3.39
	Construction	4.75	3.75
	Total	36.86	33.89
Services	Wholesale and retail trade	1.67	1.99
	Transport, storage and communications	11.77	10.56
	Finance, insurance, real estate	5.12	7.60
	Community, social & personal services	39.15	40.81
	Total	57.70	60.97

Source: Various Economic Survey Reports and Union Budgets

CONCLUSIONS

This study has shown that despite India's fast economic growth, it has not been able to match that growth with an increased absorption of the country's workforce. India has seen changes in the labour market and the impact is particularly seen in the rural economy, as rural areas saw an increase in the unemployment rates across the two periods. Unemployment is an important feature of the Indian economy as the labour market is characterized by high unemployment among female in both urban and rural areas with the study revealing that there was an increase in the unemployment rates for females in the post WTO period with rural female witnessing an increase in unemployment rate when using the various approaches.

The Indian economy has been largely agricultural, but in recent times there has been a significant shift in the sectoral contributions to economic growth and these changes have been largely attributed to policy changes that have taken place in 1991 with the liberalization and globalization of Indian economy as well as the regulations and policies enforced by the World Trade Organization when it was formed in 1995. The changes in economic policies were expected to bring a major qualitative shift in the industrial structure of the work force. The Indian economy has seen a series of reforms, covering all major sectors of the economy this has improved the economic growth.

The study revealed that there was an increase in the total employed population for both periods, but in the post WTO period there was a decline in the annual growth rate for employed population. The annual growth rate decreased from 1.36 percent during the pre WTO period to 0.17 percent during the post WTO period. It was also revealed that there was an increase in the growth rate of the finance, insurance, real estate sector from 4.46 annual growth during the pre WTO period to 5.89 percent in the post WTO period.

The study also revealed that among economic sectors the agriculture, forestry & fishing, mining and quarrying experienced a decline in both employment contributions from 0.85 percent in the pre WTO period to 0.18 percent. The finance, insurance, real estate sector had the largest contribution to employment and GDP among the sectors in the post WTO period.

During the pre WTO period, it was also revealed that economic growth had a large impact on employment generation. The study revealed that the employment elasticity in that period was 33.55 percent for point elasticity which means that a 100 point increase in the GDP led to a 33.55 percent increase in the employment opportunities. In the post WTO period, the study reveals that economic growth had a negative effect in creation of employment opportunities as the point elasticity was revealed to be -0.017 percent which means that during the post WTO period a 100

point increase in the GDP led to a 0.017 percent decrease in employment and employment opportunities.

The study revealed a shift in employment from the primary sector of the economy to the tertiary sectors which was also accompanied by a change in the contribution of sectors to the Gross Domestic Product of the Indian economy. The agricultural sector registered negative growth rates while the service sector saw a positive growth rate in the post WTO period.

The study has revealed a pattern that is prevalent across the globe as a nation developing, with the shrinkage of agricultural or farming jobs which is caused by factors such as urbanization. To alleviate this transfer of labour other sectors the recommendation is to create agricultural dependent employment opportunities. The demand for storage, processing, logistics, food preparation, and other related services becoming gradually important and many employment opportunities will emerge off the farm.

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