Original Research Article

Wage, Profit, Employment and Output in Indian Organized Manufacturing Sector during UPAI & UPA II and NDA I & NDA II regimes: A State wise Analysis

Abstract

This paper comparatively examines wages, profits, employment and output in Indian organized manufacturing sector during two political regimes, National Democratic Alliance (NDA) and United Progressive Alliance (UPA). These four aspects of industrial development across Indian states are analysed in the context of political economy of neo-liberal reforms and sustainable development goals (SDGs) to be achieved by 2030. In the times of higher income and wealth inequalities and rising unemployment in India, inclusive industrial development is crucial to achieve four sustainable development goals, SDG 5 on ensuring gender-equality, SDG 8 on descent work and growth, SDG 9 on building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and SDG 10 on reducing inequality within and among countries By using data of Annual Survey of Industries (ASI), the political economy of the two regimes is comparatively analysed in the four periods, viz., NDA I (1999-2004), UPA I (2004-2009), UPA II (2009-2014) and NDA II (2014-2019). There are four important challenges emerged in this analysis of Indian states: (i) decrease in share of wages of blue-collar workers to white-collar workers and increase in physical and financial capital in four regimes, (ii) higher level and share of blue-collar workers at 77% and constant respective shares of clerks and white-collar workers at 13% and 10% over fourth regimes, (iii) increase in contractualisation of blue-collar workers, (iv) increase in feminization of blue-collar workers.

In the UPA I, the employment and wages were more inclusive in the Indian manufacturing sector across the states in terms of higher compound growth rates as compared to those of period of the NDA I, NDA II and UPA II. These positives in the industrial development are also complemented with the higher compound growth rates of profits and higher growth rate of gross value added in the same regime. This implies that all the stakeholders in the Indian manufacturing sector, namely workers and employers got higher benefits in the UPA I regime. The main four factors for the inclusive development in UPA I are examined: (i) higher wage-growth and employment-growth of blue-collar workers, (ii) higher profit-growth, (iii) higher output-growth rate and (iv) higher average productivities of capital, blue-collar and white-collar workers. This process of inclusive industrial development can be defined as the efficiency with equity. The challenges of economic growth with equity are facing by the industrial development under SDG period. These four instrumental factors can be used for inclusive industrial growth to frame futuristic policy implications to attain sustainable development in Indian states. Under this framework of inclusive development in states of India, the manufacturing policy should be

oriented to reach share of manufacturing sector in Indian GDP to 25% by 2025 and generate employment level in the sector to 100 million by 2022.

Key Words: Wage, Profit, Employment, Output, Sustainable Development Goals, States, India, Manufacturing Sector

Introduction

"The contribution of the manufacturing sector to Gross Value Added (GVA) has been hovering around 17 per cent for the last four years (2011-12 to 2014-15), the government has taken several measures to accelerate the growth of the industrial sector so as to strengthen and sustain the momentum of economic growth. These are primarily focused on simplification and rationalization of procedures and processes for boosting investment, adopting a more open Foreign Direct Investment (FDI) policy and measures for creating a conducive business environment" (GOI, 2016:124). Under the National Manufacturing Policy 2011, the United Progressive Alliance (UPA – II, 2009-2014) led government also aimed to an increase the lower output share of manufacturing sector in total Indian GDP to 25% by 2025, this objective is also reiterated by the National Democratic Alliance (NDA II) led government in its recent Economic Survey 2015-16. Subsequently , the present government also promoted 'Make in India' plan to generate100 million additional jobs in manufacturing sector (both organized and unorganized) by 2022.The manufacturing registered or organized sector in India experienced sluggish growth in output and employment during the period 1980 to 2010 (p.108, GOI, 2016). The percentage-share of employment generated by organized manufacturing sector in total India employment remained constant at 10% around during the 30 years period; similarly the share of organized sector in the Indian total GDP remained stagnant at 2-4% during same period. This implies that the share of informal sector has larger share in Indian manufacturing sector, which is around 12-15% in 2015-16 (GOI, 2016). The Economic Survey 2015-16 highlighted the need to improve the conditions of it. The survey 2015-16 also emphasised on the growth and development of Indian manufacturing sector and it states that "The Prime Minister has made the revival of Indian manufacturing a top priority, reflected in his "Make in India" campaign and slogan. The objective is as laudable as the challenges it faces are daunting because Indian manufacturing has been stagnant at low levels, especially when compared with the East Asian successes and two questions arise: (1) Is manufacturing the sector that Make in India focus on?

And (2) What instruments should be deployed to realize the objective?" (GOI, 2016:32). Further it examined that "In India, it is important to remember that when thinking about manufacturing as a transformational sector it is registered or formal manufacturing that possesses some of the critical prerequisites such as high productivity and rapid growth in productivity. Unregistered manufacturing cannot be a transformational sector. Thus, efforts to encourage formalization will be critical" (GOI, 2016:33). Therefor the challenges of Indian manufacturing sector: (i) a largest share is informal or unorganized, entrapped lower working conditions and lower productivity, (ii) stagnant employment opportunities, (iii) lower share of output in Indian GDP and (iv) lower and wages especially in the unorganized sector. These challenges are being addressed by the NDA II government through higher role of foreign capital (FDI) and 'Make in India' program. In this paper, how to address these challenges of industrial development in the context of sustainable development goals (SDGs) in the coming years and some policy implications are given on the basis of critical analysis of wage, employment, output and profit in the Indian organized manufacturing sector during NDA I, UPA I and II and also in the pre-reform and post-reform periods.

The factory in Indian manufacturing sector is defined as organized if that unit has 10 workers or more with electricity supply or 20 workers and more engaged in that firm without electricity (ASI, 2016[1]). The high-skilled workers are defined as the workers engaged in the supervisory and managerial occupations, the medium-skilled workers are those work in the clerical, sales and office staff and low-skilled workers in the process of production and manufacturing of goods and care of machines. Further, we examine the employment scenarios of three different political regimes in India, namely, National Democratic Alliance (NDA- I) (1999-2004), United Progressive alliance (UPA I, 2004-2009), United Progressive Alliance (UPA-II, 2009-14). The another purpose of taking these regimes is to examine the years of the millennium development goals (MDGs), which was implemented by the United Nations for promoting development agenda in developing economies during 2000 for the 2000-2015 period. The performance of Indian industrial sector and its development during the years of MDGs period are examined by data of the year 2000-01 to 2013-14. Recently, the United Nations have implemented its extension of development agenda of MDGs, through 17-Sutatainable Development goals (SDGs) and related 169 targets to be achieved by the developed and developing economies for the next

[1] http://mospi.nic.in/Mospi_New/upload/nsso/fod/InstructionManualAS_I2014-15.pdf

15 years , 2016-2030 (UN, 2015). The SDGs target to achieve gender equality through SDG-5 and Descent Work agenda of International Labour Organisation (ILO) for achieving higher economic growth through SDG-8, inclusive industrial development through SDG-9 and reducing income inequalities within and between the nations through SDG-10. This implies that these four specific SDGs have targets related to the inclusive economic growth and industrial development and descant employment conditions in the member countries. How much Indian manufacturing sector is prepared to achieve these specific four goals related to the targets for the coming 15 years? This paper has addressed these four goals with the analysis of employment and wages in Indian organized manufacturing sector, where the working conditions are relatively better than wide unorganized sector, which provide 90 % employment as compared to 10 % employment generated by the organized manufacturing sector in Indian industrial sector. Specifically, this paper is divided into seven broader sections: (1) introduction, (2) theoretical framework, (3) comparative analysis of employment scenarios in NDA-I, UPA I and UPA II, (4.1) wage-gap in NDA-I, UPA-I and UPA-II, (4.2) wage-Gap: skill-premium for high-skilled Workers, (5) unequal exchange rates between returns of capital and labour: high surplus-value in Neo-liberal regimes, (6) better performance by UPA I in employment, wages, profits and output: Lessons for SDGs and the last section is on (7) conclusions and policy implications.

1. Theoretical Framework

In times of advanced technological developments in the manufacturing and service sectors there is a higher demand for high-skilled workers relatively to the demand for low-skilled workers in the labour markets, the firms are paying higher wages to the high-skilled workers. This phenomenon of increasing use of high-skilled workers and decreasing use of low-skilled workers in developing economies, like India and developed economies like the US, is defined as skill-biased technological change (SBTC), which is also known as the "new international trade theory". Berman et al (1998) examined SBTC in manufacturing industries in ten OECD countries during 1970-1990. They proved that the skill-biased technological changed led to an increase in the share of knowledge or highly skilled workers in the period. They also estimated that 70 per cent of displacement of unskilled workers from manufacturing sectors might have been due to the SBTC and also speculated similar trends in the financial services. The employment growth of knowledge workers would be higher than that of the non-knowledge

workers including service workers like administrative, office and production workers. The knowledge workers' employment growth rate per annum in the EU and the US in the period 1992-99 was at high of 3.3 per cent. However, the annual growth rates of employment of service workers in job-categories like service, administrative, office and production were lower at 2.2, 1.6, 0.9 and -0.2 per cent respectively during the same period. Other economists have also analysed the phenomenon of SBTC (Bound and George, 1992; Machin, 1994; Berman et al, 1994 and Berman, 1997).

2. Comparative Analysis of Employment Scenarios in NDA-I, UPA I and UPA II

Annual Survey of Industries, Government of India provides a comprehensive data on the different variables in factories in Indian organized manufacturing sector. This data is used for the analysis of employment and wages scenarios of low, medium and high-skilled workers in the different political periods/ regimes of NDA-I (1998-99 to 2003-04), UPA-I (2004-05 to 2008-09) and UPA-II (2009-10 to 2013-14). These regimes also correspond and covered with the 13 years (2000-2013) of MDG and also the first three months (January-March) of 2014. The main purpose of this analysis is to examine the performance of these three political regimes and guide some policy implications on the basis of results. This will provide a futuristic perspective for present government of NDA-II (2014-2019) and the SDG period (2016-30).

Table 1: Employment Scenarios under NDA-I, UPA-I and UPA-II and MDGs period

Employment in NDA I and UPA I & II (Numbers in Lakh and Share in %)	No. in 1998-99 to 2003-04	No. in 2004-05 to 2008-09	No. in 2009-10 to 2013-14	1998-2004 % of No. of Persons Employed	2004-09 % of No. of Persons Employed	2009-14% of No. of Persons Employed
	NDA I	UPA-I	UPA-II	NDA I	UPA-I	UPA-II
A. No. of Persons Employed	79.3	99.4	128.8	100.0	100.0	100.0
1. Workers: low-skilled	61.3	77.2	100.0	77.3	77.7	77.6
1.1 Directly Employed	47.38	54.2	66.1	59.7	54.6	51.3
Men	38.35	43.3	53.2	48.4	43.58	41.3
Woman	9.0	10.9	12.98	11.4	11.0	10.08
Children	0.054	0.0012	NA	0.01	0.0	0.0
1.2 Employed through Contractors	13.9	23.0	33.9	17.5	23.1	26.3
2. Employees Other than Workers: Medium and High-skilled	17.4	21.4	28.2	21.9	21.6	21.8

2.1. Supervisory and Managerial Staff: High-skilled	7.6	9.3	12.9	9.5	9.3	10.0
2.2. Other Employees: Medium	9.8	12.2	15.2	12.4	12.2	11.8
3. Unpaid Family Members/Proprietor	0.7	0.7	0.8	0.8	0.7	0.6
B. Total Man-days Employed (In ' 000)	23.9	29.7	39.1	30.2	30.0	30.3

Source of Data: ASI of different years

Table 1 shows the numbers and percentage shares of low-skilled, medium and high-skilled workers during the periods/ regimes. The total employment of workers was 79.3 lakh in NDA I, which has increased to 99.4 lakh in UPA I and further it went up to 128.8 lakh in UPA-II. The percentage shares of low-skilled workers remained constant at 77-78% in all the three periods. Conversely, the shares of medium and high-skilled workers also remained constant at 22-23%. However, absolute numbers of low-skilled workers rose up from 61.3 lakh in NDA-I to 77.2 lakh in UPA-I and further to 100.0 lakh in UPA-II. There are three critical features emerged in employment scenario in Indian manufacturing sector over the period. First, highest numbers and shares of low-skilled and paid-workers, as compared to medium and high-skilled workers, this is explained earlier. Second, the contractualisation of low-skilled workers has been increased, which resulted lower wages and poor working conditions and it also leads to higher working hours. The higher working hours can be estimated with the number of man-days increased over the period, which was 24 thousand in NDA-I and 30 thousand in UPA-I and 39 thousand in UPA-II. The percentage-share of workers employed in total numbers of persons employed through contractors has gone up from 17.5% in NDA-I to 23% in UPA-I and 26% in UPA-II. Third, the feminization of workers has also taken place through a significant increase in the number of female workers, which was 9 lakh in NDA-I, 11 lakh in UPA-I and 13 lakh in UPA-II. However the percentage shares were remained constant at 10 to 11% in total persons employed over the three periods, infect it is declined from 11% in NDA-I and UPA-I to 10% in UPA-II. These three challenges emerged in the MDGs period for inclusive industrial development through more descant jobs and gender-equality in Indian labour market of the industrial sector. The numbers of high-skilled workers has increased from 7.6 lakh in NDA-I to 9.3 lakh in UPA-I and further to 12.9 lakh in UPA-II, their shares in total employed persons endured constant at 9-10%. The increasing numbers of high-skilled workers assured higher skill-premium in the labour market, especially a jump from UPA-I to UPA-II. However, the numbers of medium-skilled workers went up from 9.8 lakh in NDA I to 12.2 lakh in UPA-I and subsequently to 15.2 in UPA-II and their shares persisted constant at 12%.

4.1 Wage-gap in NDA-I, UPA-I and UPA-II

On the one side, the share of workers in total persons employed has remained constant over the three periods as explained earlier section. But on the other side the share of their wages in total wage-bill has declined from 56.4% in NDA-I to 51.7% in UPA-I and further it is declined to less than 50% in UPA-II, i.e., 48.8%.

Table 2: Level and Percentage-share of Wages of Low-skilled, Medium and High-skilled workers under NDA-I, UPA-I and UPA-II and MDGs period

A. Wages (Rs. in Lakh)	**NDAI**	**UPA I**	**UPA II**
C. Wages and Salaries Including Employers Contribution	6755129	9219241	24439211
1. Wages and Salaries Including Bonus	5473783	9240984	21110170
1.1 Wages and Salaries	5188291	8756839	20171139
1.1.1 Workers	2927919	4527843	9836693
1.1.2 Supervisory & Managerial Staff	1435337	2875583	7275594
1.1.3 Other Employees	825035	1353413	3058852
1.2 Bonus to All Staff	284855	484146	939031
2. Employers Contribution Etc.	1281346	1778257	3329041
B. % share of Wages of Low-skilled, Medium and High-skilled workers	**NDAI**	**UPA I**	**UPA II**
% of Wages of workers in Total Wages and Salaries	56.4	51.7	48.8
% of Wages of Supervisory and Managerial Staff in Total Wages and Salaries	27.7	32.8	36.1
% of Salaries of Other Employees in Total Wages and Salaries	15.1	14.7	14.5
% of Bonus to Wages and salaries including bonus	5.2	5.2	4.5
% of Employers Contribution in Wages and Salaries including Employers Contribution	19.0	19.3	13.6

Source of Data: ASI of different years

Conversely, the wage-share of high-skilled workers has increased over the period, which was 28% in NDA I and 33% in UPA-I and 36% in UPA-II. However the wage-share of medium-skilled workers remained around 15% over the periods. Thus, higher skill-premium is resulted for high-skilled workers in terms of their higher level and share of wages. In the times of liberalization, privatization and globalization (LPG), the increasing roles of private sector and

decreasing role of government have taken place to uplift the efficiency through a greater level of competition between the private and public companies or/and factories in the market[2].

In the neo-liberal regimes, the trend of withdrawing private and public employers is also significant in Indian manufacturing factories; the share of bonus by the companies/factories is stagnant at 5% in NDAI and UPAI and a little declined by 0.5% point to 4.5% in UPA-II. Subsequently, the percentage-share of employers' contribution in total wage-bill for provident funds, pensions and other old-age security expenses have also cut down from constant 19% in NDA-I and UPA-I to 13% in UPA-II (Table 2).

4.2 Wage-Gap: Skill-premium for High-skilled Workers

Earlier section discussed the levels and shares of wages of the workers, this section examines the average wages of low, medium and high-skilled workers and their shares during the three regimes. The level of average wages of low-skilled workers has increased from Rs. 0.48 lakh in NDA I and Rs. 0.59 lakh in UPA I and Rs. 0.98 lakh in UPA II (see Table 3). However the average wages of high-skilled workers has increased from Rs.1.90 lakh in NDA I and further to Rs. 3.10 lakh in UPA I and Rs.5.64 lakh in UPA II, signified the highest skill-premium. The level of average wage of medium-skilled workers rose up from Rs. 0.84 lakh in NDA I and Rs. 1.11 lakh in UPA I and Rs. 2.02 lakh in UPA II. The percentage share of wages of low-skilled workers to that of high-skilled workers has gone down from 25% in NDA I to 19% in UPA I and subsequently to 18% in UPA II. The share of wage of medium-skilled workers to high-skilled workers has declined from 44% in NDA I to 36% in UPA I and it is remained stagnant at 36% in UPAII. The declining share of wages of low and medium skilled-workers to those of high-skilled workers led to an increasing wage-gap, which is defined as skill-premium for the high-skilled workers for their higher skilled talent through education, training and experience.

Table 3: Average wages in NDA I, UPA I and II

Workers:	**Average Wages (Rs. Lakh)**	**% Share to**	**% Share**

[2] The percentage shares of private companies in total companies were hovering around 96% to 99%, under NDA-I, UPA-I and II periods (www.indiastat.com, data accessed on 14th September, 2016). And The percentage share of total foreign companies, those in manufacturing sector in India was 16% in 2011-12, 9% in 2012-13, 19% in 2013-14 and 13% in 2014-15 (www.indiastat.com, data accessed on 14th September, 2016).

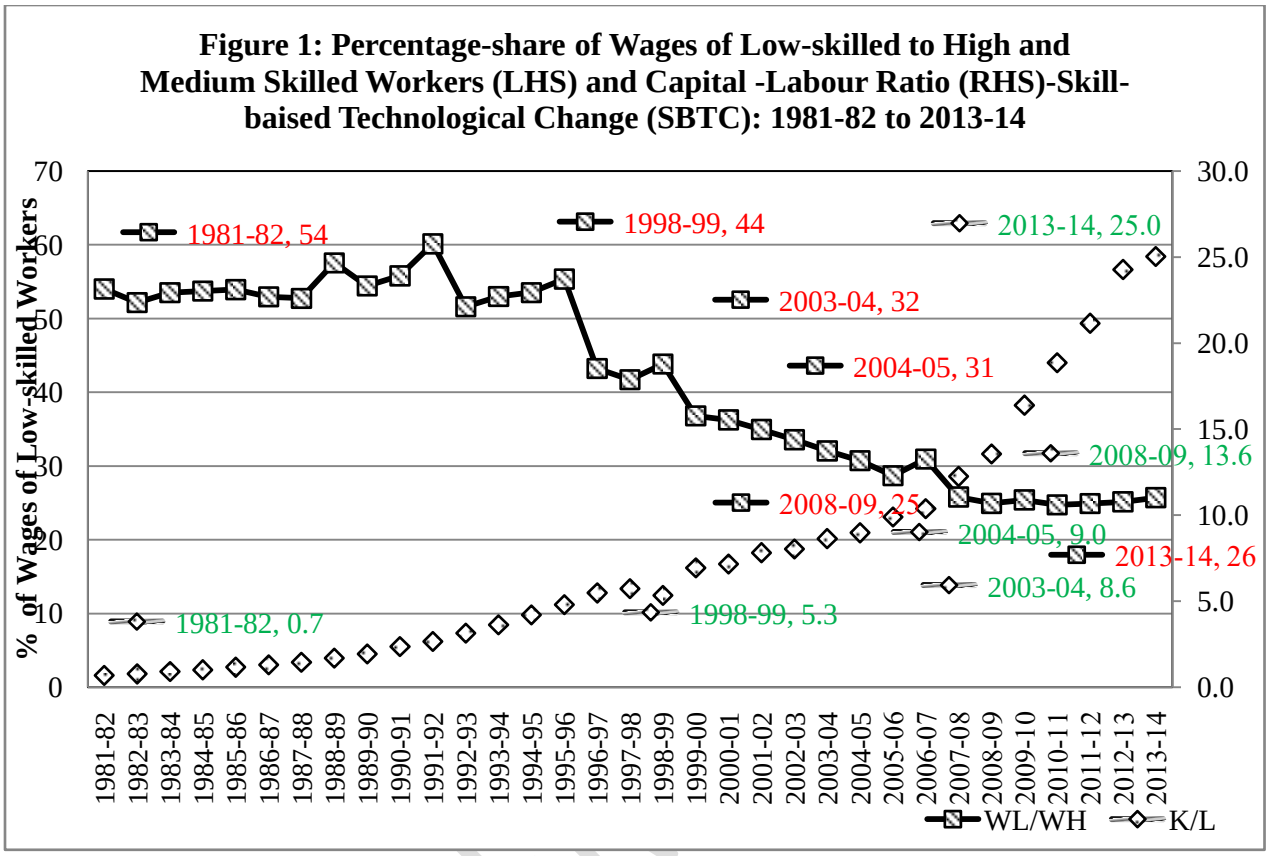
				Wages of Workers			
	NDAI	**UPA I**	**UPA II**		**NDAI**	**UPA I**	**UPA II**
Workers: Low-skilled	0.48	0.59	0.98	% of Wages of Low-skilled to High-skilled	25.2	18.9	17.5
Supervisory and Managerial Staff: High-skilled	1.90	3.10	5.64	% of Wages of High-skilled to High-skilled	100.0	100.0	100.0
Other Employees: Medium-skilled	0.84	1.11	2.02	% of Wages of Medium-skilled to High-skilled	44.4	35.9	35.8

Source of Data: ASI of different years

To examine the scale of higher skill-premium in Indian manufacturing sector, the percentage share of wages of low-skilled workers to that of the medium and high-skilled workers and capital-labour ratio are analysed by using Figure 1. The wage-gap was lower in 1981-82, though there was lower level of wages during these years as compared to the present years. The percentage of wage of low-skilled workers to that of medium and high-skilled workers was 54% in 1981-82 and 44% in 1998-99, first year of NDA-I and 32% in 2003-04, the last year of NDA-I. The share has declined to 31% in 2004-05, first year of UPA-I and 25% in 2008-09, the last year of UPA I and 26% in 2013-14 the last year of UPA II.

This implies that wage-gap is increased during the periods of NDA I and UPA I & II. This is resulted in the times of MDG years and neo-liberal market regimes and policies, which reduces the chances of convergence of per capita income between developing economies, like India and developed economies, like the US. The skill-biased technological change is also tested in this case, which also declines the possibility of the convergence in coming years of SDGs; it is a challenge emerged for the NDA-II regime (2014-2019).

Figure 1: Percentage-share of Wages of Low-skilled to High and Medium Skilled Workers (LHS) and Capital -Labour Ratio (RHS)-Skill-baised Technological Change (SBTC): 1981-82 to 2013-14



Source of Data: ASI of different years

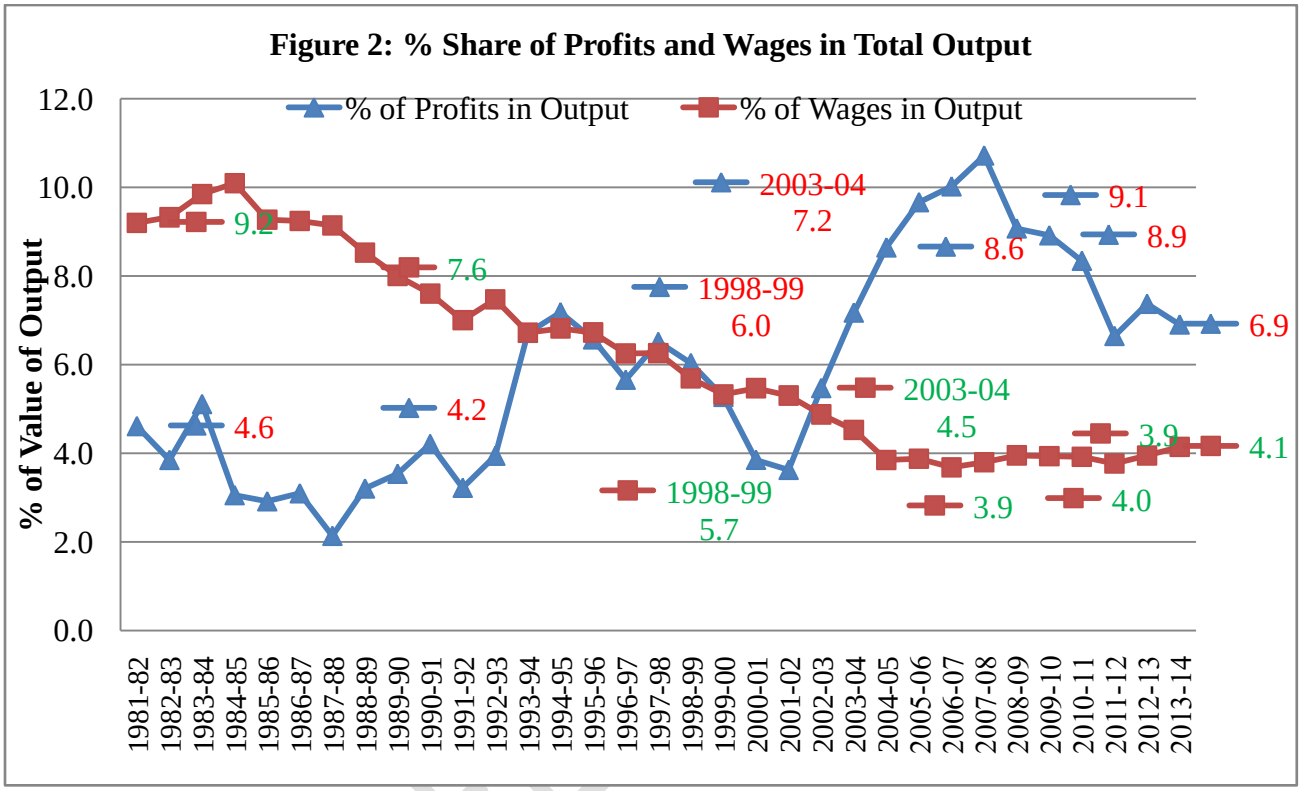
A complementary between the use of capital (physical and financial) in the advanced technological revolution and demand for high-skilled workers in Indian manufacturing sector is also examined by using Figure 1. The figure shows that capital-labour (K-L) ratio is increased over the years, 0.7 in 1981-82, which is gone up to 5.3 and 8.3 in the first and last years of NDA-I, respectively in 1998-99 and 2003-04. In the first and last years of UPA I, the respective ratios went up to 9 and 13.6 and it is further moved up to 25 in the last year of UPA II, i.e., 2013-14.

5. Unequal Exchange Rates between Returns of Capital and Labour: High Surplus-value in Neo-Liberal Regimes

Figure 2 presents the percentage shares of profits and wages in Value of Output in the Indian manufacturing sector in the pre-reform years (1981-82 and 1990-91) and post-reform years as well as the first and last years of the three regimes and also/ or MDGs years. The share of wages in output was higher at 9.2% in 1981-82 and it declined to 7.6% in 1990-91, however the shares of profit in both the pre-reform years were lower at 4.6% and 4.2%. The share of

wages in declined in the post reform years and share of profit has increased in the Indian manufacturing sector.

Figure 2: % Share of Profits and Wages in Total Output



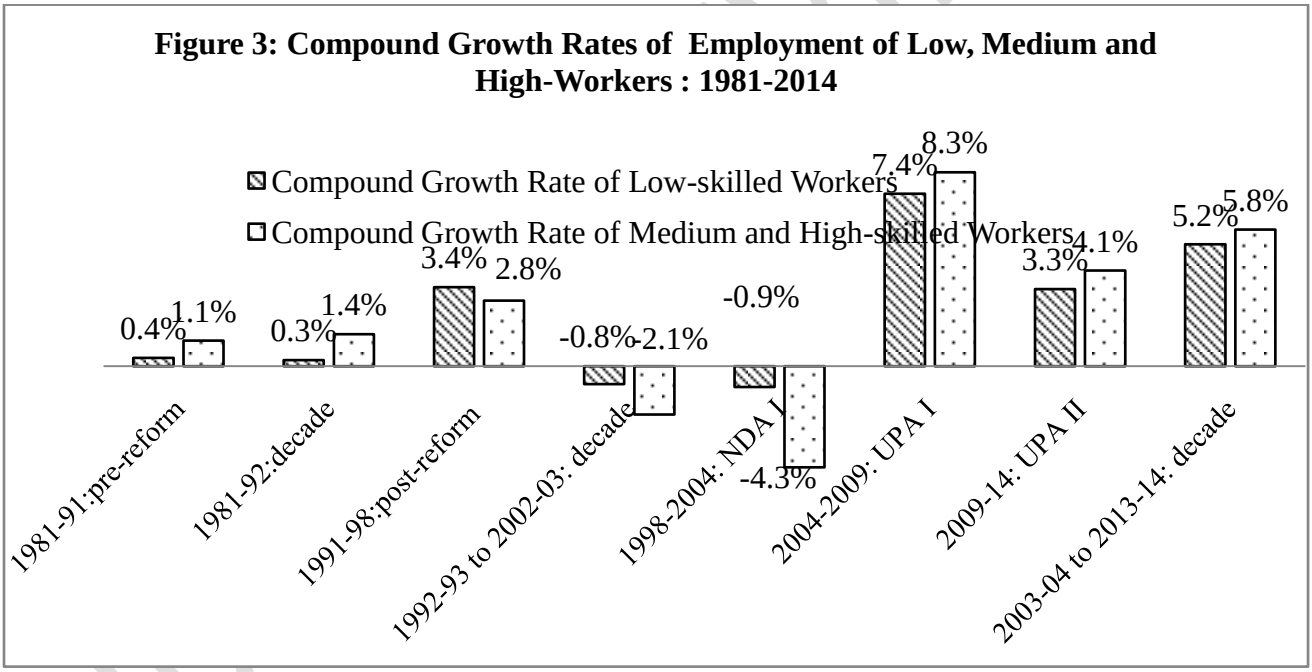
Source of Data: ASI of different years

The respective share of wages in the first and last years of NDA I were higher at 5.7% and 7.2%, however the corresponding shares of wages in the same years were lower 3.9% and 4.5%. The shares of profits in the first and last years of UPA I were higher 8.6% and 9.1%, the respective shares of wages in the same years were 3.9% and 4.0%. These shares of profits in the first and last years of UPA II were higher 8.9% in 20009-10 and 6.9% in 2013-14 and respective shares of wages were 3.9% in 2009-10 and 4.1% in 20013-14. This means that share of profits has declined by 2 percentage-points from 2013-14 to 6.9% from 8.9% in 2009-10during the post-global financial crisis, which signifies the adverse effect of the crisis. The trend of lower share of wages has been continued in the global financial crisis period in the three regimes, which was started in the post-1991 economic reform period as well as MDG years up to 2013-14.

6. Better Performance by UPA I in Employment, Wages, Profits and Output: Lessons for SDGs

In the NDA-I regime, the compound growth rates of employment, wages, profits and output are lower than those of UPA I and UPA II regimes (see Figures 3, 4 and 5). The growth rates of employment and wages of low-skilled workers in UPA I are significantly higher than those in the other regimes two regimes NDA I and UPA II, these are also highest in the pre- and post-economic reform years. This is very significant revelation for the addressing the challenges for achieving Sustainable Development Goals (SDGs) in coming years in Indian economy, not only for the Indian industrial sector but also for the other two sectors, agriculture and services. Because all the four variables in Indian manufacturing have better performance in terms of higher compound growth rates under UPA I and it is also sustainable as all the stakeholders have received adequate shares of inclusive industrial growth and development.

Figure 3: Compound Growth Rates of Employment of Low, Medium and High-Workers : 1981-2014



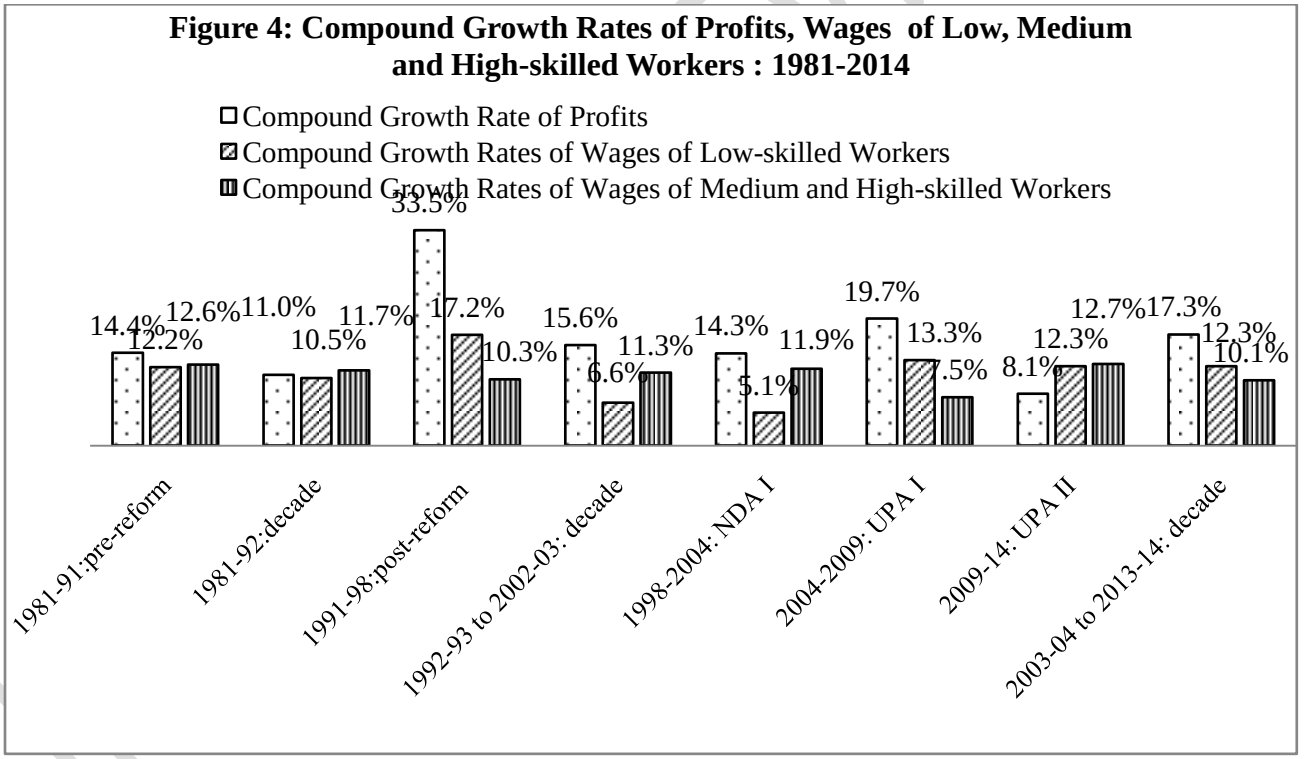
Source of Data: ASI of different years

The compound growth rate of employment of low-skilled workers in UPA-I was higher at 7.4%, and negative at -0.9% in NDA-I and lower at 3.3% in UPA-II (Figure 3). The growth rate of employment of medium and high-skilled workers was 8.3% in UPA I, which is 0.9 percentage-point higher than the growth of low-skilled workers, assuring the benefits for the medium and high-skilled workers with low-skilled workers. In comparison to the growth rates of employment of medium and high-skilled workers, the respective growth rates in NDA I and UPA II were negative at -4.3% and lower at 4.1%. This implies that there is a correspondence

between the employment growth rates of low-skilled workers and medium and high-skilled workers in all the three regimes.

The better performance of employment in the UPA I regime as compared to that of NDA I and UPA II, is examined above. The wages of the workers and profits in the Indian organized manufacturing factories are analysing by using the compound growth rates as shown in Figure 4. The respective compound growth rates of wages of low-skilled and medium and high-skilled workers in UPA I, were 13.3% and 7.5%. However, the growth rates of wages of the categories of workers in NDA I were 5.1% and 11.9%, these in UPA were 12.3% and 12.7% respectively. This means that highest wage-growth of low-skilled workers was experienced under UPA I, in comparison to two other regimes and pre- and post-reform period.

Figure 4: Compound Growth Rates of Profits, Wages of Low, Medium and High-skilled Workers : 1981-2014

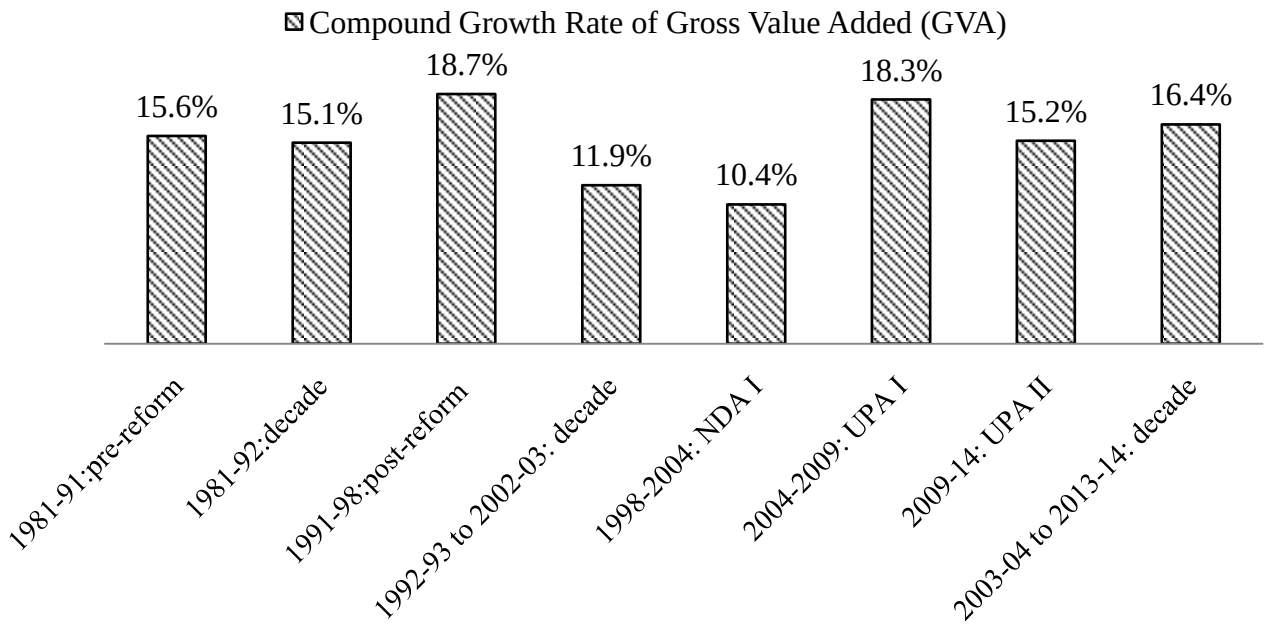


Source of Data: ASI of different years

Thus, wage-growth rate of medium- and high-skilled workers was lower under UPA I than the respective wage-growth rates in NDA I and UPA II. But it may crucial for progressive distribution of income in a low-paid developing economy. The absolute wages of medium- and high-skilled workers are higher than the wages of low-skilled workers, as it is examined in the previous sections on the skill-biased technological change of this paper (see Figures 1 and 2).

Therefore, for assuring sustainability and stability in the structures of wage-earners, higher growth of lower strata is required to have more harmonious society. The highest wage-growth rate of low-skilled workers in UPA I is also complimented with the highest profit-growth at 19.7%, in comparison to NDA I and UPA II. The profit-growth rates in NDA I and UPA II were 14.3% and 12.7% respectively.

Figure 5: Compound Growth Rate of Gross Value Added (GVA): 1981-82 to 2013-14



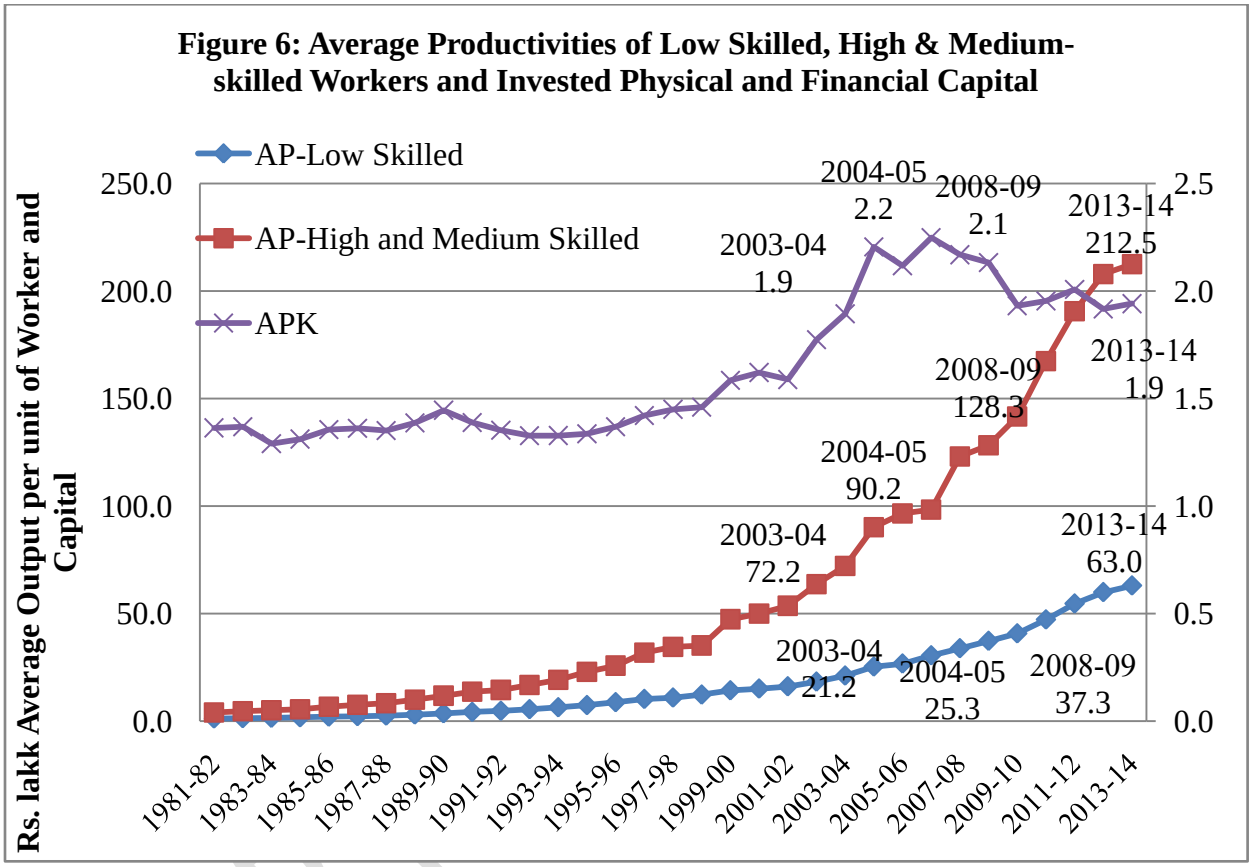
Source of Data: ASI of different years

Figure 5 shows the compound growth rates of output of gross-value added (GVA) in the three political regimes. The compound growth rate of GVA in UPA-I was highest at 18.3%[3] in UPA I in comparison to the respective growth rates in NDA I and UPA II, which were 10.4% and 15.2% . This implies that the highest employment growth of low-skilled, medium and high-skilled workers and complimented with the highest wage-growth of low-skilled workers, highest profit-growth rate and highest output growth rate during the UPA I.

[3] The highest compound growth rate of GVA was attained at 18.7% in 1991-98 period during all pre- and post-reform years and periods, which is just 0.4 percent-point higher than the growth rate of GVA in UPA I period, which was 18.3% (see Figure 5.

Better performance can also be examined by our estimated average productivities of physical and financial capital, low-skilled and medium- and high-skilled workers, as presented in Figure 6.

Figure 6: Average Productivities of Low Skilled, High & Medium-skilled Workers and Invested Physical and Financial Capital



Source of Data: ASI of different years

The respective average productivities of capital and the low-skilled and medium- and high-skilled workers are estimated as the value of output (GVA) in Rs. Lakh divided by amount of invested capital in Rs. Lakh for average productivity of capital (APK) and the GVA is divided by numbers of low-skilled and medium- and high-skilled workers for average productivity of human capital of medium and high-skilled worker (APHK) and average productivity of labour for low-skilled worker (APL). The highest average productivity of capital resulted in the UPA-I regime as compared to the NDA-I and UPA-II and also in comparison to the pre- and post-reform periods. The respective values of APK were 1.9 and 2.1in 2003-04 and 2008-09, the last years of NDA I and UPA I (see Figure 6). It is severally declined in post-global financial crisis years as it declined to 1.94 in 2013-14, the last year of UPA II. With this highest average productivity of capital, there were also higher levels of average productivities of low-skilled and

medium and high-skilled workers in UPA I, these were 37.3 and 128. 3. The corresponding productivities in the last year of NDA I were 21.2 and 72.2 and the respective productivities in the last year of UPA II were 37.3 and 212.5.

7. Conclusions and policy implications

There are four important challenges emerged in the analysis on the Indian organized manufacturing sector under the three regimes, NDA I (198-99 to 2003-04), UPA I (2004-05 to 2008-09) and UPA II (2009-10 to 2013-14): (i) skilled-biased technological change is prevalent through decrease in the share of wages of low-skilled to medium & high-skilled workers and increase in physical and financial capital in all the three regimes, (ii) stagnant and higher level and share of low-skilled workers at 77% and constant respective shares of medium and high-skilled workers at 13% and 10% over the periods of three regimes, (iii) increase in informalisation of low-skilled workers through contracted employment, (iv) increase in feminization of low-skilled workers. These four challenges have to be addressed in coming 15 years of SDGs for inclusive and sustainable, industrial development in Indian manufacturing sector, to achieve the four specific targets of SDGs 5, 8, 9 and 10. Under this framework of inclusive development, the manufacturing policy should have such type of oriented to reach its share 25% in Indian GDP by 2025and generate the employment level in the sector to 100 million by 2022.

In the pre- and post-reforms periods, the employment and wages were more inclusive in the Indian manufacturing sector under UPA I (2004-05 to 2008-09) in terms of higher compound growth rates as compared to those of NDA I and UPA II. These two positives in the industrial development are also complemented with the higher compound growth rates of profits and higher growth rate of gross value added in the same regime. This implies that all the stakeholders in the Indian manufacturing sector, namely workers and employers got higher benefits in the UPA I regime. The main four reasons for the inclusive development in UPA I are: (i) higher wage-growth and employment-growth of low-skilled workers, (ii) higher profit-growth, (iii) higher output-growth rate and (iv) higher average productivities of capital, low-skilled and medium- and high-skilled workers. This process of inclusive industrial development can be defined as the efficiency with equity. The challenges of growth with equity are facing by the industrial development for the coming 15 years in the context of sustainable development goals

and targets especially SDG 5, 8, 9 and 10. These four instrumental factors used for inclusive industrial growth are significant to frame futuristic policy implications to attain sustainable development in India.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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