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Globalization and Its' Impact on Agricultural Labour

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Abstract:

Agriculture as the backbone of Indian economy. services and manufacturing have emerged as the epicenter of GDP growth in india. this paper describes how tremendous increases in employment and declined in poverty. more than 50 percent rural population labour engage in agriculture sector. impact of green revolution using high yield varieties, seeds specially in wheat and rice production and productivity has increased after green revolution.

1. Introduction

After independence, the Indian rural economy has experienced tremendous changes. Agricultural production of food grain items alone has increased from 63.2 million tonnes in 1951-56 to 87.8 million tonnes in 1966-69 and further it has increased from 189.0 million tonnes in 1992-97 to 202.9 million tonnes in 1997-2002. Similar to agricultural production, agricultural productivity (production per hectare of land) has also increased. It has increased from 552 Kgs/ hectare in 1950-51 to 1023 Kgs./hectare in 1980-81 and further has increased from 1380 Kgs/ hectare in 1990- 91 to 1626 Kgs/ hectare in 2000- 2001 on average for total food grains. Subsequently, poverty has declined from 37.3 percent in 1993- 94 to 27.10 percent in 1999- 2000 and further it has declined to 21.8 percent in 2004- 05 in rural India.

As per the NSSO report Agricultural labourers constituted more than one fourth of the total rural work force in 2004-05. Agricultural Labour is one of the most neglected and oppressed class of rural economy. As agriculture comes under un-organized sector of the economy, Govt. rules and policies related to working conditions, wage rate, insurance and social securities are not applicable in this sector of the economy. Consequently, Agricultural labourers are bound to work and live under very uncertain and dangerous conditions. During the post reform period, the rural economy has gone through drastic changes. The main purpose of this paper is to analyze the impact of globalization on agricultural labourers in the context of fast changing rural economy during post reform periods (1990-91 onwards). This paper is an attempt to analyze the distributive justice of globalization with respect to agricultural labour, which is one of the most vulnerable class of rural economy.

2. Total Population by Economic Activity

As per the NSSO report, around 36 percent of rural work force was engaged in agriculture as self employed in 2004- 05. Around 16 percent of rural working population was engaged in non-agriculture as self employed. About 26 percent of rural working population was engaged in agriculture as manual labourers and nearly 11 percent of rural workers were engaged in non-agriculture as labourers for same period (Table- 1a). Proportion of agricultural labourers is much higher (25.8 percent) in total rural labour (36.7 percent). The proportion of agricultural labourers is the highest in total rural work force followed by the self employed in agriculture.

Year	Self employed in			Rural labour			Others	Total
	Agriculture	Non-agriculture	Total	Agriculture labour	Other labour	Total		
2004-05	35.9	15.8	51.7	25.8	10.9	36.7	11.6	100
1999-00	32.7	13.4	46.1	32.2	8.0	40.2	13.7	100

Table 1a: Distribution of household among economic groups (All India Rural)

Source: NSSO report (report no. 469 and 516) 55th and 61st round survey on employment and unemployment situation among social groups in India

For urban areas 37.5 percent of the working population was engaged in self employment in 2004- 05. 41.3 percent were engaged in regular salary/ wage employment. About 12 percent urban workers were employed as casual labour for the same period (Table- 1b).

Year	Self employed	Regular wages/salaried	Casual labour	Other households	Total
2004-05	37.5	41.3	11.8	9.4	100
1999-00	34.4	41.7	14.0	9.7	100

Table 1b: Distribution of household among economic groups (All India Urban)
Source: NSSO report (report no. 469 and 516) 55th and 61st round survey on employment and unemployment situation among social groups in India.

3. Changes in agricultural production

Total food grain production was 63.2 million tonnes in 1951- 56 and has increased to 87.8 million tonnes in 1966- 69, 155.0 million tonnes in 1985- 1990, 189 million tonnes in 1992-97 and further it has increased to 202.9 million tonnes in 1997- 2002. 1966 is the period of green revolution in Indian agriculture. Between 1966- 69 to 1992- 97 agricultural production of total food grain items has increased from 87.8 million tonnes in 1966- 69 to 189.0 million tonnes in 1992-97. The increase in production for said period is more than 100 million tones, which is higher than total food grains production in 1966-69.

The production of rice was 25.0 million tonnes in 1951-56 and it has increased to 35.9 million tonnes in 1966-69. Further, it has increased to 78.7 million tonnes in 1992-97. Production of rice has increased 78.7 million tonnes in 1992-97, which is more than double than production (35.9 million tonnes) in 1966-69.

Production of wheat was merely 7.9 million tonnes in first five year plan (1951-56) and has increased to 15.5 million tonnes in 1966-69. Further, it has increased to 62.9 million tonnes in 1992-97. Wheat production has increased four time higher (62.9 million tonnes) in 1992-97 than the production in 1966-69 (15.5 million tonnes).

The production of Jowar, Bajra and Maize has also increased for said period, but for these crops increase is very marginal (Table-2a).

Crop	(Production in million tonnes)				
	1951-56	1966-69	1985-1990	1992-97	1997- 2002
Rice	25.0	35.9	65.1	78.7	87.3
Wheat	7.9	15.5	48.3	62.9	71.3
Jowar	7.5	9.7	10.9	10.9	7.9
Bajra	3.4	4.5	5.2	6.7	7.1
Maize	2.7	5.6	7.6	9.8	11.6
Total food grains	63.2	87.8	155.0	189.0	202.9

Table 2a: Change in agricultural production of some major crops of food grains
Sources: For 1951-56 and 1966-69 Sixth Five Year Plan 1980-85, for 1985-1990 economic survey, 1992-93, for 1992-1997 economic survey, 1998-99 and for 1997-2002 economic survey 2007-08

4. Productivity of Agriculture

Productivity of agriculture (production per hectare of land) continuously has increased. Productivity of the total food grains was only 552Kgs/ hectare in 1950-51 and has increased to 1023kgs./ hectare in 1980- 81. Further, it has increased to 1380 Kgs./ hectare in 1990-91 and 1626 Kgs./ hectare in 2000-01.

Crop wise productivity can also be seen in Table- 2b. Productivity of rice was merely 668 Kgs./ hectare in 1950-51 and it has increased to 1336 Kgs/ hectare in 1980-81. Further,, it has increased to 1740 Kgs./ hectare in 1990-91 and 1901 Kgs./ hectare in 2000-01. Similar to rice, productivity of wheat has also increased continuously. Productivity of wheat was 655 Kgs./ hectare in 1950-51 and has increased to 1630 Kgs/ hectare in 1980-81. Further, it has increased to 2281 Kgs./ hectare for 1990-91 and 2708 Kgs/ hectare for 2000-01. Similar to wheat and rice, productivity for other crops such as bajara and maize has also increased and can be viewed in Table- 2b. It should be noted that productivity for jowar has declined during post reform period from 814 Kgs./ hectare in 1990-91 to 764 Kgs./ hectare in 2000-01.

Crop	(Kgs./ hectare)			
	1950-51	1980-81	1990-91	2000-01
Rice	668	1336	1740	1901
Wheat	655	1630	2281	2708
Jowar	353	660	814	764
Bajra	288	458	658	688
Maize	547	1159	1518	1822
Total food grains	552	1023	1380	1626

Table 2b: Yield per hectare of major food grain crops
Source: Sixth five year plan 1980-85, economic survey 1981 and 2007-08

As it is clear from above discussion that agricultural production and productivity per hectare of land both has increased many fold particularly during post reform period (period since 1990s and afterwards). Production and productivity of Indian agriculture has

increased mainly due to the use of high yielding varieties of seeds and use of fertilizers which has been termed as “green revolution”.¹ Before discussing the gain of green revolution in favour of agricultural labours, it is essential to know its impact on employment generation because living conditions of agricultural labourers crucially depends on days of employment they get/work in a year. Many studies have been conducted since 1966 (starting period of green revolution) onward to know the relationship between green revolution and its impact on employment generation. Rao (1979) has conducted a study for Ferozpur (in Punjab) and estimated that “tractorization” displaces 20 to 30 percent of the total human labour days per cropped area on account of tillage and transportation. The use of mechanical thresher displaces around 15 percent labour and the use of harvester displaces labour extensively by cutting down the time required for harvesting and threshing operations”.² Study conducted by Sidhu and Singh titled “Technological Changes in Indian Agriculture” shows that “if all wheat and paddy area of big farmers with holding of ten acres of land and above is harvested through the use of harvester combines, it would mean unemployment for about 1.7 lakh labourers”. Another study conducted by Bhalla (1987) indicates that “employment elasticity has continuously declined since 1968-69”.

Thus, studies presented above conducted by different academicians and scholars clearly indicates decline in employment due to large scale displacement of labour with the use of machinery technique in agriculture. Now we will see that what has been the impact of “labour substituting technique” used in agriculture on overall employment and unemployment.

5. Employment Situation

Data presented in Table-3a on employment shows increasing trend of employment for period 1983 to 1993-94 and 1993-94 to 1999-2000. Total employment which was 302.75 million in 1983 has increased to 374.45 million in 1993- 94 and further it has increased to 397.0 million in 1999-2000. Except public sector, employment has increased for all sectors of economy in said period but the growth of employment is sharply declining. It should be noted that employment for public sector has reduced from 19.44 million to 19.41 million between 1993-94 and 1999-2000.

Sector	Employment (in millions)		
	1983	1993- 94	1999- 2000
Total employment	302.75	374.45	397.00
Organised sector	24.01	27.37	28.11
Public sector	16.46	19.44	19.41
Private sector	7.55	7.93	8.70
Un- organized sector	278.7	347.08	368.89

Table 3a: Employment situation in organized and un-organized sector

Source: Economic survey, 2001- 2002

6. Growth Rate of Employment

Growth rate of employment has sharply declined between 1983 to 1993-94 and 1993- 94 to 1999-2000. The growth rate of total employment on an average was 2.04 percent between 1983 and 1993-94 and it has declined to 0.98 percent in between 1993-94 and 1999-2000. Growth rate of total employment between 1993-94 and 1999-2000 has reduced to even less than half (0.98 percent) as compared to the growth rate in between 1983 and 1993- 94 (2.04 percent). Reduction in the growth rate of employment between 1993-94 and 1999-2000 can be seen for almost all sectors i.e. organized, un-organized and public sector of economy. But for public sector, it has become negative (-0.03 percent) between 1993-94 and 1999-2000. Private sector was an exception in which growth of employment has increased from 0.45 percent in 1983 and 1993-94 to 1.87 percent in 1993-94 and 1999-2000. But the growth of private sector employment was unable to offset the declining growth rate of other sectors of economy. Consequently, total growth rate of employment has reduced to 0.98 percent in between 1993-94 to 1999-2000 from 2.04 percent in between 1983 to 1993-94.

Sector	(In percent)	
	1983 to 1993-94	1993-94 to 1999- 2000
Total employment	2.04	0.98
Organised sector	1.20	0.53
Public sector	1.52	-0.03
Private sector	0.45	1.87
Un- organized sector	2.01	1.02

Table 3b: Growth rate of employment for 1983 to 1993-94 and 1993-94 to 1999-2000

Source: Economic survey, 2001-2002, Table 10.7, p. 240

¹ Green revolution was packaged program in which combined use of high yielding varieties of seeds, fertilizer, pesticides and irrigation was required.

² In green revolution initially “land augmenting production technique” was used but later this was accompanied by the use of “labour substituting technique” by large farmers in many areas of the country especially in Punjab, Haryana and western Uttar Pradesh. In some cases, there was shortage of labour especially at the time of sowing and harvesting and in some cases it was profitable to use the machine in place of labour See Rao (1979).

7. Unemployment situation

Data on unemployment presented in Table-4 suggests that unemployment has increased over the period. On the basis of all measurement of unemployment (such as Usual status, Current Weekly Status and Current Daily Status) unemployment has increased between 1993-94 and 1999-2000. Further, it increased in 2004-05. Among all measurements of unemployment, it has increased highest on the basis of Current Daily Status which captures under-employment. On the basis of CDS (Current Daily Status), unemployment was 56 for both male and female worker from rural India per 1000 of workers in 1993-94. It has increased to 72 for male and 70 for female workers in 1999-2000. Further, unemployment has increased to 80 for male and 87 for female workers in 2004-05 (Table-4). Thus, data on unemployment shows steep rise in rural unemployment during post reform period (1993- 94 to 2004- 05).

Round	US		CWS		CDS	
	M	F	M	F	M	F
61 st (2004- 05)	21	31	38	42	80	87
55 th (1999- 00)	21	15	39	37	72	70
50 th (1993- 94)	20	14	30	30	56	56

Table 4: Unemployment for 1993-94, 1999-2000 and 2004-05 (all India Rural) per 1000 of worker

Source: NSSO report 50th, 55th and 61st round survey on employment and unemployment situation among social groups in India.

Data on agricultural production and productivity (Table-2a and 2b) clearly shows that total production of agriculture and production per hectare of land both has increased many fold, which has resulted in reduction of poverty for rural India from 37.3 percent in 1993-94 to 27.1 percent in 1999-2000 (Table- 5a). Now I will try to analyze as to, whether reduction in poverty has helped the rural poor to rise up from below poverty line with reference to agricultural labourer.

Population below poverty line (in percent)					
1993-94			1999-2000		
Total	rural	urban	Total	rural	urban
36.0	37.3	32.4	26.1	27.1	23.6

Table 5a: Poverty in India

Source: Govt. of India, planning commission

8. Poverty Among Economic Groups

In Table-5b the share of total rural population in different major economic activities and their respective share in the total rural poor population are shown. Rural population, which was engaged in self-employment in agriculture was 42.40 percent in 1993-94 and their share in rural poverty was 32.33 percent. 13.08 percent population was engaged in self-employment in non-agriculture and their share in rural population was 11.16 percent. 27.51 percent population of rural India was engaged in agriculture as labourers for their livelihood and their share in the total rural population was highest (42.62 percent). Remaining 7.49 and 9.52 percent population were engaged as non-agricultural labour and other economic activities respectively and their share in total rural population was 7.84 and 6.04 percent respectively (Table-5b). Data on poverty shows highest poverty for agricultural labourers in rural India, both in terms of their share in rural poor (42.62 percent) as against their share in rural population (27.51) and in terms of HCR (57.46 percent point) poverty among agricultural labourers.

Economic category	1993-94		
	Total rural population	Rural poor population	HCR
Self employed in agriculture	42.40	32.33	29.58
Self employed in non-agriculture	13.08	11.16	32.55
Agriculture labour	27.51	42.62	57.46
Other labour	7.49	7.84	39.10
Others	9.52	6.04	24.32

Table 5b: Poverty among economic groups for 1993- 94 (All India Rural)

Source: Calculated by K Sundaram, Suresh D Tendulkar EPW December 13, 2003

Data on poverty shows that poverty has declined between 1993-94 and 1999-2000 for all rural population engaged in different types of economic activities (Table-5c). However, poverty remained highest for agricultural labourers in 1999-2000 too, among persons engaged in different types of economic activities. The share of poor agricultural labourers in total rural poor population has increased from 42.62 percent in 1993-94 to 48 percent in 1999-2000. This shows the worsening condition of agricultural labourers for said period.

Economic category	1999- 2000		
	Total rural population	Rural poor population	HCR
Self employed in agriculture	37.78	28.25	21.62
Self employed in non-agriculture	13.84	11.53	24.09
Agriculture labour	31.10	48.01	44.64
Other labour	7.40	7.12	27.79
Others	9.87	5.09	14.93

Table 5c: Poverty among economic groups for 1999- 2000 (All India Rural)
Source: Calculated by K Sundaram, Suresh D Tendulkar EPW December 13, 2003

In table-5d, the share of poor population in total rural poor population by type of economic activity and the no. of poor population by type of economic activity is shown for 1993-94 and 1999-2000. Data shows that poverty has declined from 37.3 percent in 1993- 94 to 27.1 in 1999- 2000 on an average for rural India (Table-5a). The trend of decline in poverty can be seen by type of economic activity for the said period. The Head Count Ratio poverty was 29.58 percent point for self employed in agriculture in 1993-94 and has declined to 21.62 percent in 1999-2000. It was 32.55 percent for self-employed in non-agriculture in 1993-94 and has reduced to 24.09 percent in 1999-2000. Poverty among agricultural labourers was 57.46 percent in 1993-94 and has reduced to 44.64 percent in 1999-2000. Similarly, poverty has reduced for other labour and other house hold (households other than labour household) respectively for said period (Table-5d). Thus, data on poverty shows that poverty has declined between 1993-94 and 1999- 2000 for all groups of population engaged in different economic activities but amongst the agriculture labourers, it has worsened during post reforms period.

Besides decreasing Head Count Ratio poverty in percentage, absolute no. of poor population has also decreased between 1993-94 and 1999-2000 (Table- 5d). But agriculture labour has been an exception of it. For agriculture labour, no. of poor person has increased from 96.1 million in 1993- 94 to 101.0 million in 1999-2000. This shows the worsening condition of agricultural labour during post reform period when other group of rural population (those engaged in other economic activities) enjoy benefit of economic reform in terms of declining in poverty ratio and decreasing absolute no. of poor population..

Economic category	1993- 94		1999- 2000	
	HCR (in percent)	No. of Poor (million)	HCR (in percent)	No. of Poor (million)
Self employed in agriculture	29.58	73.8	21.62	59.4
Self employed in non-agriculture	32.55	25.1	24.09	24.2
Agriculture labour	57.46	96.1	44.64	101.0
Other labour	39.10	17.7	27.79	14.9
Others	24.32	13.6	14.93	10.7

Table 5d: Changes in poverty and no. of poor between 1993- 94 and 1999- 2000 (all India Rural)
Source: Calculated by K Sundaram, Suresh D Tendulkar EPW December 13, 2003

9. Conclusion

During post reform period agricultural production and productivity of agriculture (production per hectare of land) has considerably increased. The increase in production and productivity of agriculture has been contributed mainly by the green revolution in Indian agriculture. As a result rural poverty has declined rapidly between 1993-94 and 1999-2000. But the benefit of agricultural prosperity in rural India has not reached to agricultural labour which is one of the most vulnerable classes of rural economy. There have been two reasons behind this. Firstly, labour substituting production techniques have been used in agriculture by the large farmers to increase their profitability. As a result, growth rate of employment in rural sector has sharply declined for period 1983 to 1993-94 and 1993-94 to 1999-2000. Secondly, public investment in rural sector, particularly in agriculture has declined during post reform period.³ Therefore, unemployment has sharply increased during post reform period. Thus, cumulative result of decreasing growth rate of employment and increasing of unemployment can be seen in continuously increasing the absolute number of poor person among agricultural labour during post reform period. Whereas, the absolute number of poor person has come down for group of persons who are engaged in other sector (other than as labour in Agriculture) of rural economy for said period. In rural India, agriculture labour has been the only group among different economic groups of people which has been far behind in achieving the benefit of economic reforms.

³ For detail see Rao (2005) and also Gulati and Bathla (2002).

10. Suggestions

Agricultural labour constitutes more than one-fourth of the total rural population and about 50 percent of rural poor belong to agricultural labour. Thus, ambitious target of reducing Head Count Ratio poverty by 10 percent point by 2012 (in 11th five year plan) cannot be achieved unless special policies are formulated for reducing poverty of agricultural labourers.

- NREGS (National rural employment guarantee scheme) is a welcoming step in this regard but the number of days of employment must be increased. It should be at least 150 days in a year.
- Micro finance system on the line of Bangladesh micro credit system should be introduced amongst agricultural labourers to enable them to productively utilize their seasonal/cyclical unemployment phase in agriculture or other fields.
- Govt. should make a policy to declare Minimum wages for different economic activities for rural India especially Agriculture labourers and should also periodically revise it in relation to Consumer Price Index.
- The process of introduction of heavy machinery (e.g. Harvestors) in agricultural activities should be gradual and it should be done keeping in mind the need for optimum employment generation.

11. References

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