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Pro-poor growth in India: an analysis in the post reform period

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Abstract

Objective: To examines the pro-poorness of growth in India in the post reform period.
Data & Methodology: The study based on National Sample Survey Organization (NSSO) unit level data of Consumer Expenditure Survey (CES) for1993-94 (55th), 2004-05 (61st) and 2011-12 (68th) round. The poverty decomposition, pro-poor growth index, poverty equivalent growth and growth incidence curve has been estimated.
Findings: The 1stperiod (1993-94 to 2004-05) has recorded a slower rise in Monthly per capita consumer expenditure (MPCE) and faster rise in gini causing a slow reduction in poverty. The 2ndperiod (2004-05 to 2011-12) witness a faster rise in real MPCE with a slow growth in inequality causing faster reduction in poverty both in rural and Urban India. The 2nd period is approaching towards the pro-poorness, while the 1st period doesn't.
Application/Improvements: With poverty reduction the government should focus on the reduction in inequality to achieve pro-poor and inclusive growth. The process of pro-poorness i.e. the factors causing pro-poor growth and the Inclusiveness of the growth can be taken as the further research work.
Keywords: Poverty, Inequality, Rural, Urban, Pro-poor, Inclusive, India

1. Introduction

Despite high overall economic growth rates in India, many policy makers are having concerned that, whether this growth has been too uneven and accompanied by rising income inequality. In addition, whether the disadvantaged socio-economic and religious groups have benefited proportionately from this rapid economic growth is questionable. The government targeted inclusive growth as a strategy to overcome these inequalities and disadvantages. Indeed, India's Eleventh Five-Year Plan, 2007–2012 was entitled "Inclusive Growth" and included concrete strategies to promote the well-being and participation of disadvantaged group [1]. Inclusive growth is more than broad-based growth. While economic growth refers to increased economic output or income, inclusive growth focuses on a subset of such growth episodes. Growth is a necessary condition for inclusive growth. In order to growth to be inclusive two options are possible. One focuses on the process that the actual growth included many people who participated in that growth. The second option focuses on outcomes of the growth process [2].

Poverty reduction is a major concern of development policy. In turn, this focus on poverty reduction has generated interest in pro-poor growth. India, which has had poverty reduction as the central goal of policy over the last 50 years, has recently switched to a new development strategy focusing on two basic goals: raising economic growth and making growth more inclusive. The central focus of the 2006World Development Report is the pursuit of equality of opportunity while avoiding extreme deprivation [3]. Both reports emphasize the paramount importance of inclusive growth, i.e., creating economic opportunities through sustainable growth and making the opportunities available to all including the poor [4,5]. India, in the recent past, has witnessed a high growth rate, reduction in poverty and inequality. Hence it is important to have a look into whether the growth and poverty reduction in India is pro-poor means whether the poor benefits more in the growth process. The flow of the paper is as follows: The 1st section dealt with the introduction of pro-poor and inclusive growth concept; The 2nd and 3rd section presents on measures of poverty and pro-poor growth measures; The 4th section examines empirical evidence of pro-poorness of India followed by a conclusion in the section-5.

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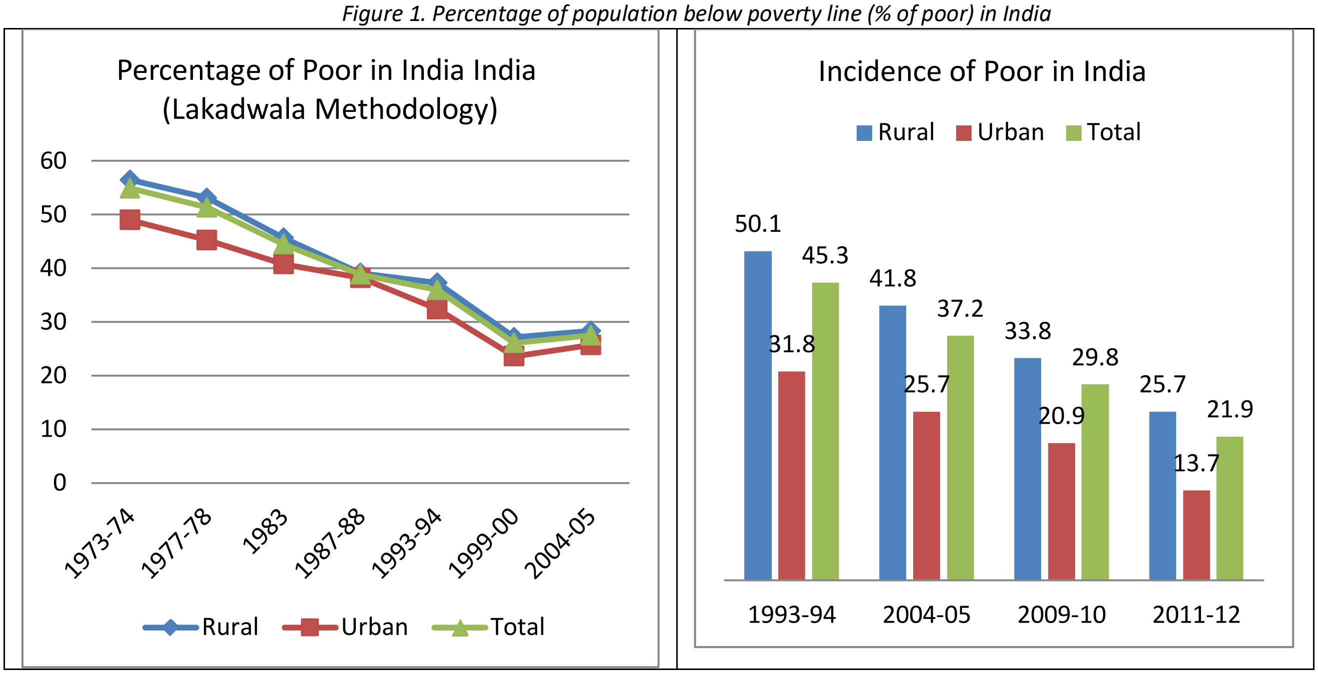
2. Data and methodology

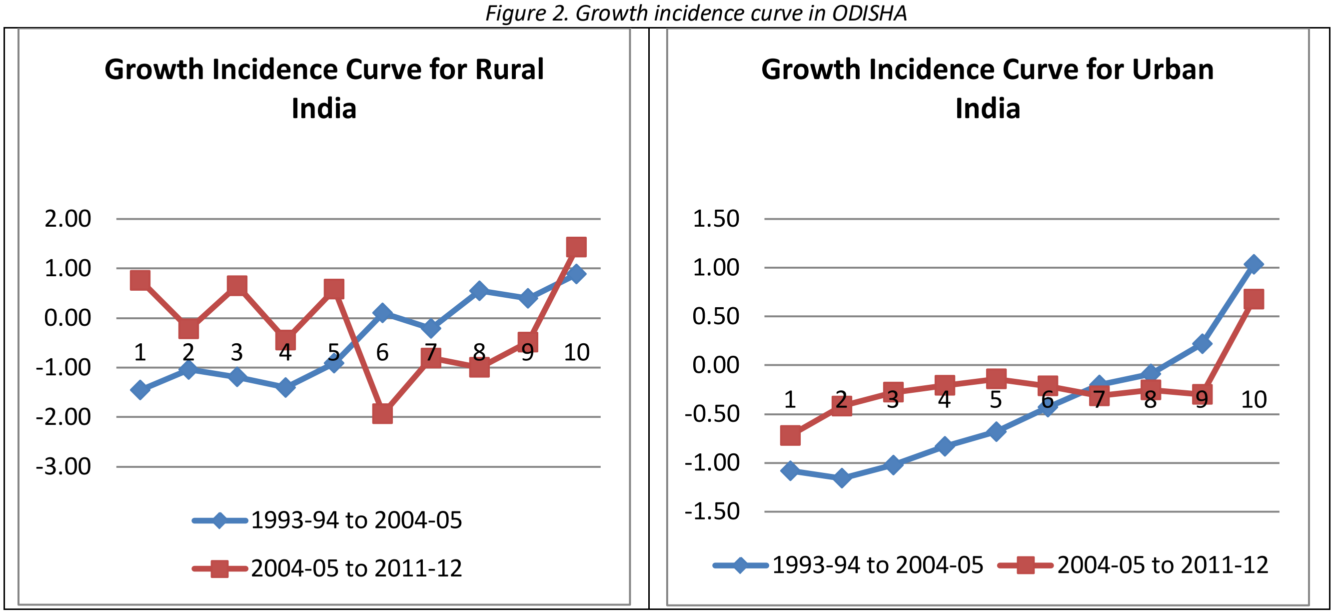
The poverty line defined by the Expert group headed by Dr. Tendulkar has been taken into account and accordingly the poverty Head Count Ratio (HCR), depth of poverty (poverty gap) and severity of poverty (squared poverty gap) has been estimated. The figure of HCR has collected from the NITI Aayog earlier known as planning commission, Government of India [6]. For calculating the poverty in the post reform period, the NSSO unit level data on "Consumer Expenditure Survey" for the 1993-94 (50th), 2004-05 (61st), 2009-10 (66th) and 2011-12 (68th) round have been used. Figure 1 gives a picture of the percentage of poor in India starting from the 27th(1972-73) quinquennial rounds. The data point for Figure stops at 2004-05 as it has been estimated using the Lakadwala Methodology. Though the poverty HCR has been declined through out for rural and urban India, it is after 1999-00 only it has seen small increasing trends. Figure shows the HCR using the Tendulkar methodology. From the figure's it can be shown that the poverty is declining throughout in the post reform period. Comparing the 50th and 61stround where the poverty in India has been declined by 9 % the decline in 2004-05 to 2009-10 has 7% point.

Figure 1. Percentage of population below poverty line (% of poor) in India



Source – Calculated by the author using planning commission figures

Figure 2. Growth incidence curve in ODISHA



Source – Authors calculation from NSSO unit level data of CES

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3.Pro-poor growth

Table 1. Indicators of living standard for rural India

Rural India	1993-94	2004-05	2011-12	% CHANGE	% CHANGE
MPCE	505.23	579.18	707.23	1.24	2.50
HCR	51.52	41.87	25.40	-1.89	-6.25
PG	13.29	9.65	4.98	-2.91	-8.27
SPG	4.78	3.16	1.47	-3.76	-9.57
GINI	0.260	0.280	0.287	0.67	0.31

The pro-poor growth debate has started with pro-distribution arguments of Chenery and Ahluwalia in the 1970s, in their paper of "redistribution with growth" [7].This model is the critique of the trickle-down hypothesis, which claims that growth itself would alleviate poverty. Pro-poor growth was also implicit in the term "broad-based growth," used in the 1990 World Development Report [8]. While the concept was never defined at that time, it subsequently came to be referred to as pro-poor growth during the 1990s.According to various international organizations; pro-poor growth is growth that benefits the poor. However, this definition does not provide answers such as, how much must the poor benefit for growth to be considered pro-poor? How much of poverty reduction is required for growth to be considered pro-poor [9].Equalizing opportunities means that the benefits generated by economic growth are shared across the population including by those who are less well-off. Equalizing opportunities is multidimensional. Key elements in equalizing opportunities will include the creation of productive and decent jobs through efficient, sustainable, and environmentally friendly growth; reduction and elimination of bad inequalities that impede the access to opportunities for the less well-off; and strengthened human capabilities to enable individuals to qualify for productive and decent employment. A reduction in economic and political inequality would be central in improving access to all in product and factor markets.

There is increased recognition that even if opportunities were equalized, there would be some chronically poor who for a variety of reasons will not be able to participate in and benefit from the opportunities provided by the growth process. Social protection through the provision of social safety nets will be required for the chronically poor to enable them to survive with a modicum of dignity. The pursuit of equality of opportunity and the avoidance of extreme deprivation of the chronically poor have been defined as equity. The multidimensionality of equity requires the reduction in inequality in the access to opportunities, access to public goods and services and access to social safety nets. Equity encompasses pro-poor growth with its unidimensional focus on income inequality. On the other hand, pro-poor growth encompasses poverty reduction, which focuses solely on the impact of growth on poverty reduction regardless of income inequality. From the above analysis, it can be inferred that the growth will be pro-poor if the decline in poverty will be accompanied by increasing growth (MPCE as a proxy for a growth of income) and reduction of inequality. Table 1 &2 presents the real MPCE[1], Incidence, depth, and severity of poverty and the inequality measured in terms of GINI coefficient for rural and urban India.

From Table 1 it can be inferred that the 2nd-period witnesses a faster rise in real MPCE in comparison to the 1st period and also the poverty decline (incidence, depth & severity) is faster in the 2nd period in rural India. While the inequality measured in terms of GINI coefficient increases at a faster rate in the 1st period which offset the poverty decline. The 2nd period witnesses a slower rise in GINI in rural India. The urban India too witnesses the same trends of real MPCE, poverty, and inequality as the rural India. The urban real MPCE figures are higher than the rural India showing a faster rise in MPCE and hence the poverty reduction. But a faster rise in inequality in urban India offset the poverty reduction more than its rural counterpart.

Table 2. Indicators of living standard for Urban India

Urban India	1993-94	2004-05	2011-12	% CHANGE	% CHANGE
MPCE	888.74	1104.59	1440.12	1.98	3.79
HCR	33.67	25.77	13.53	-2.43	-9.20
PG	8.27	6.08	2.65	-2.80	-11.86
SPG	2.94	2.05	0.78	-3.28	-13.80
GINI	0.32	0.364	0.376	1.17	0.46

Source – Calculated by the Author from NSSO CES unit level data

The MPCE of 1993-94 and 2011-12 has been converted into 2004-05 real MPCE for having a comparison over time. Both the above table shows that there is an increase in real MPCE at a faster rate in the 2nd period and hence the poverty decline is faster in the 2nd period in comparison to the 1st period. It shows that there exists a negative relation between the real MPCE and poverty. With an increase in MPCE the poverty seeing declining trends. The 2nd period seen a faster decline in poverty which is faster than the rise in real MPCE of that period. It is because of the reduction in inequality (GINI) for the period which causes a further decline in poverty. The poverty gap and squared poverty gap has seen a slower rising trends in the 1st period; it witnessed a substantial reduction in the 2nd period. It implies that it's not only the people who are close to the poverty line has uplift above the poverty line, rather the people way below the poverty line also increase their income and come out of poor. The inequality among the poor in the 2nd period has declined which too implied by fall in gini ratio in rural India.

In the urban India, the poverty has declined at a faster rate in the 2ndperiod in comparison to the 1st period. The inequality has increased through-out though increases at a higher rate in the 1st period and increases at a slower rate in the 2nd period. The depth and severity of poverty though increases at a lower rate in the 1st period has seen a faster decline in the 2nd period. The real MPCE too increases at a faster pace in the 2nd period causing a poverty reduction. The decline in incidence, depth, and severity of poverty both in rural and urban ODISHA in the 2nd period needs an in-depth study. The growth elasticity of poverty (Table 3) can be derived from the ratio of a rate of change in poverty to a rate of change in real MPCE. The 1st period in rural India has seen a slow growth elasticity of poverty with a negative sign which implies that with one unit rise in real MPCE the rural poverty in India has declined by 0.14 percentages in the 1st period which jumps to 0.36 percentages in the 2nd period. The urban ODISHA in the 1st period witnessed a negative growth elasticity of poverty while the 2nd period again witnessed a high reduction in poverty due to rise in MPCE. It’s the 2nd period in ODISHA which has seen a higher growth elasticity of poverty.

Table 3. Growth elasticity of poverty

Regions	1993-94 to 2004-05	2004-05 to 2011-12
Rural India	-0.14	-0.36
Urban India	-0.11	-0.35

Source - Author calculation from Table 1 & 2

4. Measures of pro poor growth

In recent years, a number of studies have attempted to define and measure pro-poor growth. This paper closely examines below pro-poor growth measures.

1. Pro-poor growth index

In [10] his paper use the idea of poverty decomposition to show that poverty reduction depends on both the rate of growth and the change in income distribution. They consider that growth is pro-poor when the benefits of growth that accrue to the poor are proportionally more than those received by the non-poor. The pro-poor growth index (PPGI) shows the relation between total poverty reduction and poverty reduction those results from a distribution-neutral growth. This relation is expressed in the ratio of poverty elasticity’s. When a growth scenario is pro-poor, PPGI is greater than one. PPGI lies between zero and one in the case of trickle-down, whereas the index is negative for immiserizing growth scenarios.

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2. Poverty equivalent growth rate

While the PPGI captures the distribution of growth benefits among the poor and non-poor, the index does not take into account the level of the actual growth rate. In response to this, [11] proposed another pro-poor growth measure called the poverty equivalent growth rate (PEGR). The PEG is defined as the growth rate that will result in the same level of poverty reduction as the present growth rate if the growth process had not been accompanied by any change in inequality. The PEGR is derived by multiplying PPGI by the growth rate of mean income. Growth is pro-poor (anti-poor) if the PEGR is greater (less) than the mean income growth rate. If the PEGR lies between 0 and the mean income growth rate, then growth is accompanied by an increasing inequality wherein poverty still declines. This situation may be characterized as a trickle-down process when the poor receive proportionally less of the benefits of growth than the non-poor.

3. Growth incidence curve and poverty growth curve

To show whether a growth process is pro-poor, [12] define a growth incidence curve (GIC) that indicates the growth rates in income at different percentile points. If the curve is positive at all percentile points, then there is an unambiguous reduction in poverty between two periods. It is also implied that as the GIC shifts upward at all points, the reduction of poverty is greater. [12] Growth incidence curve shows that growth in the period is pro-poor if the growth rates decline monotonically moving from the bottom centile to the top centile which means the income of the lower decile rises at a faster rate than the higher decile. If the GIC increases monotonically means that the growth is anti-poor, i.e., the mean income of the higher decile rises at a faster rate than the lower decile.

5. Decomposition of poverty

The decline in poverty is attributable to the change in Monthly per capita expenditure and the distribution. The methodology of decomposition of change in poverty starts with the seminal work of [13,14] and recently by [15]. Whereas the first two authors distinguish a change in poverty into growth in MPCE, distributional change & the residuals, [15] proposed an exact decomposition where there are no residuals. Later on [17] &[18] has included the population effect in the poverty decomposition literature. The change in poverty can be written as follows.

The degree of poverty depends upon two factors which are associated with economic growth. These are the average level of income and the extent of inequality. The increase in average income which is motivated by increase in economic growth reduces poverty and the increase in inequality increases poverty. The importance of growth and inequality in accounting for changes in poverty is built by decomposition of changes in poverty into growth effect and change in income distribution. Using the headcount ratio of poverty (P), we can model poverty P as a function of average income per capita (Y^*), poverty line (Y) and income inequality (D) such that,

$P = P(Y^*, Y, D)$ ....(1)

The poverty line is constant over the period 0 to t. Therefore the change of poverty level can be decomposed from period 0 to period t as follows,

$\Delta P = P(Y_t^* D_t) - P(Y_0^* D_0)$...................... (2)

This can be expanded such as,

$\Delta P = [P(Y_t^* D_t) - P(Y_0^* D_t)] + [P(Y_0^* D_t) - P(Y_0^* D_0)]$ ....(3)

The first term on the RHS of equation (3) is the *growth effect*. It measures the change in poverty due to change in the average income over the period 0 to t for a given income distribution. This shows for a given income distribution (D) and poverty line (Y), growth in average income of the population would lead to reduction in poverty since

$P(Y_t^* D_t) < P(Y_0^* D_t)$.

The second term on the RHS in (3) is the *distribution effect*. It measures the change in poverty due to the change in the income distribution. Lowering of income inequality would lead to the reduction in poverty $P(Y_0^* D_t) < P(Y_0^* D_0)$for the equation (3) to hold.

The conclusion derived from the theoretical review on economic growth and poverty is that formost countries, income distribution (inequality) tends to remain relatively stable, and thus decomposition of changes in poverty into growth effect and distribution effect, suggests that growth in income per capita is the main source of

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reduction in poverty. This has been supported by the work of[19] [20]. The average has been taken and the residual if any has been canceled and what we got the exact decomposition as proposed by [16].

6. Pro poor growth in India

The pro poor growth index (PPGI) and poverty equivalent growth (PEG) has been examined in Table 4. Both the measured can be derived from the decomposition of growth analysis. The growth component of the poverty changes is always negative implying the effect of growth keeping distribution neutral is always negative. The growth in MPCE will result in a reduction in poverty. While the redistribution component may be positive or negative. The positive distribution implies that the distribution will hamper the poverty reduction while the negative distribution will increase the decline in poverty. It's the 2nd period which has seen a higher decline in poverty in India in comparison to the 1st period. It's the 2nd period of rural India which witnessed a slow increase in inequality in comparison to the 1st period resulting in a faster decline in poverty. In the 1st period urban India, the growth impact of poverty reduction is higher than the distribution effect causing a decline in poverty HCR. While in the 2nd period the growth effect outweighs the distribution effect causing a faster reduction in poverty. It's the faster reduction in inequality which resulted in a faster decline in HCR in the 2ndperiod.The poverty reduction is pro-poor if the PPGI is higher than one or else it is anti-poor. Similarly, if the PEG is higher than the mean growth rate, then it is pro-poor. Looking into the figures, it can be concluded that though there is growth, poverty reduction; it's not pro-poor in India.

Table 4. Decomposition of change in Poverty into Growth & Distribution in India

	Decomposition	Poverty change	Growth	Redistribution	PPGI	PEG
1993-94 to 2004-05	Rural India	-9.48	-12.88	3.39	0.74	-2.06
	Urban India	-7.89	-14.43	6.53	0.55	0.00
2004-05 to 2011-12	Rural India	-16.48	-17.63	1.15	0.93	2.33
	Urban India	-12.23	-13.64	1.41	0.90	3.40

Source – Calculated by the Author

The pro poor growth index (PPGI) is useful to examine the extent to which growth in a country has been in favor of the poor or the non-poor. However, it may not be useful when comparing two countries that have different growth rates. In this situation, the PPGI is not able to answer which case is relatively more pro-poor. What is required is a benchmark to make a comparison. The poverty equivalent growth rate (PEGR) complements the shortcoming of the PPGI by incorporating a benchmark. Figure 2 presents the GIC of rural and urban India in the post reform period. The post reform period can be classified into two phases. The GIC curve shows the percentage change in mean income among the decile groups. The growth is pro-poor if the GIC curve shows a declining trend. Itsanti poor if it shows increasing trends which means the income of the lower strata increases at a slower rate than the upper strata. The GIC both for rural and urban India in both the period has witnessed monotonically increasing trends showing that the poverty reduction is not pro-poor.

7. Conclusion

Though India witnesses a higher growth rate (real MPCE) and poverty reduction in the post reform period the growth is not pro-poor due to a significant rise in inequality. The 1st period recorded low growth rate and rise in inequality and hence not pro poor. The 2nd period (2004-05 to 2011-12) of India seems to approach the pro-poorness due to faster growth in MPCE and slow rise in inequality. Hence with various provisions to reduce poverty, the states should look into various steps to reduce the inequality to make the growth pro-poor in rural and urban India.

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