Revisiting the Great Indian Poverty Debate: Measurement, Patterns, and Determinants

Himanshu [1] and Kunal Sen[2]

[1] Jawaharlal Nehru University and Centre de Sciences Humaines, New Delhi, India
himanshu@csh-delhi.com

[2] BWPI and IDPM,
The University of Manchester, UK
kunal.sen@manchester.ac.uk

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Abstract

In spite of rapid economic growth in the past three decades, poverty rates in India remain high, especially in certain regions and among the socially excluded groups. However, what has happened to poverty in India, especially after the onset of economic reforms in 1991, has been fiercely debated, both politically and statistically. In this paper, we revisit the Great Indian Poverty Debate, addressing both the measurement and causes of India's persistent poverty. Our analysis of recent Indian poverty data suggests that there has been a higher rate of poverty decline in the second decade of economic reforms, in the 2000s, as compared to the first decade of reforms, in the 1990s. However, the rate of poverty decline in the post-reform period has not matched what was observed in the pre-reform period, in the 1980s. Further, there is evidence of sharply increasing inequality, both within the rural and urban sectors, as well as in a growing rural-urban divide. We suggest that the disappointingly low rate of decline in poverty in India in spite of high economic growth in the post-reform period may be attributed to declining growth in agricultural output, linked to low productivity growth in the sector, along with the increasing scarcity of arable land for cultivation.

Keywords

Poverty, measurement, agricultural growth, social exclusion, India.

Introduction

Six decades after independence, millions of people in India remain poor by national and international standards. In spite of rapid economic growth in the past three decades, poverty rates remain high, especially in certain regions and among the socially excluded groups. However, what has happened to poverty in India, especially after the onset of economic reforms in 1991, has been fiercely debated, both politically and statistically, leading to what two leading scholars of poverty call the "The Great Indian Poverty Debate" (Deaton and Kozel 2005). There is no consensus in the voluminous literature on poverty in India on the actual incidence of poverty, as well as its rate of change in the high growth period of the post 1990s (Panagariya and Mukim 2013). There also remains considerable uncertainty in the academic literature and in Indian policy circles on the causes of persistent poverty in India (Kotwal and Sen 2013).

In this paper, we revisit the Great Indian Poverty Debate, addressing both the measurement and causes of India's persistent poverty. We begin with a discussion of the measurement of poverty in India, where recently there has been considerable debate on what constitutes 'true' poverty, following the release of recent estimates by the Indian Planning Commission. We analyse recent poverty data, and provides estimates of the incidence of poverty in India with the most recent representative survey data available. We follow this with a description of patterns and trends in poverty in India since the early 1990s. Using our own calculations, we discuss the rate of change in rural and urban poverty in India over the last two decades, both over time and across States, and assess to what extent India's recent economic growth has been pro-poor. We then discuss possible causes of the persistence of poverty in the country, focusing on the two main determinants that have been highlighted in the literature: agricultural growth and the social and economic marginalization of the Dalits and Adivasis, who currently constitute a large proportion of the poor in India (Ravallion and Datt 2002; Gang, Yun, and Sen 2008).

Our analysis of recent Indian poverty data suggests that there has been a higher rate of poverty decline in the second decade of economic reforms, in the 2000s, as compared to the first decade of reforms, in the 1990s. However, the rate of poverty decline in the post-reform period has not matched what was observed in the pre-reform period, in the 1980s. Further, there is considerable variation in the rate of poverty decline across states in India. There is also evidence of sharply increasing inequality, both within the rural and urban sectors, as well as in a growing rural-urban divide.

Agricultural growth is an important driver of poverty in India, given that the bulk of the country's poor live in rural areas. The relationship between agricultural growth and rural poverty in India has, however, remained controversial, although the available evidence suggests that agricultural growth 'trickled down' to the rural poor during the Green Revolution period. In this chapter, we highlight the important role of agro-ecological factors in mediating the relationship between agricultural growth and rural poverty, arguing that where such favourable factors were not present, agricultural growth did not occur, nor did poverty decline. Therefore, a focus on agricultural growth as the way to reduce poverty in regions that are less favoured in agro-ecological terms is unlikely to succeed. We also suggest that the disappointingly low rate of decline in poverty in India in spite of high economic growth in the post-reform period may be attributed to declining growth in agricultural output, linked to low productivity growth in the sector, along with the increasing scarcity of arable land for cultivation.

A striking feature of the persistence of poverty in India has been the fact that about half of the poor in India are members of two social groups, the Dalits (Scheduled Castes) and the Adivasis (Scheduled

Tribes), and that the difference between poverty incidence in these two groups and that in the rest of the population has not lessened significantly over time, in spite of the rapid growth phase of the past three decades and the affirmative-action policies aimed at these groups that have been adopted since Independence. In this paper, we present patterns of poverty incidence among the Dalits and Adivasis and discuss why poverty has persisted in these two social groups. We suggest that occupational segregation among Dalits and locational factors in the case of Adivasis along with low levels of education among Dalits and Adivasis, especially in rural areas, may explain in a large part the high poverty incidence in these two groups.

The measurement of poverty in India

The release of the Indian Planning Commission's official poverty estimates, based on consumption-expenditure data for 2009–2010, sparked – perhaps for the first time in the history of independent India – outrage and protest by the middle class so much so, that within months the government was forced under public pressure to abandon the estimates[1]. The figures are in abeyance until a new committee set up to examine the issue of poverty estimation has taken a view. In the process, the Indian Planning Commission also abandoned the Tendulkar Committee report[1] which had been accepted by the Commission in April 2011.

While the debate on how to measure poverty, and what causes it to decline, has been going on for a long time in Indian academia (see Deaton and Kozel 2005; Sen and Himanshu 2004; Deaton and Drèze 2002), consideration of the issues has until recently never percolated through to the middle class – at least not in the misinformed and misguided way that the debate is being conducted in the current context. This is surprising, since the 66th round (2009–10) poverty estimates were the first poverty estimates of the United Progressive Alliance (UPA), and they showed that the poverty head-count ratio declined by 7.4 percentage points, or 1.47 percentage points per annum, between 2004–05 and 2009–10. This is almost double the rate of decline in poverty between 1993–94 and 2004–05, which was 0.74 percentage points per annum. While the latest estimates should have been celebrated and projected by the government as proof of the success of its 'inclusive growth' strategy, the government was forced to defend itself on the very robustness of these estimates.

The credit for this middle-class outrage should go to the Indian Planning Commission, the agency assigned with the task of estimating poverty in India. On a matter unrelated to estimates of poverty, the Indian Planning Commission impleaded itself in the Supreme Court in a bid to justify the use of poverty estimates for targeting purposes[2]. Given the historical experiences of targeting in the country, any such move to seek legitimacy for targeting was bound not only to create strong reactions, but bound also to call into question the motive for seeking such legitimacy.[2] This essentially was the reason for the outburst of middle-class protest, posing legitimate and relevant questions about the very foundation of the poverty estimates if they were to be used for targeting. It is unfortunate that the collateral damage of all this was the credibility of the National Sample Survey consumption data and

[1] Poverty in India has traditionally been measured on the consumption expenditure data collected by the National Sample Survey Organisation using an absolute poverty line. The absolute poverty line is usually anchored to some normative basket of consumption which is considered to be the minimum basic need bundle required to stay above the poverty line. There have been various committees set up by the Planning Commission which has been the nodal agency of specifying and publishing the poverty lines. The last such committee which gave its report in April 2011 was set-up under the chairpersonship of Suresh Tendulkar.

[2] Since 1997, India moved from a regime of universal benefits to a system where many of the anti-poverty transfers were targeted to poorer households. This was done using a census of households and identification of poor households as beneficiary based on some proxy indicators. The planning commission further limited the number of beneficiaries so identified to the number of poor based on poverty estimates of planning commission.

the poverty estimates which are well regarded among economists and academics, not only in India but also internationally.

However, since the matter has become controversial, and questions have been raised about the robustness of the poverty estimates, it is necessary to settle the issue at the outset before proceeding to examine trends in poverty reduction. The issue of the robustness of the poverty lines has already been examined by the literature that followed the publication of the Tendulkar Committee report. Nonetheless, it is useful to compare the Tendulkar estimates with the estimates of poverty produced by the Lakdawala Committee (Expert Group, 1993), which existed before the Tendulkar Committee poverty lines were accepted by the government.

Even though the underlying data are the same, the Lakdawala poverty estimates show a lower decline than the Tendulkar estimates. By applying the Lakdawala poverty lines to Uniform Recall Period[3] (URP) consumption expenditure of 2009–10, it appears that the proportion of the population subsisting below the poverty line is 26.1 per cent in rural areas, 24.0 per cent in urban areas, and 25.5 per cent for the country as a whole.[3] The corresponding estimates for 2004–05 were 28.3 per cent, 25.7 per cent, and 27.5 per cent. That is, the percentage-point decline in poverty between 2004–05 and 2009–10 was only 2.2 per cent in rural areas, 1.7 per cent in urban areas, and 2.0 per cent for all areas. Further, this also implies that the annual decline in poverty between 2004–05 and 2009–10, at 0.43, 0.34, and 0.40 per cent for rural, urban, and all areas respectively, was only half of the annual percentage poverty decline seen between 1993–94 and 2004–05, at 0.82, 0.61, and 0.77 per cent for rural areas, urban areas, and all areas respectively. This is contrary to the estimates for the same periods reported on the basis of the Tendulkar poverty lines. According to the latter, the annual percentage-point decline in poverty accelerated to almost double, at 1.60, 0.96, and 1.47 in rural, urban, and all areas during 2004–2010, compared with 0.75, 0.55, and 0.74 respectively during 1993–2005.

The difference in these two methods and their underlying trend is primarily due to the way in which inflation is treated in both these measures. The Lakdawala method was based on poverty estimates anchored on 1973–74 consumption-expenditure estimates; and it used the Consumer Price Index for Agricultural Labourers (CPIAL)and the Consumer Price Index for Industrial Workers (CPIIW) to update the poverty lines over time for rural and urban areas. The updating of these poverty lines was based on the Laspeyre index, using commodity-group weights from the 1973–74 consumption-expenditure surveys, applying the commodity-group-specific inflation indices from these two sources.[4] An extensive literature has already analysed the problems with using the consumer-price indices from the labour bureau (CPIAL and CPIIW).[5] The problems were not only the use of outdated commodity weights, but also the inadequate coverage of centres (for example, CPIIW), along with problems in capturing inflation for items of consumption such as health care and education and fuel in some cases. The Tendulkar Committee sought to remove some of these anomalies by shifting away from the consumer-price indices from the labour bureau to unit values[4] implicit in the consumption-expenditure surveys. The second major departure was the use of Fisher indices which were rooted in

[3] Consumption expenditure data is collected by the NSSO using a recall period of 30 day for all items of consumption. This is usually referred as the Uniform Recall Period (URP) estimate of consumption expenditure. However since 1999-00, the NSSO has also experimented with using shorter recall period such as a week for some food items and also a longer recall period of one year for low frequency items such as clothing, footwear and durables. This estimate of consumption expenditure which uses monthly as well as annual recall period is usually referred as Mixed Recall Period estimate (MRP).

[4] Unit values refers to the implicit prices obtained by dividing the value of consumption by the quantity of consumption reported in NSS consumption surveys.

current consumption patterns. In fact, the Tendulkar Committee only made technical adjustments to correct the anomalies in the use of price indices, while retaining the urban poverty estimates of the Lakdawala Committee as the reference. As a result of the change in methodology, the inflation implicit in Tendulkar poverty lines between 2004–05 and 2009–10 turns out to be 150% in rural areas and 149% in urban areas, compared with 160% and 157% in rural and urban areas respectively, as suggested by the Lakdawala methodology.

The difference in the two inflation factors implicit in the Tendulkar poverty lines and the Lakdawala poverty lines is primarily due to the difference in weights used in the computation of the poverty lines. To a great extent this is happening because the structure of the basket has changed over the years, with commodity groups such as food accorded a much lower weight than what is implicit in the Lakdawala method. Whereas food groups represent 80 per cent of total consumption implicit in the Lakdawala method, the Tendulkar poverty lines imply a food share of less than 60 per cent. This has happened over a period of time, and the weights reflected in the Tendulkar methodology are a better reflection of current consumption trends. A part of this is also due to the use of Fisher indices by the Tendulkar method, as against the fixed weights of the Lakdawala method.

Even though the Tendulkar Committee revised and corrected the poverty lines for spatial prices and effectively raised the rural poverty lines, their figure was criticized for being an underestimate. While there may not be much merit in the arguments of those who have been criticizing the poverty line for being too low on a per capita per day basis, the critics' concerns remain valid. This is again entirely due to the double-speak of the Indian Planning Commission, which has been ambivalent on the issue of whether or not these poverty lines will be used for the targeting of beneficiary households. While it must be made clear that there is nothing wrong with the Tendulkar poverty lines as long as they are used only as a statistical benchmark to track progress over time, it must also be made clear that the Tendulkar Committee did not recommend using the resultant poverty estimates for any targeting of beneficiaries, nor was this ever recommended by any other committee established earlier to estimate poverty.

At the same time, even as a statistical tool, the absolute poverty line which is used by the Indian Planning Commission has to satisfy the generally accepted norms of a minimum standard of living. The poverty lines recommended by the Tendulkar Committee have been tested for most of these (for example, external validation checks were carried out to ensure that the poverty line would satisfy minimum nutritional, educational, and health expenditure norms, along with the ability to capture dimensions of poverty such as occupational vulnerability, literacy, and so on).[6] The committee did accept the fact that the lines met most of the norms in the majority of States, but not all.

Having said this, we should also compare the Tendulkar lines with other poverty lines. The weighted average of Tendulkar Committee rural and urban poverty lines for 2004–05 turns out to be Rs. 16.25. This is only marginally lower than the Rs. 20 used by the Arjun Sengupta Committee, who claimed that 77 per cent of Indians live below this poverty line. The World Bank uses a poverty line of $1.25 per day in Purchasing Power Parity (PPP) terms. The current poverty line, as claimed by the Indian Planning Commission in its affidavit, is Rs. 26 for rural areas and Rs. 32 for urban areas. The weighted average turns out to be Rs. 28 in 2009–10 prices. Using the current PPP exchange rate of Rs. 19 to one dollar[5], the Indian poverty line is higher than the World Bank poverty line. What about other countries and their poverty lines? Most developed countries, rather than using an absolute poverty line, use a relative poverty line pegged at 60 per cent of median income/expenditure. The

[5] World Development Indicators, 2012

Tendulkar poverty lines are 92 per cent of the median in rural areas and 69 per cent of the median expenditure in urban areas in 2004–05. That is, the Indian poverty line is considerably higher than poverty lines used in international comparisons, or comparable poverty lines in other countries.

While the Tendulkar poverty lines appear robust compared with the Lakdawala poverty lines in terms of their superiority in capturing the spatial and inter-temporal price differential, issues of robustness and comparability have also arisen in the case of the official poverty lines issued by the Indian Planning Commission on a completely different matter: that of in-kind transfers. The issue of the treatment of in-kind transfers as well as valuation of implicit transfers from the state, which have become more important since 2004–05, has already been raised with regard to the Mid-Day-Meal (MDM) expenditures.[7] As mentioned earlier, this issue of implicit in-kind food transfers as a result of government schemes such as the MDM schemes has in any case arisen because the 2009–10 data include MDM expenditure, which was not included in the past. The inclusion of MDM expenditure as part of private household expenditure in the 2009–10 consumption survey had the effect of increasing the Monthly Per capita Consumption Expenditure (MPCE) and underestimating poverty, using the official poverty lines based on the Tendulkar method. It also lowers measured inequality, since the majority of the households who report MDM expenditure are concentrated in the bottom half of the distribution.

A preliminary exercise using official poverty lines suggests that after exclusion of MDM expenditure from the total consumption expenditure of households, the actual poverty estimate for 2009–10 is 35.2 per cent in rural areas, 21.5 per cent in urban areas, and 31.5 per cent for all India, as against the reported Indian Planning Commission estimate of 33.3, 20.9, and 29.9 per cent respectively. That is, the real decline in poverty between 2004–05 and 2009–10 is only 6.63, 4.3, and 5.7 percentage points in rural areas, urban areas, and all India, as against reported estimates of 8.0, 4.8, and 7.4 percentage points by the Indian Planning Commission. The inescapable conclusion even after this correction remains that poverty has declined faster than it was declining in the previous period, even though the extent of decline may have been overestimated by the Indian Planning Commission. It also implies that the total number of poor in the country in 2009–10 was 373 million, 18 million more than the reported estimate of 355 million for the country as a whole. That is, the number of people below the poverty line declined not by 52 million as reported by Indian Planning Commission, but only by 34 million.

In this context, the Indian Planning Commission official view seems to be that it is necessary to include the in-kind transfers because, after all, beneficiaries are getting these transfers, and that leads to welfare improvement. However, since this is also the case of many other transfers which lead to measured improvement, the issue of in-kind transfers needs to be looked at carefully, not only from the perspective of measurement of welfare and poverty but also in terms of the comparability of poverty estimates over time, since previous quinquennial surveys have not included any in-kind transfer as part of private household expenditure. Moreover, the issues are not only limited to in-kind transfers such as MDM but also include consumption from the Public Distribution System (PDS), which has the impact of lower measured MPCE but higher consumer welfare as a result of transfers.This could either be a consequence of lower prices for the commodities or due to expansion of the coverage and entitlement of the households in respect of these commodities.

Patterns of poverty in India

We now move on to describing the patterns of poverty in India. Since the issue of including MDM expenditure has already been brought into the public domain, any analysis of changes in poverty measurements should be conducted on the basis of estimates comparable with earlier poverty estimates. Tables 1, 2, 3, and 4 give the estimates of poverty, poverty gap, and squared poverty gap for 1993–94, 2004–05, and 2009–10.[6] The comparable measure of MPCE used for poverty estimation in 2009–10 has been labelled as 'adjusted MPCE', because of the adjustment made by deducting MDM expenditure from the consumption-expenditure estimates. This is reported in Table 4. For comparison purposes, the official poverty estimates based on consumption expenditure including MDM expenditure are reported in Table 3. These are the same as the official poverty estimates released by the Indian Planning Commission. All the measures are estimated using unit-level data and the Tendulkar poverty lines released by the Indian Planning Commission.

At the all-India level, the decline in poverty head-count ratio (HCR) was 7.4 percentage points between 2004–05 and 2009–10 (8.0 in rural and 4.8 in urban areas), compared with 8.1 percentage points between 1993–94 and 2004–05 (8.3 in rural and 4.0 in urban areas), and based on official estimates. However, on a comparable basis, the decline in poverty HCR between 2004–05 and 2009–10 is only 5.7 percentage points (6.63 in rural and 4.3 in urban areas). On an annual basis, this implies a poverty reduction of 1.12 percentage points per annum (1.31 in rural and 0.79 in urban areas) between 2004–05 and 2009–10, higher than the comparative decline between 1993–94 and 2004–05 at 0.74 percentage points per annum (0.75 in rural and 0.55 in urban areas).

[6] Head count ratio (HCR) is the simplest measure of poverty and is defined as the percentage of population below a specified poverty line. However, HCR does not distinguish between households below the poverty line and treats all of them as equal irrespective of the gap between actual consumption and the poverty line. Poverty Gap (PG) measures the distance of the households below the poverty line from the poverty line. That is higher the difference between the actual consumption of the households below poverty line and the poverty line, higher will be the poverty gap. Squared Poverty Gap (SPG) is a measure which is higher order measure of poverty and is based on the square of the poverty gap. It gives higher weightage to households further away from the poverty line.

Table 1. Estimates of poverty: head-count ratio, poverty gap, and squared poverty gap for 1993–94

	Head-count ratio			Poverty gap			Squared poverty gap		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	48.1	35.2	44.6	11.3	8.3	10.5	3.9	2.8	3.6
Assam	54.9	27.7	51.8	11.3	5.0	10.7	3.3	1.4	3.1
Bihar	62.3	44.7	60.5	15.9	11.2	15.5	5.6	4.0	5.5
Chhattisgarh	55.9	28.1	50.9	12.4	5.9	11.3	3.9	1.8	3.5
Gujarat	43.1	28	37.8	10.5	6.3	9.2	3.6	2.0	3.1
Haryana	40	24.2	35.9	9.5	4.6	8.2	3.2	1.4	2.7
Himachal Pradesh	36.7	13.6	34.6	7.3	2.1	6.8	2.2	0.5	2.1
Jammu & Kashmir	32.5	6.9	26.3	5.9	1.2	4.8	1.6	0.3	1.3
Jharkhand	65.9	41.8	60.7	16.8	10.0	15.5	5.8	3.4	5.3
Karnataka	56.6	34.2	49.5	15.0	8.5	13.1	5.5	3.0	4.8
Kerala	33.9	23.9	31.3	7.8	5.5	7.3	2.7	1.9	2.5
Madhya Pradesh	49	31.8	44.6	13.0	7.1	11.5	4.9	2.3	4.2
Maharashtra	59.3	30.3	47.8	17.3	8.1	13.9	6.9	3.1	5.5
Orissa	63	34.5	59.1	16.0	8.3	15.0	5.7	2.8	5.3
Punjab	20.3	27.2	22.4	3.7	5.2	4.1	1.0	1.5	1.1
Rajasthan	40.8	29.9	38.3	8.8	6.6	8.3	2.8	2.1	2.6
Tamil Nadu	51	33.7	44.6	13.4	7.9	11.5	5.0	2.9	4.3
Uttar Pradesh	50.9	38.3	48.4	13.0	9.6	12.3	4.5	3.5	4.3
Uttaranchal	36.7	18.7	32	6.5	4.0	6.0	1.7	1.3	1.6
West Bengal	42.5	31.2	39.4	8.7	6.9	8.3	2.6	2.3	2.5
Total	50.1	31.8	45.3	12.4	7.5	11.2	4.3	2.6	3.9

Note: all estimates have been calculated from unit-level data based on Tendulkar Committee poverty lines. The MPCE measure used is Mixed Recall period. All estimates are in percentages. Estimates for Chhattisgarh, Jharkhand and Uttaranchal have been arrived at by aggregating the districts which comprise these states.

Table 2. Estimates of poverty: head-count ratio, poverty gap, and squared poverty gap for 2004–05

	Head-count ratio			Poverty gap			Squared poverty gap		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	32.3	23.4	29.9	7.0	4.8	6.4	2.3	1.5	2.1
Assam	36.4	21.8	34.4	7.0	4.2	6.8	2.0	1.1	1.9
Bihar	55.7	43.7	54.4	12.7	11.4	12.6	3.9	3.9	3.9
Chhattisgarh	55.1	28.4	49.4	13.7	7.2	12.7	4.9	2.6	4.6
Gujarat	39.1	20.1	31.8	9.3	3.9	7.5	3.2	1.1	2.5
Haryana	24.8	22.4	24.1	4.7	4.9	4.8	1.3	1.6	1.4
Himachal Pradesh	25	4.6	22.9	4.2	1.1	3.9	1.1	0.4	1.0
Jammu & Kashmir	14.1	10.4	13.2	2.1	2.1	2.1	0.5	0.6	0.5
Jharkhand	51.6	23.8	45.3	11.1	5.8	10.3	3.4	1.9	3.1
Karnataka	37.5	25.9	33.4	6.5	6.2	6.4	1.7	2.1	1.8
Kerala	20.2	18.4	19.7	4.4	4.0	4.3	1.5	1.3	1.4
Madhya Pradesh	53.6	35.1	48.6	12.6	8.6	11.6	4.2	2.9	3.9
Maharashtra	47.9	25.6	38.1	11.9	6.5	9.7	4.3	2.3	3.5
Orissa	60.8	37.6	57.2	17.4	9.6	16.3	6.6	3.5	6.2
Punjab	22.1	18.7	20.9	3.8	3.2	3.6	1.0	0.8	0.9
Rajasthan	35.8	29.7	34.4	7.0	5.7	6.7	2.0	1.7	1.9
Tamil Nadu	37.5	19.7	28.9	7.4	4.1	6.1	2.1	1.3	1.8
Uttar Pradesh	42.7	34.1	40.9	9.2	7.8	8.9	2.8	2.5	2.7
Uttaranchal	35.1	26.2	32.7	5.8	5.1	5.6	1.4	1.4	1.4
West Bengal	38.2	24.4	34.3	7.9	5.3	7.3	2.4	1.6	2.2
Total	41.8	25.7	37.2	9.2	5.8	8.4	2.9	1.9	2.7

Note: all estimates have been calculated from unit-level data based on Tendulkar Committee poverty lines. The MPCE measure used is Mixed Recall period. All estimates are in percentages.

Table 3. Estimates of poverty head-count ratio, poverty gap, and squared poverty gap for 2009–10 (official)

	Head-count ratio			Poverty gap			Squared poverty gap		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	22.8	17.7	21.1	4.7	3.8	4.5	1.5	1.2	1.4
Assam	39.9	26.1	37.9	7.3	5.9	7.2	1.9	2.0	1.9
Bihar	55.3	39.4	53.5	13.4	10.3	13.1	4.5	3.7	4.5
Chhattisgarh	56.1	23.8	48.7	12.4	6.2	11.3	3.8	2.3	3.6
Gujarat	26.7	17.9	23.0	4.6	3.6	4.2	1.2	1.1	1.1
Haryana	18.6	23.0	20.1	3.7	4.6	4.0	1.1	1.2	1.1
Himachal Pradesh	9.1	12.6	9.5	1.4	2.4	1.5	0.4	0.7	0.4
Jammu & Kashmir	8.1	12.8	9.4	1.2	1.9	1.4	0.3	0.4	0.4
Jharkhand	41.6	31.1	39.1	9.1	7.9	8.8	2.8	2.8	2.8
Karnataka	26.1	19.6	23.6	4.8	4.4	4.6	1.3	1.4	1.3
Kerala	12.0	12.1	12.0	2.3	2.1	2.2	0.7	0.6	0.7
Madhya Pradesh	42.0	22.9	36.7	10.6	5.6	9.4	3.7	1.9	3.3
Maharashtra	29.5	18.3	24.5	5.7	4.0	5.0	1.6	1.3	1.4
Orissa	39.2	25.9	37.0	9.0	5.3	8.5	3.0	1.7	2.8
Punjab	14.6	18.1	15.9	1.9	3.8	2.6	0.4	1.1	0.6
Rajasthan	26.4	19.9	24.8	4.3	3.8	4.2	1.1	1.1	1.1
Tamil Nadu	21.2	12.8	17.1	3.7	2.1	3.0	1.0	0.6	0.8
Uttar Pradesh	39.4	31.7	37.7	7.6	7.3	7.5	2.1	2.4	2.2
Uttaranchal	14.9	25.2	18.0	2.0	5.1	2.8	0.6	1.5	0.8
West Bengal	28.8	22.0	26.7	5.3	4.5	5.1	1.4	1.4	1.4
Total	33.8	20.9	29.8	6.8	4.5	6.2	2.1	1.4	1.9

Note: all estimates have been calculated from unit-level data based on Tendulkar Committee poverty lines. The MPCE measure used is Mixed Recall period. All estimates are in percentages. Official estimates include expenditure on MDM in MPCE but are not comparable to earlier estimates.

Table 4. Estimates of poverty head-count ratio, poverty gap, and squared poverty gap for 2009–10 (adjusted)

	Head-count ratio			Poverty gap			Squared poverty gap		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	24.9	18.7	23.2	5.3	4.3	5.0	1.8	1.5	1.7
Assam	40.7	26.1	39.2	7.8	6.1	7.6	2.1	2.1	2.1
Bihar	55.8	39.6	54.2	13.9	10.5	13.5	4.7	3.8	4.6
Chhattisgarh	58.4	24.2	52.3	14.2	6.6	12.8	4.7	2.5	4.3
Gujarat	29.2	17.8	24.9	5.5	3.9	4.9	1.5	1.2	1.4
Haryana	20.2	23.2	21.1	4.0	4.6	4.2	1.2	1.3	1.2
Himachal Pradesh	11.4	14.0	11.6	2.1	2.9	2.1	0.6	0.8	0.6
Jammu & Kashmir	8.7	12.8	9.6	1.3	1.9	1.5	0.4	0.4	0.4
Jharkhand	43.7	32.1	41.4	10.3	8.4	9.9	3.3	3.1	3.3
Karnataka	29.3	20.1	26.1	5.9	4.9	5.5	1.7	1.7	1.7
Kerala	12.7	12.9	12.8	2.6	2.4	2.5	0.8	0.7	0.8
Madhya Pradesh	44.6	23.5	39.4	11.3	5.8	10.0	4.1	2.0	3.6
Maharashtra	32.4	18.9	26.8	6.7	4.3	5.7	2.0	1.4	1.8
Orissa	41.7	26.6	39.5	10.2	5.6	9.6	3.7	1.8	3.4
Punjab	15.4	18.1	16.3	2.2	3.9	2.8	0.5	1.2	0.7
Rajasthan	27.8	20.1	25.9	5.0	4.0	4.8	1.3	1.3	1.3
Tamil Nadu	23.8	14.1	19.5	4.8	2.6	3.8	1.4	0.8	1.1
Uttar Pradesh	40.6	31.9	38.8	8.2	7.5	8.1	2.4	2.5	2.4
Uttaranchal	18.2	26.3	20.3	2.7	5.6	3.4	0.8	1.7	1.0
West Bengal	31.7	22.6	29.5	6.0	4.8	5.7	1.7	1.6	1.7
Total	35.2	21.7	31.6	7.6	4.8	6.8	2.4	1.6	2.2

Note: All estimates have been calculated from unit-level data based on Tendulkar Committee poverty lines, for this table and for the rest of the chapter. The MPCE measure used is Mixed Recall period. All estimates are in percentages. These estimates have been produced by use of an adjusted MPCE measure which excludes MDM expenditure. They are comparable to poverty estimates of 1993–94 and 2004–05 reported by the Tendulkar Committee.

While the evidence for the better performance of the post 2004–05 period based on a simple measure of HCR is clearly in favour of improved performance, the same is not true once we move to higher-order measures of poverty such as poverty gap and squared poverty gap. Based on poverty gap, the per annum decline between 2004–05 and 2009–10 is still marginally higher, at 0.31 percentage points per annum (0.34 in rural and 0.19 in urban areas), compared with the decline between 1993–94 and 2004–05 at 0.26 percentage points per annum (0.29 in rural and 0.16 in urban areas). However, for the squared poverty gap measure, the period between 2004–05 and 2009–10 turns out to be performing worse than the comparable performance between 1993–94 and 2004–05. By this measure, per annum percentage poverty decline between 2004–05 and 2009–10 was 0.10 (0.11 in rural and 0.06 in urban areas), compared with 0.11 percentage points per annum (0.13 in rural and 0.07 in urban areas) between 1993–94 and 2004–05.

The fact that the higher-order measures of poverty do not show the same improvement after 2004–05, as is shown by the simple measures of HCR, does lead to obvious questions about the dynamism

of poverty reduction, and in particular the issue of who gained and who lost. The evidence from the analysis of State-level data again suggests a mixed bag, but is definitely in favour of higher poverty decline in richer States (or States with a low incidence of poverty to begin with) compared with poorer States which are home to the majority of the poor. Except Orissa, most of the poorer States such as Assam, Bihar, Chhattisgarh, and Uttar Pradesh show marginal decline or an increase in poverty. While Assam and Chhattisgarh show a higher poverty incidence in 2009–10 compared with 2004–05 by the simple measure of HCR, Bihar and Jharkhand get added to the list by the higher-order measures of poverty.

Richer States with lower poverty incidence, such as Tamil Nadu, Maharashtra, Gujarat, and Andhra Pradesh, which accounted for 22 per cent of the rural poor and 33.6 per cent of the urban poor in 2004–05, account for 17.2 per cent of rural poor and 29.9 per cent of urban poor by 2009–10. On the other hand, the poorer States of Bihar, Assam, Uttar Pradesh, and Chhattisgarh, which accounted for 37.8 per cent of rural poor and 23.9 per cent of urban poor in 2004–05, accounted for 47.2 per cent of rural poor and 27.1 per cent of urban poor in 2009–10. There is a relative concentration of poor people in poorer States of eastern India, while the richer States of south and western India have seen relative prosperity increasing. In fact, the evidence on rising inequality throughout the last two decades is also available from the consumption-expenditure surveys from the National Sample Survey Organisation (NSSO). These reveal that inequality as measured by the gini coefficient increased throughout in rural areas, but much faster in urban areas (see Table 5). However, a better measure of the inequality between the two extremes of population is available by looking at the ratio of MPCE of the top 10 per cent of the population to that of the bottom 10 per cent of the population. Figures 1a and 1b also plot the growth rate of MPCE by MPCE deciles. Figure 1c gives the indices of real MPCE by consumption groups.

Table 5. Gini coefficients for rural and urban areas

	Rural	Urban	Total
1993–94	25.8	31.9	30.1
2004–05	28.1	36.4	34.6
2009–10	28.8	38.3	36.2

Source: Consumption Expenditure Survey, NSSO

Table 6. Ratio of average consumption expenditure (top 10% / bottom 10%)

	Rural	Urban
1993–94	5.06	7.14
2004–05	5.63	9.14
2009–10	5.94	10.33

Source: Consumption Expenditure Survey, NSSO

Figure 1a

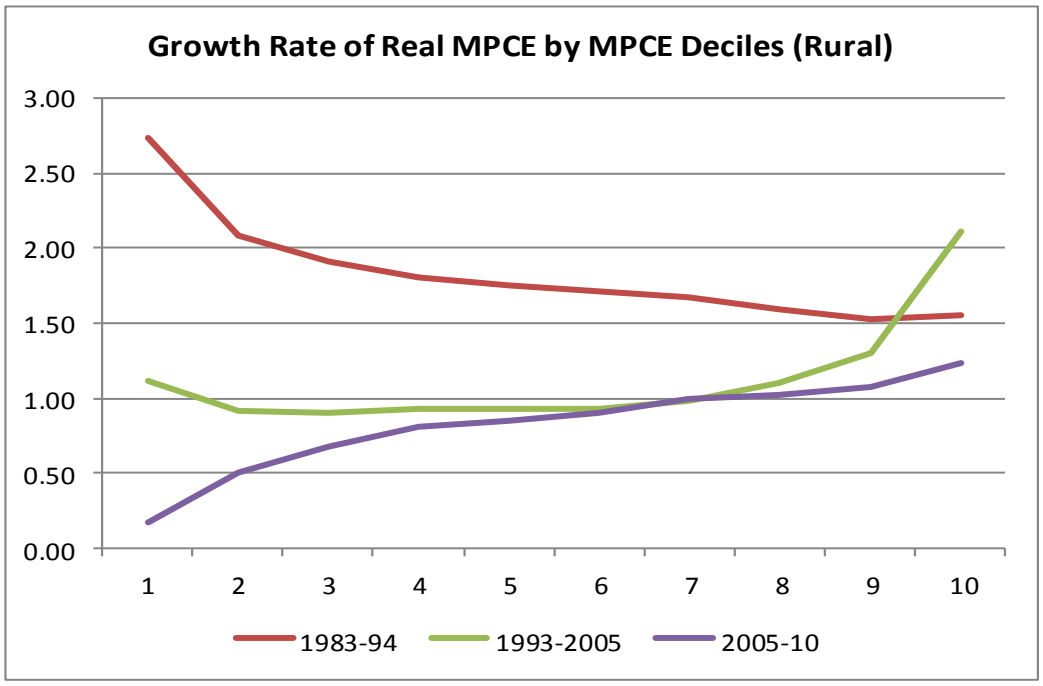


Figure 1b

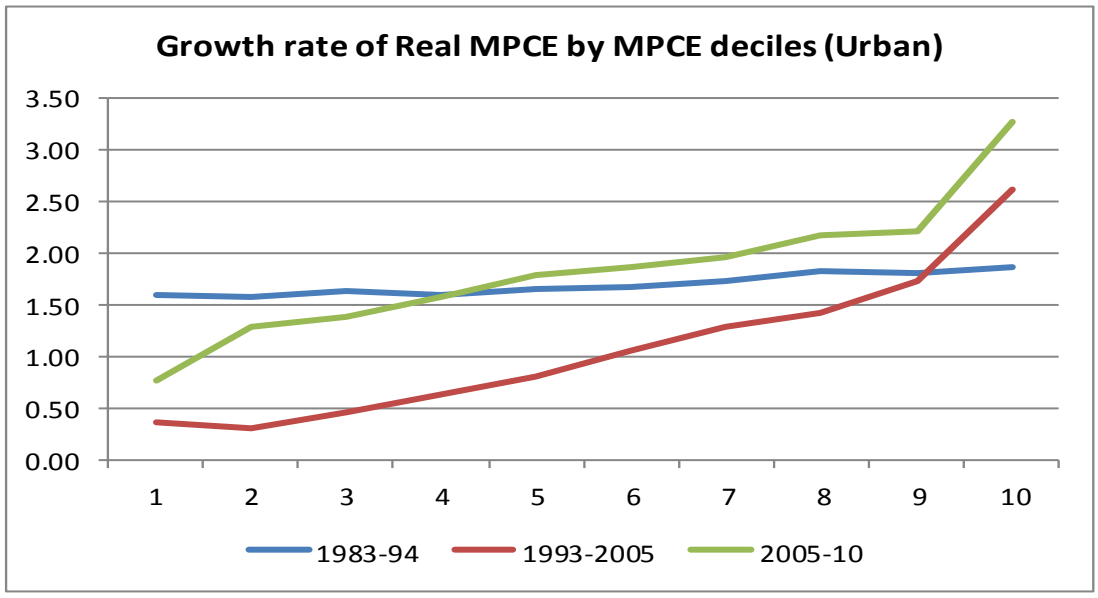
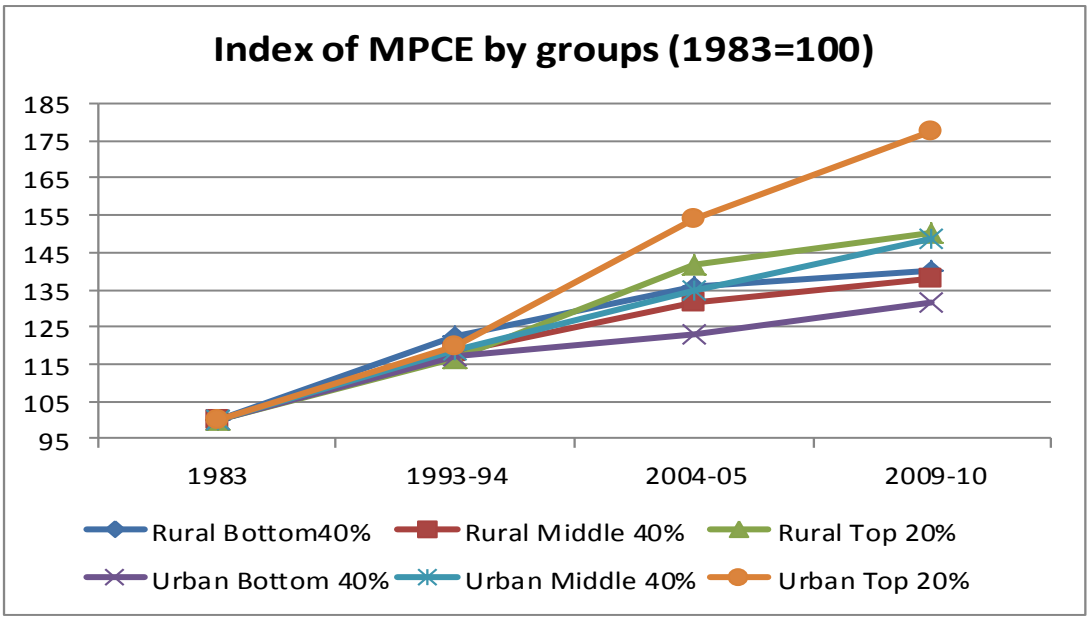


Figure 1c



In both rural and urban areas, the 1980s saw higher growth of consumption expenditure among the lower deciles compared with the richer deciles. This pattern was reversed after 1993–94, with lower-consumption deciles growing more slowly than the richer deciles. Since 2004–05, this trend has actually accentuated, with the growth rate of the lower two deciles in rural areas remaining below 0.5 per cent. In the case of urban areas, while there has been an increase of growth rates across the board, the gap between growth rates of the lowest deciles compared with the highest deciles has continued to increase. While these figures do suggest increasing inequality across households, particularly among the two extremes of the distribution, the consumption-expenditure estimates also suggest increasing divergence in consumption expenditure of various occupational groups. In particular, there is evidence of slower improvements among the vulnerable categories of households, such as agricultural-labour households and other-labour households. This is true also for casual-labour households in the urban areas, whose consumption expenditures have increased more slowly than the overall increase in consumption expenditure. One way to analyse these expenditures is to look at the ratio of consumption expenditure of these households to the overall consumption expenditure. Table 7 presents these ratios for 1993–94, 2004–05, and 2009–10.

Table 7. Ratio of average MPCE of some occupational groups to average MPCE of all population

	Rural		Urban	
	AL/All	OL/All	CAS/All	CAS/REG
1993-94	0.78	0.95	0.61	0.54
2004-05	0.75	0.93	0.54	0.47
2009-10	0.77	0.91	0.54	0.46

Note: AL=Agricultural Labour, OL=Other Labour, CAS=Casual Labour, REG=Regular Workers
Source:NSSO Consumption Expenditure Surveys

Although there is some improvement after 2004–05 in the ratio of MPCE of agricultural-labour households compared with all households, MPCE has worsened for other-labour households. While average MPCE of other-labour households was 95 per cent of all households' MPCE in 1993–94, this ratio was down to 91 per cent in 2009–10. Similarly, in urban areas, MPCE of casual-labour households was 61 per cent of all households' MPCE, but declined to only 54 per cent by 2009–10. Also, MPCE of regular-worker households has increased faster than the MPCE of casual-labour households in urban areas, as reflected by the ratio of MPCE of casual-labour households to regular-workers households.

Along with the poverty and inequality estimates, estimates of employment and unemployment are also available now. As is clear from Table 8, the high growth rate of GDP in the last five years has failed to create employment. Whereas 60 million additional jobs were created between 1999–2000 and 2004–05, only two million additional jobs were created in the last five years for which data are available. This is a matter of particular concern, considering that the previous period between 1999–2000 and 2004–05 showed employment growth which was not only higher than the growth of the labour force but also the highest seen in the last four decades[7].

Table 8. Employment growth

	Rural		Urban		Total
	Male	Female	Male	Female	
	Workers in employment (in millions)				
1993–94	188	105	65	17	374
1999–2000	199	106	75	18	398
2004–05	219	124	90	25	458
2009–10	232	105	100	23	460
	Growth rates				
1993–2000	0.94	0.15	2.61	0.94	1.02
1999–2004	1.96	3.24	3.71	6.23	2.85
2004–2010	1.20	-3.30	2.07	-1.42	0.10

Source: Based on employment estimates from NSSO

Compared with 1999–2000 to 2004–05, the period between 2004–05 and 2009–10 shows employment growth at only 0.1 per cent per annum by usual status, but somewhat higher, at 1 per cent per annum, by daily status. While confirming the trend of slow employment growth reported by the 2007–08 employment survey, these figures also confirm other trends, noted earlier, in changes in the status of employment and industrial distribution.[8] The bulk of the employment generated in the last five years has been in the low-productivity construction sector. Further, the data also suggest an increasing casualization of the workforce, with employment swelling in the informal sector. The trend towards non-farm diversification also does not show any significant acceleration, compared with the previous periods.

[7] For details see, Himanshu (2011)

[8] Another feature of employment in the 2004-2010 period has been the decline in female employment, both in the rural and urban sectors. See Neff, Sen and Kling (2012) for an exploration of the fall in female labour force participation in the rural areas.

The paradox of a faster decline in poverty along with rising inequality and unemployment does raise important questions about the dynamics of poverty reduction. This is particularly so in a period of severe drought and unprecedented inflation, particularly in food prices. Although the period after 2004–05 did witness an acceleration of growth rates to an average of 8.4 per cent per annum between 2004–05 and 2009–10, from less than 6 per cent per annum during the preceding five-year period, it could be argued that the drought and the global recession make a significant reduction in poverty less likely. It does appear that the adverse effect of these two external shocks on rural areas was less than earlier expected despite the fact that the 2009 drought was the worst in 30 years. Although this did not lead to an absolute decline in agricultural output, it did generate inflationary pressures that could have created distress. However, some of the distress that the drought and the recession could have caused was mitigated by other measures.

First, since recession restrained prices of manufactures, the inflation itself was accompanied by a significant movement of terms of trade in favour of agriculture. Secondly, the 66th round Employment-Unemployment Surveys (EUS) also shows casual real-wage rates growing at 4 per cent per annum for rural males and 5 per cent for rural females between 2005 and 2010, suggesting that those most vulnerable to inflation were now much better protected. The third defining feature of the 2004–05 to 2009–10 period has been the increase in social-sector spending by the States, as well as by the central government. An obvious example of this is the MGNREGA job-guarantee scheme. For example, with the 66th round showing an 8-fold increase in participation in public works compared with the 61st round, and a doubling even compared with the 64th round, the impact of MGNREGA is clearly visible. Recent research has confirmed the role of MGNREGA in not only influencing wage rates but also creating employment opportunities in non-farm sectors in rural areas[9]. While the MGNREGA programme was largely led by the central government, State governments were seen as the primary catalyst as far as food-related schemes were concerned. Most of the State governments expanded the scope of the existing programmes such as PDS and MDM by not only expanding coverage of households eligible for benefits but also by significantly reducing prices of essential cereals. More generally, the effects of the financial crisis were also muted because of the fiscal stimulus, which involved both a significant step-up in construction activity in the public sector and debt-relief for farmers. Taking into account that rural areas also witnessed a significant flow of resources in the run-up to the general elections in 2009, all these meant that the external shocks, although important, were not so severe as to re-create the earlier situation of sustained distress.

Seen against this backdrop, there does appear to be a *prima facie* case of growth contributing to significant poverty reduction since 2004–05. This is also consistent with previous literature on poverty reduction, which argues that growth is the primary driver of poverty reduction. However, a disaggregated analysis at State level also cautions against drawing such casual inferences. While it is true that the aggregate growth rate accelerated between 2004–05 and 2009–10, compared with the period between 1993–94 and 2004–05, it is also true that the growth rate across States varied a great deal. In fact, the coefficient of variation of State Domestic Product across States does show an increase in the subsequent period. One notable feature of the growth rate after 2004–05 has been the phenomenon of the hitherto poorer states such as Bihar, Uttar Pradesh, Chhattisgarh, and Orissa now emerging as States with the highest growth rates, whereas the traditional drivers of growth, such as the western and southern States, have not seen any significant acceleration in growth rates in the latter period compared with the previous period. However, there is no suggestion of any significant positive correlation between a State's growth rates and the extent of poverty reduction. Barring Orissa, which also shows a high reduction in poverty between 2004–05 and 2009–10, Bihar,

[9] For details see Berg, Bhattacharya, Manjula, Rajshekhar (2011)

Chhattisgarh, and Uttar Pradesh are among the States with negligible poverty reduction – and poverty has actually increased in the case of Chhattisgarh. Most of these States have very high concentrations of poverty, and the inability of growth to result in poverty reduction does raise a question about the transmission mechanism of growth in these States. While it is difficult to argue that growth did not play a role in the significant reduction in poverty in a period of rising inequality and associated factors, it is also true that the role of transfers from the state was crucial not only in insulating the poorer households from external shocks but also in ensuring an improvement in the welfare of these households. These were some of the issues that the analysis using official data should have provided. Unfortunately, this has not been possible, on the part of either the official agencies or private researchers, because of the criticisms that have been levelled against the official poverty measures

Agricultural growth and rural poverty

Agricultural growth per worker (defined as the growth in labour productivity in agriculture) is by definition the change in land productivity (yields) and the land-labour ratio. Figure 2 summarises the changes in all three variables from the mid 1960s to the mid 1990s. As is clear from Figure 2, agricultural growth has been mostly driven by the change in land productivity as land-labour ratios have seen a continuous decline since the 1960s (possibly due to low absorption of unskilled labour by the nonfarm sector, see Kotwal et al. (2011) . While agricultural growth was miniscule at 0.26 [er cent per annum in 1962-1973, it increased to over 3 per cent in 1980-1995, mostly driven by strong growth in land productivity. Given the decrease in the land-labour ratio over time, the figure makes clear that the primary determinant of agricultural growth in India now and in the future is land productivity growth.

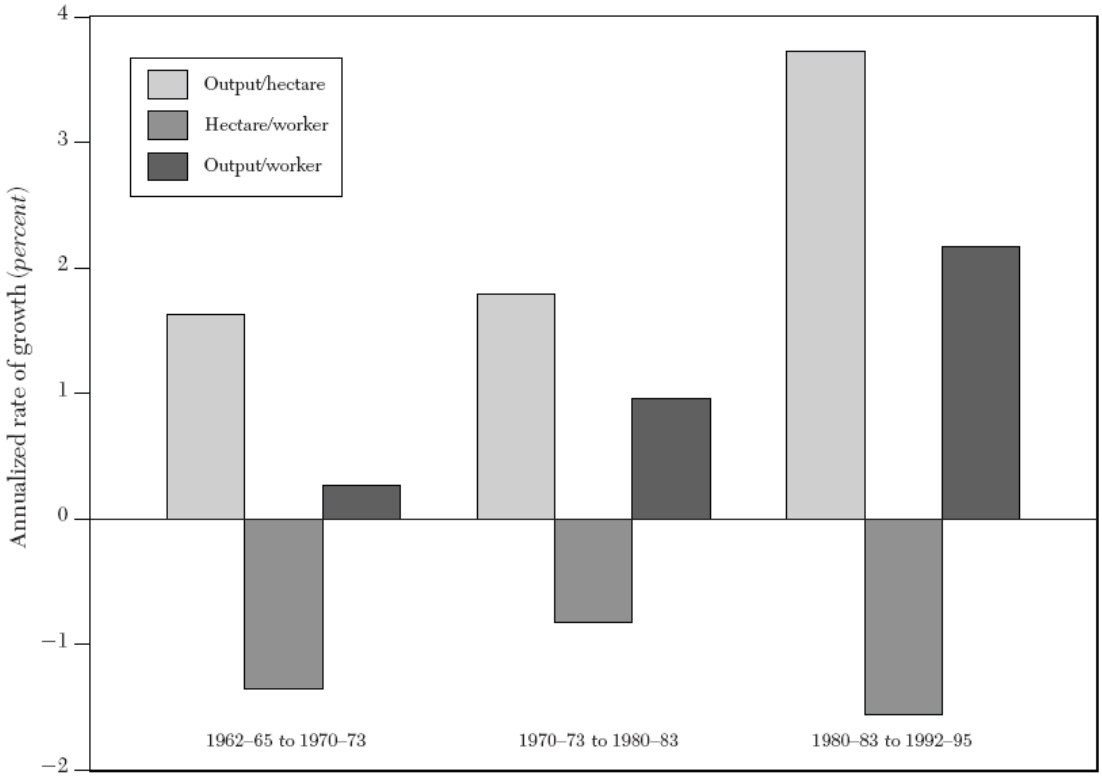
There is an extensive empirical literature which addresses the relationship between agricultural growth and rural poverty in the Indian context. We begin this section with a selective review of this literature, concentrating on the studies that are considered to have made seminal contributions. The first empirical studies that attempted to validate the applicability of the trickle-down hypothesis for rural India were Ahluwalia (1977) and Saith (1981). Both studies use comparable periods for their empirical analysis – Ahluwalia uses data from 1956–57 to 1973–74, and Saith from 1956–57 to 1973–74. Conducting the analysis at the individual-State level, Ahluwalia finds some support for the trickle-down hypothesis, as agricultural performance has a poverty-reducing effect in seven of the 14 States considered, where about three-quarters of the rural population live in poverty. In contrast, Saith argues that while agricultural growth may have reduced rural poverty in India, there may have been other outcomes of the growth process, such as labour-saving mechanization and the increasing power of the *kulak* class to influence the setting of agricultural prices, a trend which may have led to increasing poverty with the spread of the Green Revolution in India.

In an important contribution to the literature on the trickle-down effects of growth in the Indian context, Datt and Ravallion (1998) link the changes in rural poverty (measured alternately by the head-count ratio, the poverty gap, and squared poverty gap) in a particular State to initial conditions prevailing in the State in 1960 (the starting date of their analysis), growth in farm output per acre, growth in per capita non-farm output, changes in the cost of living for agricultural labourers, and per capita state development expenditure. They find strong support for the trickle-down hypothesis: cross-State variations in trend rate of growth of average farm yields were important in explaining cross-State variations in the trend rates of rural poverty reduction. However, more recently, Besley, Burgess, and Esteve-Volart (2004), using the same State panel data set as Datt and Ravallion, provide a less

positive assessment of the ability of agricultural growth to reduce poverty in India. Firstly, they find that the elasticity of rural poverty to per capita income is -0.6, compared with the elasticity of urban poverty to per capita income, which is -0.8. Secondly, using the State domestic product for the primary, secondary, and tertiary sectors to assess the impact of the different sectors on poverty, they find that the secondary and tertiary sectors have a larger impact on poverty than the primary sector, with elasticities of -0.36 and -0.32 respectively, compared with -0.25 for the primary sector.[10] Plotting crop yield and rural poverty in India for the period 1949–1998 (Figure 3), one can observe a clear negative relationship between food-crop yield (land productivity) and the rural head-count ratio. However, such a negative relationship is not apparent in the periods 1949–late 1960s and the post-1990 period. Thus, if trickle-down has occurred at all in rural India, it seems to be mainly confined to the Green Revolution period of the late 1960s to late 1980s.

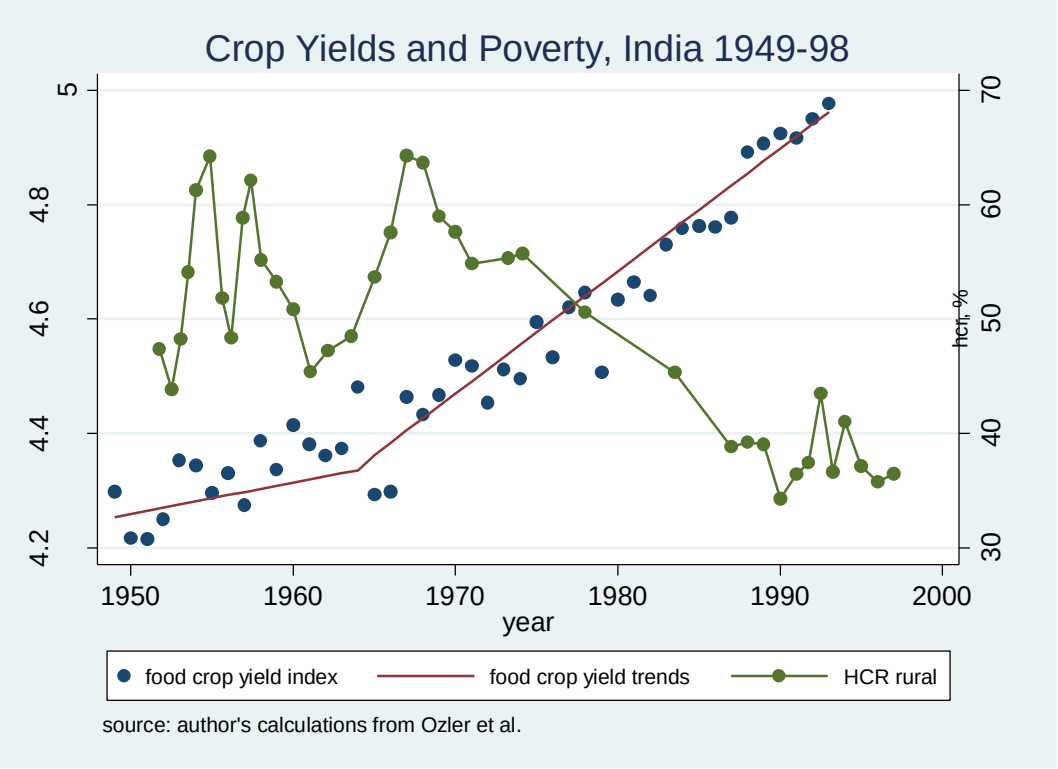
[10] See Palmer-Jones and Sen (2006) for a discussion on the methods used in these two studies, and how the differences in methods used may account for the differences in findings.

Figure 2: Agricultural Productivity Growth, 1962-1995



Source: Kotwal, A. et al. (2011)

Figure 3. Crop yields and poverty in India, 1949–1998



Palmer-Jones and Sen (2003) have highlighted the role of agro-ecological factors in mediating the relationship between agricultural growth and rural poverty; they argued that some Indian States were characterized by relatively homogeneous agro-ecological properties that were favourable to agricultural growth, and these States, mostly in north-west India, were provided with appropriate supportive policies (in terms of large-scale irrigation and access to the new Borlaug seed-fertilizer technology introduced in the mid-1960s), which accounts in large part for their better performance in terms of both agricultural growth and poverty reduction, and hence the associations found in State-level analyses. Other States had very diverse conditions in agro-ecological conditions and these showed in poorer average performance, even though in some of their regions their performance is impressive. Thus, while States which experienced rapid agricultural growth consequently achieved poverty reduction, Palmer-Jones and Sen (2003) show that the success of these States is due to their possession of a high proportion of favourable agro-ecological conditions; and where these conditions have not been present, neither poverty reduction nor agricultural growth has been achieved to the same degree.

What have been the trends in agricultural growth in the post-1991 period? Bhalla and Singh (2009) find that the growth in value of agricultural output has decreased from 3.37 per cent per annum in 1980/83-1990/93 to 1.74 per cent per annum in 1990/93-2003/2006. This has been mostly due to a fall in crop yield growth which fell from from 3.17 per cent per annum in 1980/83-1990/93 to 1.52 per cent per annum in 1990/93-2003/2006. A decline in public investment in agriculture may have been a contributing factor to the lack of yield growth in agriculture, although input subsidies to agriculture increased during this period (Landes and Gulati 2004). In addition, there was a decline in expenditure on the public-sector research system for agriculture, as well as a decline in the productivity of the research system (Kotwal et al. 2011). The economic reforms themselves were not directly targeted to the agricultural sector, though there were indirect effects working through changes in the credit system for agriculture, with a weakening of the mandatory requirements for commercial banks to open

rural and semi-urban branches, as well as an improvement in the terms of trade for agriculture in the 1990s as protection for industry was removed (along with higher minimum support prices for rice and wheat), leading to a fall in industrial prices (Balakrishnan, Golait and Kumar 2008). While the decrease in bank density in rural areas may have had an adverse effect on the financing of private agricultural investment, rising real prices for agricultural commodities in the post-reform period could have had a positive effect on output growth in the agricultural sector (Joshi, Birthal and Minot 2006). Therefore, the net effect of the reforms on the stagnation in agricultural yield growth in the post-1991 period is difficult to determine a priori and remains an area for future research.

Social structure and poverty

One of the key factors behind the persistence of poverty in India has been the slow progress in reducing poverty among Dalits (Scheduled Castes, SC) and Adivasis (Scheduled Tribes, ST). As Figures4 and 5 make clear, while poverty rates declined among these two social groups from 1983 to 2009, in both rural and urban areas, the difference in poverty incidence between these two social groups is high relative to the rest of the population, even as recently as 2009. For example, in rural areas the gap in poverty incidence between ST and Others (a broad-brush category, including forward-caste Hindus, OBCs, as well as other religions) was 21.9 percentage points in 1993–94, and this marginally decreased to 20.9 percentage points in 2009–2010. In the case of the SC, the gap in poverty incidence between them and Others was 18.3 percentage points in 1993–94, which declined to 15 percentage points in 2009–2010. In urban areas, the gap in poverty incidence between ST and Others was 12.8 percentage points in 1993–94, which declined to 12.6 percentage points in 2009–2010. In the case of the SC, the gap in poverty incidence between them and Others was 23.4 percentage points in 1993–94, with a decrease to 16.2 percentage points in 2009–2010.

What explains the higher incidence of poverty incidence among Dalits and Adivasis? Gang et al. (2008) show that the factors that explain the high incidence in these two social groups are not the same. In the case of the SC, it is lower educational attainment and the occupational segregation of households, whose members mostly work as lowly paid agricultural labourers, which explain their higher poverty rates. On the other hand, for ST households, locational factors rather than occupational characteristics are more important in explaining their higher poverty status, with Adivasis being the most forest-dependent households in India and residing in low-productivity agricultural land. The strong correlation between poverty rates and occupational structure is evident from Figures 6 and 7. As Figure 6 makes clear, in the case of rural households the highest poverty incidence is among agricultural labourers, followed by non-agricultural labourers, followed by self-employed households working in non-agriculture sectors, followed by self-employed households in agriculture (farmers), followed by households classified in the occupational category ‘miscellaneous’. In the case of urban households, the poverty rate among casual labourers is significantly higher than for the self-employed, regular workers, and others. The ranking of occupational categories by poverty incidence is remarkably constant between 1993 and 2009.

The relationship between occupational segregation and higher poverty incidence among Dalits can be ascribed in great part to caste-based discrimination in urban areas (Madheswaran and Attewell 2007; Banerjee et al. 2008), and the tight relationship between caste and the specific occupations that they are expected to pursue in Indian villages (Béteille 1996). The close correlation between caste and occupational structure is observed in Figure 8, which shows occupational categories by social group at two points in time: 1983 and 2009. Dalits and Adivasis are still significantly represented in the agricultural-labourer class, which we have seen has the highest incidence of poverty in India. It is

remarkable how static the occupational structure has been in a period of rapid economic change. However, there are signs that this is changing, albeit slowly. Gang et al. (2011) find that there has been occupational convergence of the SC with the non-SC/ST (Oher)s between 1983 and 2004, although they find no such occupational convergence for the ST.

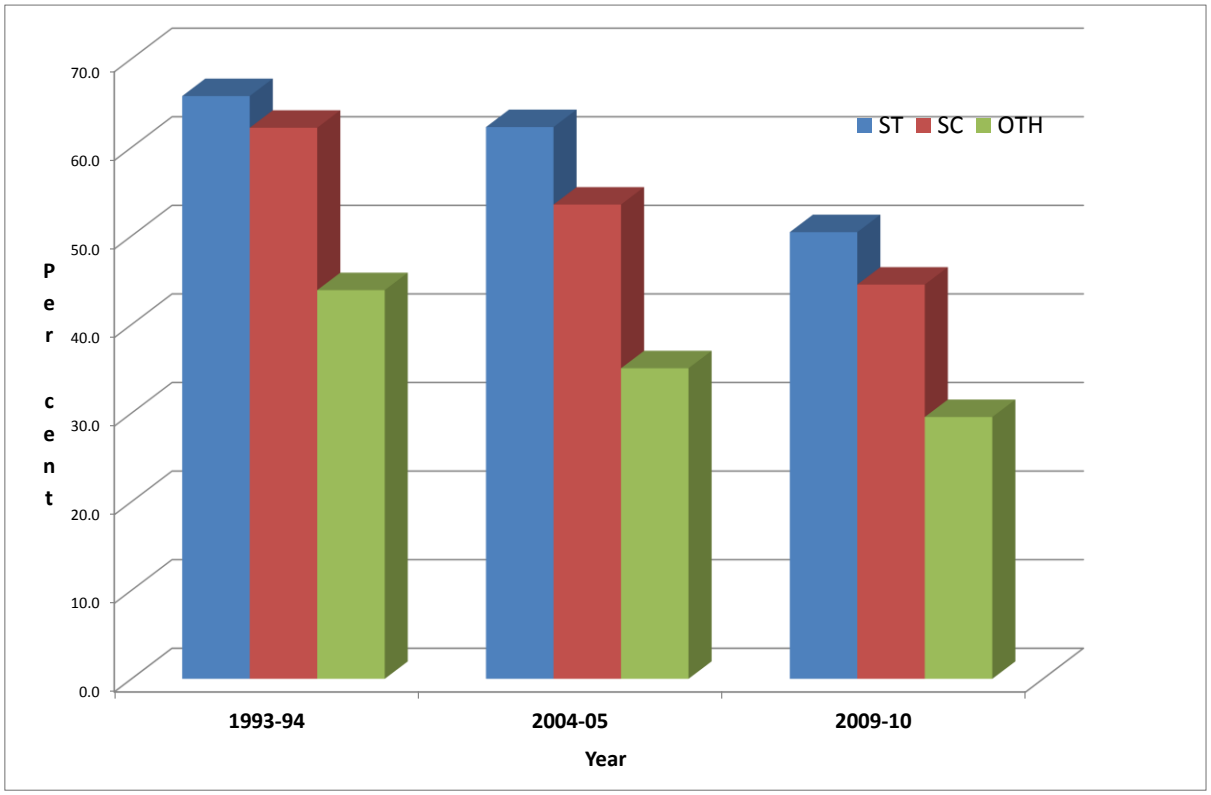
Conclusions

This chapter has provided an overview of the recent debate about the measurement of poverty in India, as well as describing the patterns of poverty, using the most recent household surveys conducted by the Indian government. Our analysis of recent Indian poverty data suggests that there has been a higher rate of poverty decline in the second decade of economic reforms, in the 2000s, as compared to the first decade of reforms, in the 1990s. However, the rate of poverty decline in the post-reform period has not matched what was observed in the pre-reform period, in the 1980s. Further, there is considerable variation in the rate of poverty decline across states in India. There is also evidence of sharply increasing inequality, both within the rural and urban sectors, as well as in a growing rural-urban divide. We also find poverty in India is increasingly concentrated in certain regions and social groups. The increasing inequality in India, as well as the concentration of poverty in certain regions of India, and in particular social groups, is clearly a matter of policy concern.

Analysing the causes of poverty in India, we noted that while agricultural growth, especially during the Green Revolution, was an important determinant of poverty decline in rural areas in the past, the strongly poverty-reducing effect of agricultural growth may have lessened in the post-reform period. The poverty reducing impact of agricultural growth has been observed in Indian states which have a high proportion of favourable agro-ecological conditions; and where these conditions have not been present, neither poverty reduction nor agricultural growth has been achieved to the same degree. This suggests that the future role of agricultural growth in reducing poverty in India, especially in the states with unfavourable agro-climactic factors, may be limited.

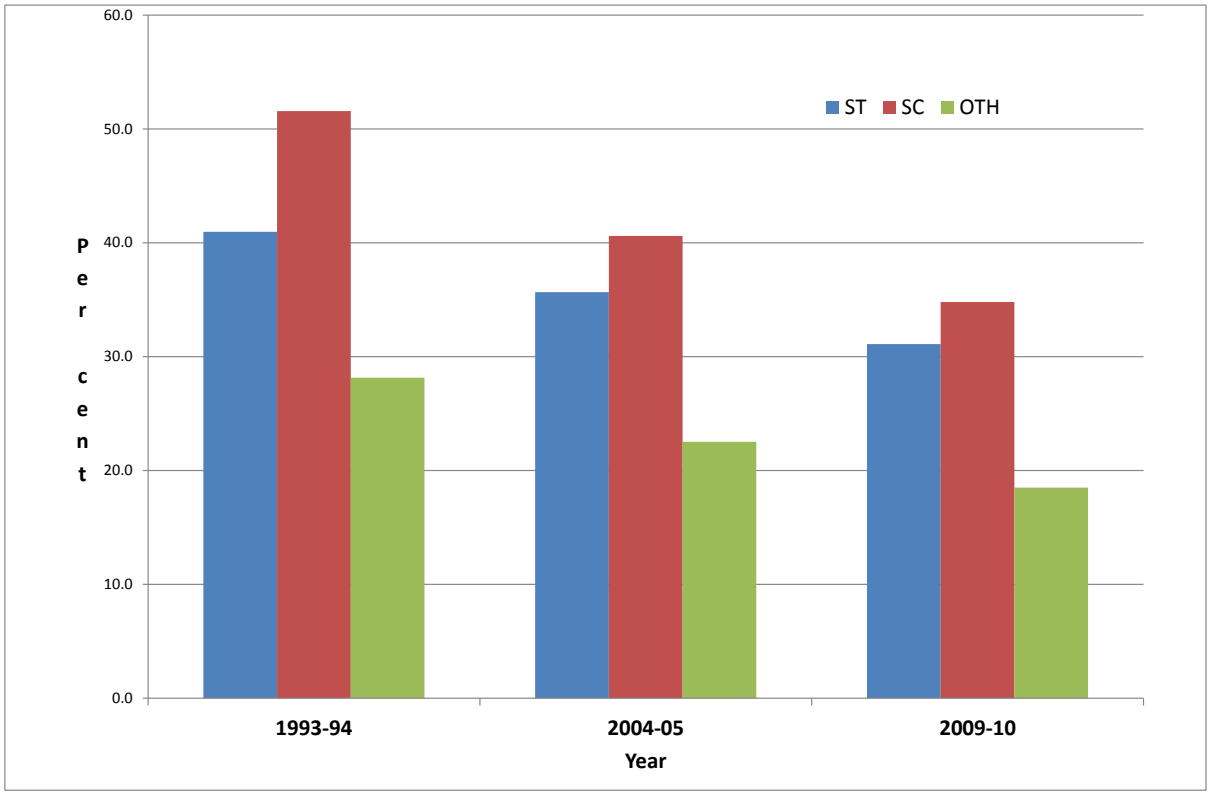
We also observed the strong correlation between poverty and social structure in India, and in particular the persistence of the caste-based social hierarchy of occupations in rural India. We noted that the occupational structure has been remarkably static in a period of rapid economic change, though there are signs that this is changing, especially among Dalits, as their occupational structure slowly converge to that of the rest of the population. However, there is less evidence of such occupational convergence among Adivasis. This suggests that the Indian government needs to particularly address the poverty situation of the Adivasis via targeted social and economic empowerment programmes towards this marginalised social group.

Figure 4: Rural poverty head-count ratio, by social group, 1993 to 2009



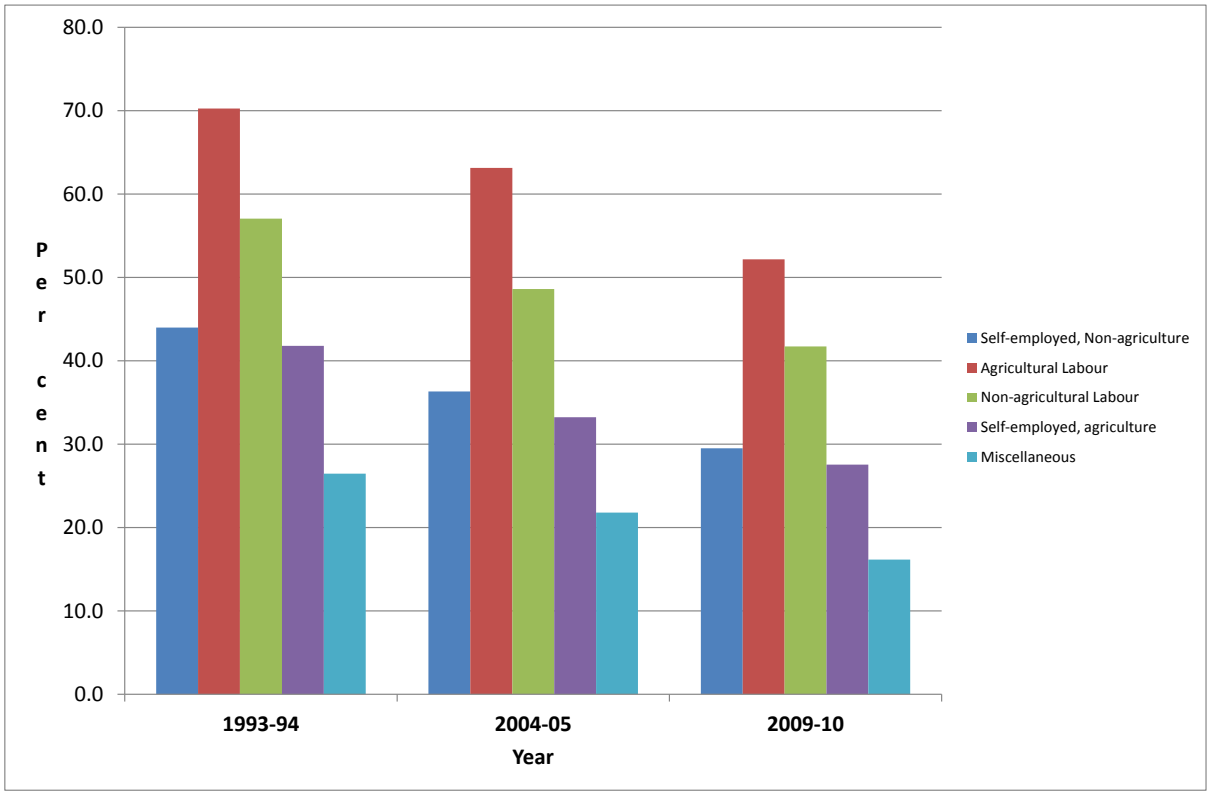
Notes: *ST=Scheduled Tribe; SC=Scheduled Caste. Poverty estimate for 2009–2010 adjusted by deducting MDM expenditure.*

Figure 5: Urban poverty head-count ratio, by social group, 1993 to 2009



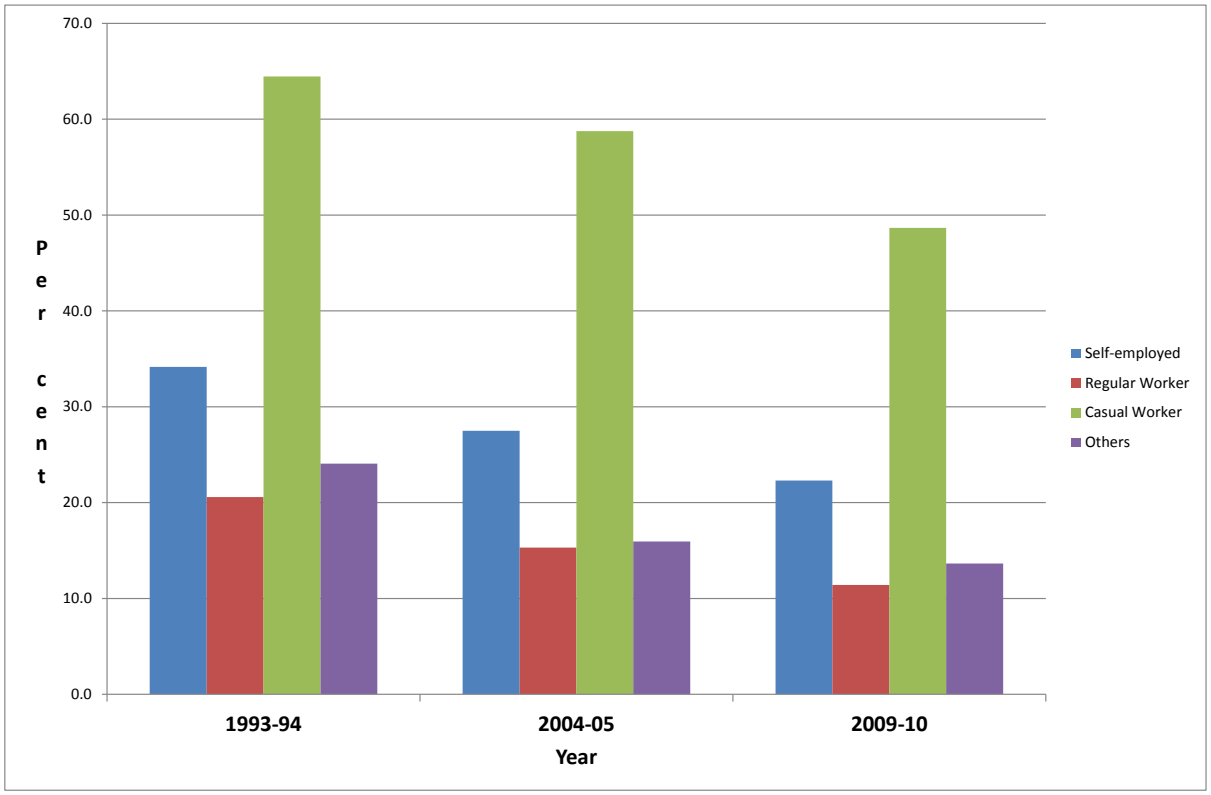
Notes: *ST=Scheduled Tribe; SC=Scheduled Caste. Poverty estimate for 2009–2010 adjusted by deducting MDM expenditure.*

Figure 6: Rural poverty head-count ratio, by occupations, 1993 to 2009



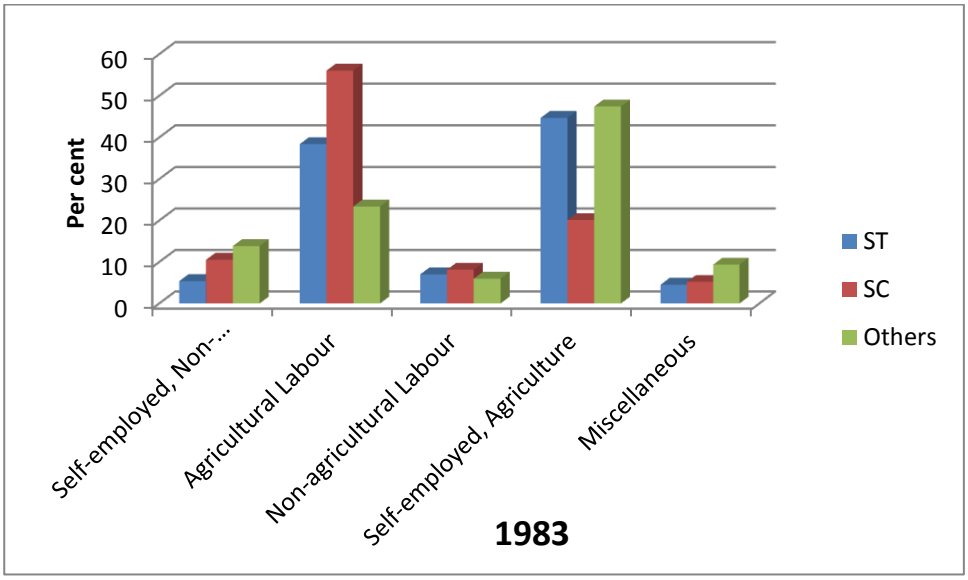
Note: *Poverty estimate for 2009-2010 adjusted by deducting MDM expenditure.*

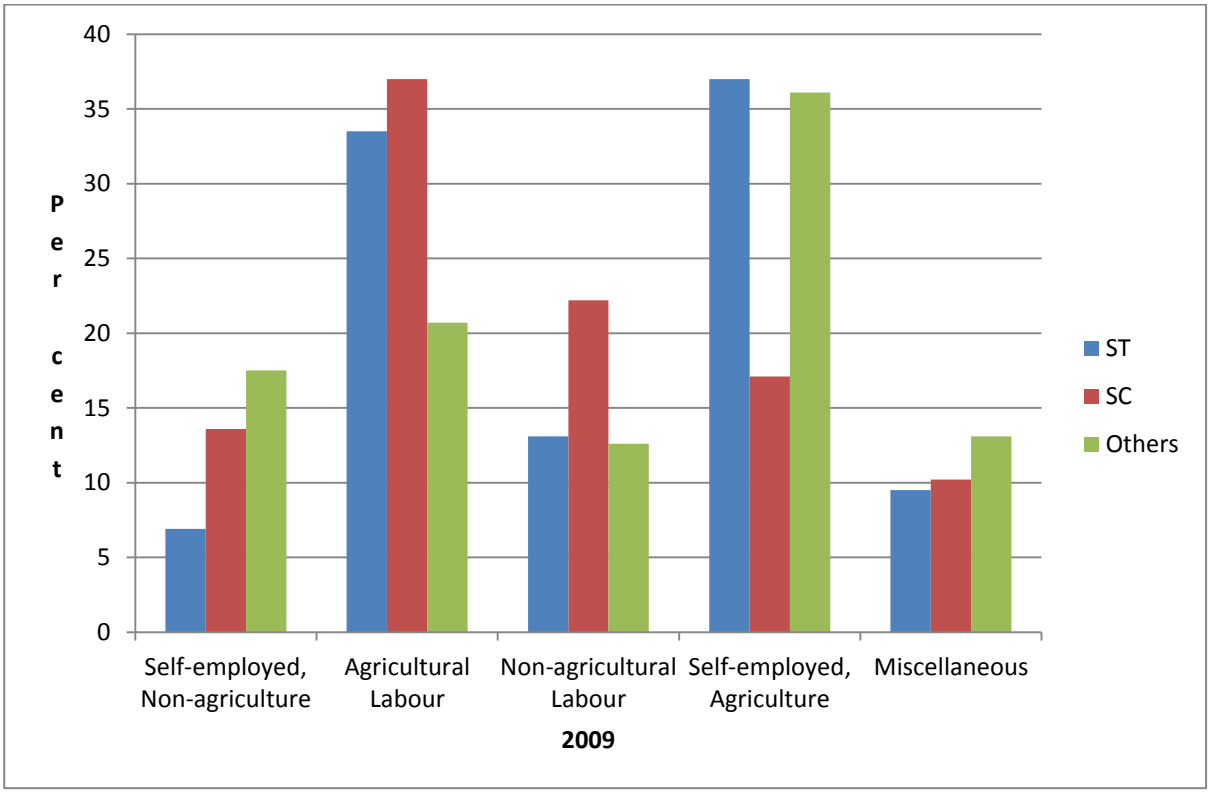
Figure 7: Urban poverty head-count ratio, by occupations, 1993 to 2009



Note: *Poverty estimate for 2009–2010 adjusted by deducting MDM expenditure.*

Figure 8: Occupational structure by social group, rural India, 1983 and 2009





Note: *ST=Scheduled Tribe; SC=Scheduled Caste*

Notes

[1] The Tendulkar Committee was set up by the Planning Commission in 2005 to suggest a methodology for the measurement of poverty in India. The committee, headed by Suresh Tendulkar, submitted its report in December 2009 and the report was accepted in April 2010 by the Planning Commission.
[2] There have been persistent claims, based on secondary large-scale data sets as well as primary surveys and anecdotal evidence, that the targeting of households into BPL (below poverty line) and APL (above poverty line) has been vitiated by large exclusion and inclusion ratios.
[3] The poverty estimates are based on URP monthly expenditure and do not include MDM expenditure as part of MPCE. Including the MDM expenditure, the poverty estimates are 24.2 per cent (rural), 23.5 per cent (urban), and 24.0 per cent (all India). However, since the original Lakdawala estimates from the Indian Planning Commission were based on URP MPCE which did not include MDM expenditure, all comparisons are based on comparable URP poverty estimates, excluding MDM expenditure.
[4] For details, see Report of the Expert Group on Estimation of Proportion and Number of Poor, 1993.
[5] See Deaton and Drèze 2002, and Deaton 2003.
[6] For details, see Himanshu 2010.
[7] See Himanshu 2012.
[8] Poverty gap and squared poverty gap are higher-order measures of poverty. The poverty gap measures the depth of poverty defined as the aggregate shortfall of the poor population from the poverty line. The squared poverty gap measures the severity of poverty and gives higher weight to households who are further belpw from the poverty line.

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