

A brief overview of the Indian poverty debate

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The official poverty estimates published by the Planning Commission showed a decline in absolute poverty levels from 36% in 1993-94 to 26% in 1999-00. In the early 1990s various liberalisation policies had been introduced in India and India had started to experience higher growth rates (compared to pre-liberalisation period). The question that became important at this juncture was, “Did the advantages of this high economic growth reach all echelons of society, in particular the ‘poor?’” And so the official reports at this time showing a reduction in absolute poverty levels created a stir. Some old issues about poverty measurement and some new ones were brought into the foreground and heavily debated and discussed. Here I attempt to trace out the key issues of this debate.

How is the official poverty level estimated?

The first poverty line (or poverty threshold) was recommended in 1962 by a Working Group (**1962 Working Group, hereafter**) comprising of experts that was set-up by the Planning Commission, Government of India. This definition was revamped based on the recommendations of the “Report of the Task Force on Projections of Minimum Needs and Effective Consumption Demand”, 1979 (**1979 Task Force, hereafter**) and later modified on the basis of the recommendations of the “Report of the Expert Group on Estimation of Proportion and Number of Poor”, 1993 (**1993 Expert Group, hereafter**). The 1979 Task Force and the 1993 Expert Group were also set up by the Planning Commission, Government of India.

The key features of the current official poverty estimates are:

- 1. The poverty measure is a head-count ratio based on an expenditure poverty line**, i.e., all those with expenditures below the defined poverty threshold or poverty line are considered to be poor.
- 2. The definition of the poverty line is based on an absolute measure of poverty as opposed to a relative one.** An absolute measure sets the poverty line at a level based on some criterion of minimum living standards with no reference to the income distribution of the population as a whole. A relative measure sets the poverty line at a level that is some fixed point on the income distribution, e.g., 60% of the median income. *Even if the absolute poverty falls it is possible for relative poverty to increase if inequality increases.*
- 3. A normative criterion is used to define the absolute poverty line which in this case is the average daily calorie requirement of a person – 2400 in rural areas and 2100 in urban areas.** The 1979 Task Force used information on daily calorie requirements provided by the Nutrition Expert Group (1968) for different age-sex-occupational groups and applied that to the projections of the age-sex-occupational composition of the population in rural and urban areas in 1982-83 to arrive at the average daily calorie requirement of a person in rural and urban – 2435 in rural areas and 2095 in urban areas and then rounded off to get the above numbers. Hereafter these are referred to as RDA, required daily allowance.
- 4. A behavioural and expenditure based criterion was used to arrive at the monetary equivalent of the (rural and urban) poverty lines in 1973-74: the**

observed rural (urban) per-capita expenditure class at the national level which had an average per-capita daily calorie intake equal to the rural (urban RDA was taken to be rural (urban) poverty line. The rural and urban consumption baskets of these expenditure classes at the national level in 1973-74 are hereafter referred to as **CBR73 and CBU73**, respectively. The National Sample Survey (NSS) data for the 28th Round (1973-74) was used to compute the rural and urban poverty lines.

5. **The poverty lines for years *after* 1973-74 are arrived at by adjusting the 1973-74 poverty lines to account for the changes in prices only. In other words, this method assumes that the rural and urban consumption baskets are the same as the CBR73 and CBU73, respectively.** The state-specific consumer price index for agricultural labourers, CPIAL and the state-specific consumer price index for industrial workers, CPIIW are used for updating the rural and urban poverty lines, respectively. Note these price indices are re-weighted using CBR73 and CBU73.

6. **As per the recommendations of the 1993 Expert Group rural and urban poverty lines should be computed for each state separately. This is done by weighting the state specific rural and urban price indices with the CBR73 and CBU73, respectively.** The national poverty line is implicitly estimated by identifying that per-capita expenditure level which if used as the poverty line will yield the same number of poor persons (as we will get by adding up the persons below the sector specific state poverty lines).

7. The data from *large* NSS surveys that are generally conducted every five years and collected detailed information on consumption expenditure is used to arrive at the official poverty estimates. Weighting the state-specific price indices, CPIAL and CPIIW, by the consumption baskets CBR73 and CBU73, the Planning Commission computes the official state-specific poverty lines for the rural and urban sectors, respectively. Then expenditure data from the NSS is used to identify all those who have per-capita expenditures less than the poverty line. They are counted as “poor”. The rural and urban poverty ratio for each state is the proportion of the rural and urban NSS sample in each state that is identified as poor. This data is then used in conjunction with the Census data to compute the absolute number of poor persons in each sector in each state. These numbers are added up to compute the number of poor persons in each sector in the whole country. Finally, this number is divided by the total population in each sector in the country to get the rural and urban poverty ratio in India. This consumption questionnaire is called the Consumer Expenditure Survey (CES) and a shorter version called the Employment-Unemployment Survey (EUS) is (sometimes?) administered to a sub-sample.

So, what do the official poverty estimates tell us?

The official poverty line of 1973-74 tells us that persons with these MPCE levels on an average *do consume* the RDA. And as average daily calorie intake is lower for lower MPCE classes all those with MPCE less than the poverty line consume calories less than the RDA and hence are identified as “poor”.

The official poverty lines in the years *after* 1973-74, tell us that persons with these MPCE levels *can consume*, at the current price level, a consumption basket which ensures RDA and those who have MPCE levels less than these poverty lines *cannot consume* that

consumption basket and hence are identified as “poor”. These lines do not tell us who actually does consume the RDA.

Given that the poverty lines based on the “fixed consumption basket” and the “fixed calorie norm” definitions provide different information about the level of deprivation in the economy and given that both can be computed from the same dataset, it would be very useful if two poverty estimates based on these two definitions were provided. However, the "fixed consumption basket" should include essential non-food items, in addition to, essential food items if it is to measure whether people can afford to consume goods that are absolutely essential for living.

Objections:

1. The poverty line only considers the minimum nutrition level required to survive and work but does not consider other necessities such as fuel, health services, housing, clothing that are also required for survival and working.
2. The official poverty lines after 1973-74 do not necessarily ensure the RDA for the expenditure classes corresponding to the poverty lines. In 1999-00, 27% of the rural population and 24% of the urban population have per-capita expenditures below the (rural/urban) poverty line but as Mehta (2004) and Patnaik (2006) show around 75% of the rural population and 55% of the urban population have an average daily calorie intake which is less than the RDA. The 1993 Expert Group was aware of this and chose a fixed consumption basket as opposed to a fixed calorie norm definition of the poverty line to ensure comparability across the years.

This is one of the key issues of the poverty debate. i.e., which of the two definitions gives us a better or truer picture of poverty levels in India? The answer lies in what we want to know. The official poverty estimates tells us what proportion of the population *cannot consume*, at the current prices, the same consumption basket which would ensure the RDA (this refers to CBR73 and CBU73). This poverty estimate *does not* tell us what proportion of the population *actually does not consume* a consumption basket that ensures a daily calorie intake equal to the RDA. Mehta and Patnaik are of the view that it is the latter that would give us a better idea of who are poor. While the official estimates make sense in terms of inter-year comparability, it does beg the question as to why people who can choose a consumption basket that ensures the RDA instead choose to consume food items that result in less than the RDA. One answer is dramatic change in preferences in favour of food items with low calorie intake. A second answer is that as prices for non-food essentials increased but incomes did not increase (or increased but at a slower rate), people started cutting down on some of the food items. Patnaik (2006) and Mehta (2004) favour the second explanation. For instance, here is what Mehta (2004) has to say on the matter:

Thus, in 1973-74 the expenditure group at poverty line in rural areas spent 80% of its total expenditure on food. In 1999-2000, the expenditure group at rural official poverty line spends only 65% of its total expenditure on food... These [consumption pattern in rural India for the expenditure class at the official poverty line for 1999-00] figures show how fallacious is the argument advanced by some that the calorie intake has reduced because even at poverty group people prefer to get their calories from more expensive food.

and Patnaik (2006),

The food share of total expenditure will fall also when people are getting worse off and their income and expenditure is stagnant or falling. This is because under such conditions of stagnant or falling income, the minimum unavoidable non-food spending on fuel for cooking and lighting, debt service, health-care, transport to work and so on, which are becoming more expensive, will force reduction in the food expenditure and raise hunger....This proposition receives strong support from the fact that at the official poverty lines the share of spending on fuels and on 'miscellaneous goods and services' has risen further between the 55th and 61st Rounds while there is decline in real spending on food.

3. Another key issue arose in the poverty estimates for 1999-00 based on the 55th Round of the NSS because of the way the food consumption questions were asked. Consumption questions typically ask respondents about their consumption of different items over a certain period of time, such as the last seven days, or last month, or last year. This time period is called the *recall period*. In the 50th Round (1993-94) *food items and intoxicants* were asked using a 30-day recall period and *five low frequency items (clothing, footwear, durable goods, education and institutional medicine)* using both a 30-day and a 365-day recall period. In the 55th Round the former were asked using both a 7-day and a 30-day recall period and the latter using only a 365-day recall period.

There are two main issues when using this data to estimate and compare poverty estimates for the two rounds. *First*, since the same recall period is not used for the same items in both rounds are the poverty estimates comparable? Using shorter recall periods for high frequency items increases consumption reports as it reduces memory loss. Again using longer recall periods for low-frequency items is also likely to increase reports of consumption of these items. This is because these are generally purchased in long intervals and shorter recall periods would miss these purchases. *Second*, since for some items two recall periods were used did that *contaminate* the reports (as respondents may have a tendency to report in such a manner that there is consistency between the two reports)? In that case which recall period elicited the truth? For example, if first asked to report the amount of milk purchased in the last month and then asked for a recall period of seven days do respondents simply divide the first answer by 4 to arrive at the second?

Deaton, Sundaram and Tendulkar and Sen and Himanshu try to address these problems and provide different poverty estimates (see Table 2). None of these provide any definitive answers as each of these estimates is based on a particular set of assumptions but give an idea of the range of possible poverty estimates. In Table 1 Patnaik (2006) also provides the poverty estimates after correcting for this data collection issue for 1990-00. After correcting for the recall period error, the decline in absolute poverty between 1993-94 and 1999-2000 ranges from 7.1 percentage points (Deaton, 2005) to about 2.8 percentage points (Sen and Himanshu, 2005).

Deaton (2003) assumed that the relationship between the probability of being poor and the six non-food items which were asked using the same 30-day recall period in both the 50th and 55th rounds is the same in both rounds. These six items are fuel and light, miscellaneous goods, miscellaneous services, non-institutional medical services, rent, and consumer cesses and taxes. He also assumed that the distribution of expenditure on these six items in the 55th round is the same as it would have been had the questionnaire remained unchanged. He first estimated the probability of being poor given the expenditure on these items from the 50th round and then used that predicted relationship and the actual expenditures on these goods from the 55th round to arrive at an estimate of poverty for the 55th round. Sen and Himanshu (2005) criticise Deaton's first

assumption on the grounds of increased nutrition poverty and increased share of expenditure on non-food items in the 55th round.

In the 55th round the EUS collected information on consumption of food items using *only* 30-day recall period and hence free of *contamination bias*. Note EUS questionnaire is an abbreviated form of the CES questionnaire. So, the EUS estimates may be lower than CES either of these reasons. In split-sample experiments in the 51st to 54th Rounds where half the sample were asked food items using only a 7-day recall period and the other half using only a 30-day recall period, the difference in the two estimates, *i.e.*, the *contamination bias*, was found to be around 30%. Sundaram and Tendulkar (cited in Sen and Himanshu 2005) found that for only some of the food items the CES estimates were higher than the EUS estimates and even in these cases the difference was less than 30% for most of these. They take this as proof that there is no *contamination bias* in the CES estimates. They also assume that the reporting of the low-frequency items was not contaminated with the use of a 30-day and a 365-day recall period in the 50th round as these are very important items that people are likely to remember. Based on these assumptions they suggest computing household expenditure using a Mixed Reference Period (MRP) – 30-day recall period for food and intoxicants and 365-day recall period for low-frequency items in both the 50th and 55th rounds.

Sen and Himanshu (2005) conclude that using a 365-day recall period for the low frequency items increases reporting of these items for poorer persons and reduces reporting for richer persons (for whom these are high frequency items and hence subject to memory loss in longer recall periods). They also find that there is no contamination bias for the poorer sections but for richer sections there is an upward contamination bias. In other words, they conclude that using the reported consumption of these low-frequency items using the 365-day recall period in the 50th and 55th rounds to estimate poverty (as was done by Sundaram and Tendulkar) is fine. However, measures of inequality based on per-capita consumption figures computed using the 365-day recall period is likely to be underestimated.

Sen and Himanshu (2005) contest Sundaram and Tendulkar's assumption on no *contamination bias* for the food items and intoxicants. They point out that the results of experiments in the 38th and 52nd rounds show that using a shorter schedule did not reduce reporting of food consumption. And so if EUS estimates are lower than CES estimates then that is because of *contamination bias*. They adjust Sundaram and Tendulkar's estimates using information from the 56th round (and also some of the other neighbouring rounds) on food items for which there was difference in the 55th round CES-EUS estimates. As there is no independent evidence on the extent of contamination bias, these estimates they say should be taken to be the lower bound of the poverty estimates for the 55th round.

4. It should be noted that the official poverty estimates are not income poverty lines but expenditure poverty lines. It is quite possible that many persons have expenditure levels above the poverty threshold but are able to do so only with heavy borrowing as their income levels fall short of the poverty threshold. If these borrowings are for consumption, and not investment, purposes then in the long term these persons are likely to fall below the poverty threshold.

5. Patnaik (2006) shows that it is quite highly possible that the official 1973-74 rural poverty line of Rs. 49 is not consistent with daily calorie intake of 2400 (the RDA) but

with that of 2200. And a poverty line of Rs. 56 (which results in poverty estimate of 72%) is consistent with daily calorie intake of 2400. Using an initial poverty line of Rs. 56 in 1973-74, Patnaik computes the official poverty estimates (see Table 1)

The following objections were incorporated by the 1993 Expert Group and are no longer points of contention.

6. Due to high inter-state price differentials estimating one rural and one urban poverty line for the whole country was felt to be quite problematic.
7. The private consumption expenditure figures obtained from the National Sample Survey and the National Accounts are not consistent with each other and over the years this inconsistency has been growing. The official poverty estimates involved adjusting the expenditure levels obtained from the NSS by a factor so as to make the total private consumption expenditure from the two sources consistent. As the NAS figures were typically higher this meant that poverty estimates would be lower with this adjustment. As the NAS figures were likely to involve double counting it was not considered to be a good strategy. Quoting the studies by Minhas the 1993 Expert Group concluded that such a strategy is “indeed hazardous” and recommended that this practice be abandoned.

This review of the Indian poverty debate is based on the following articles. Thanks to Dipankar for his useful comments.

Based on the following articles:

1. Deaton, Angus and Valerie Kozel. “Data and Dogma: the great Indian poverty debate,” *World Bank Research Observer*, 2005, 20 (2), 177-199.
2. Deaton, Angus. “Adjusted Indian Poverty Estimates for 1999-2000,” *Economic and Political Weekly*, 2003, 322-326.
3. Mehta, Jaya. “Poverty in India”, 2004, <http://gamma.nic.fi/~otammile/povindia.htm>
Also printed in *Alternative Economic Survey 2003-2004*
4. Patnaik, Utsa. “Poverty and Neo-Liberalism in India” Based on *Rao Bahadur Kale Memorial Lecture delivered at Gokhale Institute of Politics and Economics, Pune, February 03, 2006*. December 2006
5. Planning Commission, Government of India “Report of the Task Force on Projections of Minimum Needs and Effective Consumption Demand”, 1979
6. Planning Commission, Government of India “Report of the Expert Group on Estimation of Proportion and Number of Poor”, 1993
7. Sen, Abhijit and Himanshu, “Poverty and Inequality in India: Getting Closer to the Truth,” *The Great Indian Poverty Debate*, Edited by Angus Deaton and Valerie Kozel, Macmillan India. 2005

Table 1: Comparing poverty estimates (% poor below the poverty line) using the “fixed calorie” and the “fixed consumption basket” norms¹

	Official Poverty Estimates (based on the “fixed consumption basket” norm)	Poverty Estimates based on “fixed calorie norm” ³	Official Poverty Estimates (based on “fixed consumption basket” norm), adjusted for 2400 calorie norm in 1973-74 ³
1973-74	56.4	72	72
1977-78	53.1	65.5	63
1983	45.7	70	54
1993-94	37.3	74.5	49.2
1999-00	27.4	74.5 (77.5) ²	39
2004-05	29.5	N.A.	41.5

¹ Source: Patnaik (2006)

² Adjusting for recall period problems

³ Patnaik (2006) shows that it is possible that the official 1973-74 rural poverty line of Rs. 49 is not consistent with daily calorie intake of 2400 (the RDA) but only with that of 2200. A poverty line of Rs. 56 is consistent with daily calorie intake of 2400. The estimates in column (3) and (4) use Rs. 56 as the poverty line in 1973-74.

Table 2: Comparing Poverty Estimates (% poor below the poverty line) using Different Methods to Correct for the Recall Period Problem¹

	Official (rural)	Official (urban)	Deaton (rural)	Deaton (urban)	Sundaram and Tendulkar (rural)	Sundaram and Tendulkar (urban)	Sen and Himanshu (rural)	Sen and Himanshu (urban)
1993-94	37.3	32.4	37.3	32.4	34	26	31.9	29.2
1999-00	27.0	23.6	30.2	24.7	29	23	29.1	26.1

¹ Source Deaton and Kozel (2005)