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DEBATING POVERTY

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Poverty Line: Pursuit of an Elusive Minimum

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What do we mean by poverty? What is the poverty line? Why do we need estimates of poverty line and poverty? How does one use these estimates in policy making? This paper tries to evaluate the various variables for estimating a minimum poverty line. It studies the experience of India in dealing with poverty and food security and estimating the poverty line during pre-independence, post-independence and the reform era.

Poverty lines estimated *a la* Tendulkar Committee method (Government of India (GoI), 2009) by the Planning Commission for 2011-12 worked out to Rs. 816 per capita per month in rural India and Rs. 1000 in urban India. Commentators called these numbers crazy. Some academic experts debunked their utility because, as per their estimates, virtually the entire population has a calorie intake less than the norm and is undernourished. Some ridiculed the Planning Commission arguing that with Rs. 33 one could not buy even a kilo of rice, not to speak of the subsistence bundle. The Government's response to the entire hue and cry has been to constitute yet another committee under the chairmanship of C. Rangarajan to review the methodology for poverty estimation.

This raises several questions: Are these numbers unrealistic? Is it true that the entire population is really undernourished? Is there a need for a food security provision for the entire population?

To answer these questions, let us try to draw a perspective on the question of poverty line and estimate of poverty as it evolved in India. What do we mean by poverty? To what does a poverty line refer? Why do we need estimates of poverty line and poverty? How does one use these estimates in policy making? How imperative is it? If it is so imperative, how does one estimate the subsistence minimum and its monetary equivalent at a point in time and over time in a vast country like ours?

Poverty refers to a situation when an individual cannot provide for himself with the minimum subsistence essential for survival in a society. Poverty line is nothing but this subsistence minimum generally expressed in terms of its cost. With this information, we can decide if an individual with some given income is poor or not; if he is poor, we can also determine the extent of income shortfall from the poverty line, what in other words is called extent of deprivation. It can also be used for budgeting, that is, to estimate the amount of resources required for poverty alleviation by direct cash transfer. Information on deprivation and its profile across regions and social groups is important to formulate development strategies, identify appropriate polices and facilitate their targeting. Policy targeting is imperative in a poor country like India because, it has limited income and resources for such policies and development programmes.

The estimation of the poverty line is a challenge, because India is predominantly rural country characterised by informal market structures and is undergoing structural changes in the course of its economic development. As a result, the subsistence norm as well as its cost will keep changing. It is precisely this issue that the expert groups and expert commentators have failed to address. It is this singular failure that has led to estimates of increasing undernourishment with declining poverty. This paper seeks to explain this paradox and the experts' failure to address it by providing an account of the evolution of the Indian Poverty Line.

In absolute numbers, 321 million Indians were poor of which 261 million (a share of 81 per cent) were from rural areas and 60 million (a share of 19 per cent) from the urban. Thus, poverty is predominantly rural in India though the sector's share in the total number of poor has been declining over time (Table 1). By 2004-05, the number of rural poor declined to 221 million, while the urban ones increased to 81 million.

Table 1: Official Estimates of Poverty

Year	Rural		Urban		Combined		Share of rural sector in poverty (%)
	Number of persons (million)	% of persons	Number of persons (million)	% of persons	Number of persons (million)	% of persons	
1973-74	261.29	56.4	60.05	49.0	321.34	54.9	81.3
1983	251.96	45.7	70.94	40.8	322.90	44.5	78.0
1993-94	244.03	37.3	76.34	32.3	320.37	36.0	76.2
2004-05	220.92	28.3	80.80	25.7	301.72	27.5	73.2

Source: GOI (2008b; pp 79-80)

Indian Poverty Line: How It Originated

The poverty line originated in India during the pre-independence era. Decades prior to Indian Independence, our freedom fighters were acutely aware of the causes and consequences of appalling deprivation in the country. Naoroji (1901), argued that British rule had bled India. The total income generated in the country was not enough to meet even the subsistence requirement of the Indian population.

How did he verify this? He defined the minimum subsistence as the amount of food required "for the bare wants of a human being, to keep him in ordinary good health and decency" *(ibid., p. 25)*. He called this minimum 'necessary consumption' and measured it in terms of the diet prescribed by the Government Medical Inspector of Emigrants on

March 26, 1870, for the emigrant coolies during their voyage. The diet did not consider energy requirements for work; it included rice or flour, dhal, mutton, vegetables, ghee, and vegetable oil and salt.
The scale of diet is as in (Table 2):

Table 2: Scale of Diet: Government Medical Inspector of Emigrants, March 26, 1870.

Rice diet for one man (ozs.)		For flour diet (ozs.)	
Rice	20.0	Flour	10.0
Dhal	6.0	Dhal	4.0
Preserved mutton	2.5	Preserved mutton	2.5
Vegetables	4.27	Vegetables	4.27
Ghee	1.0	Ghee	1.0
Mustard oil	0.5	Mustard oil	0.5
Salt	1.0	Salt	1.0
Total	35.27	Total	29.77

Source: Naoroji, 1901; p. 25.
Note: One ounce (oz.) = 28.35 gram.

Naoraji used this reference bundle to estimate the cost of necessary consumption in 1867-68. His estimates of costs of necessary consumption ranged from Rs 16 to Rs 35 per capita per year in various regions of India. In other words, these estimates were real and one would know how much one could buy with Rs. 16 - Rs. 35. While his prices and cost estimates were real, the reference bundle did not pertain to the population under review but to emigrant coolies.
He compared such estimates with the corresponding income generated across regions. This showed that "even for such food and clothing as a criminal obtains, there is hardly enough of production even in a good season, leaving alone all little luxuries, all social and religious wants, all expense on occasions of joy and sorrow, and any provision for bad season" *(ibid., p. 31)*.

Policy Choices: Before and After Independence

The Indian National Congress constituted a think tank called the National Planning Committee under Pandit Nehru in October 1938, to arrive at a policy for poverty reduction. Its task was to formulate a comprehensive scheme for National Planning in order to address problems such as of "poverty and unemployment, of national defense and of economic regeneration". The Committee did not define a poverty line but acknowledged that "lack of food, of clothing, of housing and of every other essential requirement of human existence" (Nehru, 1946) were the constraints on subsistence living. It defined explicit goals for development policy once the country got independence.

Development pursuit should seek to "ensure an adequate standard of living for the masses, in other words, to get rid of the appalling poverty of the people" *(ibid.)*. It recommended a ten-year plan to secure for the population in general (i) a nutritious food basket providing for a balanced diet of 2400 to 2800 calories per adult worker; (ii) clothing (30 yards per capita per annum); and (iii) housing (100 sq. ft. per capita). Evaluation of development policies would be in terms of indicators like per capita income, life expectancy and literacy rate.

On getting independence, India had a huge development agenda to pursue. The government adopted five year planning as a specific development strategy to pursue the agenda. Policy goals were defined largely in terms of broad objectives like growth, development, industrialization and reduction in inequalities. After two successive five year plans, the Government decided to review five year development strategies and their outcomes. For this purpose, it set up a task force called Committee on Distribution of Income and Levels of Living. It appointed a working group to look into the question of defining a national subsistence minimum.

The working group recommended a minimum of Rs. 20 per capita per month (Rs. 25 for urban areas) at 1960-61 prices (GoI, 1962). This normative minimum was considered adequate to ensure minimum energy requirements for an active and healthy life and also minimum clothing and shelter. The norm did not provide for expenditure on health and education, which were to be provided by the State, as per the Indian Constitution. Acknowledging that "the minimum which can be guaranteed is limited by the size of the total product and the extent of redistribution which is feasible" *(ibid)*, the Government prepared a *'Perspective of Development: 1961-1976'*.

The Government kept this minimum of Rs. 20 per capita per month at 1960-61 prices as the goal for the Fifth Five Year Plan. The *Perspective* unambiguously stated that (i) poverty removal should be the central concern of planning in India; (ii) every citizen should be assured of a minimum income within a reasonable period of time; and (iii) the minimum itself should be revised upwards with economic progress *(ibid. p. 13)*. The *Perspective* recognised the constraints due to limited resources for investment; it worked out growth imperatives of planning for a minimum living. Its estimates showed that the economy would have to grow at the rate of seven per cent per annum during 1966-1976 to ensure a nutritionally adequate diet for the bottom third decile group of the population *(ibid. p. 18)*. [1]

One is not really sure how the working group arrived at the estimate of Rs. 20 as the poverty line. The late V.M. Dandekar and N Rath (Dandekar and Rath, 1971) were probably the first to define an income/consumer expenditure norm for poverty with reference to an explicit average daily per capita calorie intake norm of 2250 kcals for

[1] The Task Force admitted that the economic status of the poorest twenty per cent would not increase only by growth unless provided for by specific policy interventions.

both rural and urban areas. They made use of the estimates of household consumer expenditures collected in the annual National Sample Surveys (NSS) to arrive at their numbers.

One might ask how much one could buy with the amount specified by these poverty line numbers generated from the NSS household budget information. One could not have bought the minimum bundle at market prices even in the rural areas for several reasons. To begin with, the NSS does not really estimate expenditures on different food items at market prices. Depending upon whether a given household meet its consumption requirement from its own farm / the retail markets, the NSS uses producer (farm-harvest) / retail markets prices to estimate total expenditure on food. Retail prices exceed the producer price by trade and transport margin; hence, a poverty line estimated using a mixture of producer and consumer prices as done in the NSS calculus would not guarantee the minimum bundle at market prices.

Secondly, rural households experience economies of scale in food production and consumption when they cook food not only for their own use but also for payment of wages-in-kind (cooked food) to the farm labour households. Hence, NSS-based unit cost of calories could be underestimates. In addition, the NSS does not credit wage payments received in kind to the consumption account of the labour household to avoid double counting, reporting errors and to get unbiased estimate of average consumption for the country. This would also affect NSS choice of the threshold from the household distribution profile to define the poverty line. So, poverty lines estimated using household budget information would not guarantee the minimum bundle at market prices, even for a small family which cooks food for itself not to speak of the single member household relying on restaurants for food consumption.

Estimating Official Poverty Line

In 1977, the Government set up a Task Force on Projection of Minimum Needs and Effective Consumption Demand. Its task was to review academic research and information on the subject and develop it further to facilitate drafting of the Sixth Five Year Plan (GoI, 1979; p. 4). The Task Force defined the poor as "those whose per capita consumption expenditure lies below the midpoint of the monthly per capita expenditure class having a daily calorie intake of 2,400 in rural areas and 2,100 in urban areas" (GoI 1981, p. 81).[2] It estimated poverty lines corresponding to these norms using the NSS data on household consumer expenditure for the year 1973-74. It obtained a poverty line of Rs 49.09 per capita per month at 1973-74 prices for rural all- India and Rs. 56.64 for urban India. Its estimates of poverty corresponding to these norms were 56.4 per cent for rural India, 49.23 per cent for urban India and 54.9 per cent for the country as a whole. In absolute numbers, 321 million Indians were poor of which 261 million (a share of 81

[2] These are norms for the total population worked out as a population weighted average of age-gender-activity specific calorie allowances recommended by the Nutrition Expert Group (1968) (GoI 1979; p. 9)

per cent) were from rural areas and 60 million (a share of 19 per cent) from the urban. Thus, poverty is predominantly rural in India, though the sector's share in the total number of poor has been declining over time (Table 1). By 2004-05, the number of rural poor declined to 221 million, while the urban ones increased to 81 million.

Given the poverty line and the data on size distribution of population across monthly per capita expenditure classes, poverty estimate given by the headcount measure, that is, the proportion of the population living below the poverty line for the base year is simply read, as the cumulative proportion of population with consumer expenditure less than the poverty line. Since the method is very similar to the one followed by Dandekar and Rath, there is no guarantee that the amount specified would fetch you the desired minimum at market prices. But these estimates played a useful role in plan calculations and projections.

Computing Official Poverty Over Time

How do we estimate poverty line and poverty for subsequent years? The poverty line has to be updated to account for changes in prices since the consumer expenditure data are at current prices. Experts used deflators ranging from simple wholesale price index to national income deflator and cost of living index numbers for different occupational groups like the agricultural labourers. Depending upon the index used, experts came up with varying estimates and conclusions. So the Government appointed an Expert Group in 1989 to look into the methodology for estimating poverty and the question of re-defining poverty line (GoI 1993).

The Expert Group (GoI, 1993) recommended a price index obtained as a weighted average (to account for the relative importance of different items of consumption) of subgroup price indices of Consumer Price for Agricultural Labourers (CPIAL) for rural all-India. The Expert Group recommended the same poverty lines as those by GoI (1979). It is to the credit of this Expert Group for an explicit clarification that poverty line defines on an average the level of per capita per day expenditure "which meets a normative minimum standard of living, deemed reasonable. Calorie intake is but one of the ingredients, though an important one, of the minimum standard, but the poverty line makes an allowance for non-food consumption needs as well on the basis of observed consumer behaviour." (GoI 1993, p. 30).

How satisfactory is the methodology recommended by the Expert Group? While updating poverty lines for subsequent years, experts should have considered the peculiarities of the information base and ongoing institutional changes in the country. Till the 1970s, the rural landless labour households, which constitute a major subset of the poor, used to get paid in kind. It was no longer so in 1993. With economic development, there is increasing monetisation so much so, that at present the fraction of the labour force getting paid in kind is negligible. In other words, they depend upon the market for their entire food consumption involving purchases of not only food articles but also overhead items like fuel and other complementary items. Updating poverty lines is not simply a question of accounting for changes in prices. It would also involve accounting for additional costs because of the imperatives associated with commercialization of labour and commodity markets. Failure to account for such changes would provide a part of the explanation of ostensibly low poverty lines.

Poverty Line in Reform Era

The era of reform began in 1991 with the government's efforts to reduce the fiscal deficit involving, inter alia, targeting the subsidized public food distribution system (PDS) only to the poor. Such an approach called for estimates of poverty line for identification of the poor and implementation of programmes.

In spite of such efforts, the New Millennium has begun with a bleeding rural India. One hears periodic reports on farmer suicides and deaths due to starvation. Policy and academic papers published empirical findings of (a) a secular decline in average cereal consumption and calorie intake of the total population (GoI, 2008a); and (b) a child population, half of which is underweight. Such a depressing scenario on multi-dimensional deprivation has called for a reform of conventional welfare programmes towards a rights-based approach like Mahatma Gandhi National Rural Employment Guarantee Act and Food Security Act. As regards food security, experts advocate universal PDS on the ground that virtually the entire population is undernourished.

It is in this context, that the government set up the Tendulkar Expert Group to review the methodology of estimation of poverty (GoI, 2009). The Tendulkar Committee debunked the calorie norm. It accepted the conventional all-India urban poverty estimate for the year 2004-05, since in its perception it was widely accepted and was not controversial. It justified its choice of the corresponding poverty line by citing its adequacy to provide adequate energy, meet minimum educational and medical expenses. It recommended a revised methodology to construct price index numbers to work out equivalent poverty lines for rural and urban sectors across states using prices implicit in the NSS data. As per its revised concept and methodology, poverty worked out to be 41.8 per cent in the rural sector, 25.7 per cent in the urban and 37.2 per cent in the country as a whole in 2004-05.

Experts debunk even these numbers, since they believe that virtually the entire population is undernourished as judged by the 2400/2100 calorie norms for rural/urban India. However, they are not on a sound footing. This is because the century-old calorie norm is no longer valid. Calorie needs of the people must have only declined due to economic growth, improved sanitation and health facilities, standard of living, technology, transportation and infrastructure. This would call for a downward revision in cereal and calorie norms. This is further confirmed by the NSS time series data on household consumption distribution, which throws up a picture slightly different form that of the average for the total population cited in the eleventh five year plan document (GoI, 2008a). The NSS estimates show (i) a secular decline in per capita cereal consumption and calorie intake of the upper five/six decile groups only; and (ii) a stable/marginal increase in those of the bottom decile groups of population in rural and urban India. The two series converge at a lower norm implying reduced calorie requirement. Still, if there is any evidence on under-nutrition and anaemia, it could be due to malnutrition and inadequate health care at crucial stages of life as demonstrated by 'Asian Enigma' (Ramalingaswami *et al.,* 1996).

The pursuit of an elusive minimum continues unabated, sans an integrated empirical framework and perspective on issues related to deprivation. And now, the government has constituted another committee whose report is awaited with bated breath.

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