POLICIES FOR THE POOR: VERIFYING THE INFORMATION BASE

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Abstract

This paper illustrates how policy formulation without prior data verification would not make much sense and serve any purpose. Given the National Sample Survey (NSS) finding on substantial errors of inclusion of the non-poor in the targeted Public Distribution System (PDS) and its extenuation that all the targeted beneficiaries are genuinely poor, we examine how valid is the explanation and hence, the recommendation for a universal PDS. Contrary to the general perception, the targeted PDS is universal and the need of the hour is to address the error of excluding the genuinely poor rather than provide a universal PDS/cash transfer.

Keywords: Poverty, Information base, verification

JEL Classifications: I32, I38 and P46

1. Introduction

Policymaking for the poor has received considerable attention in India among academic researchers as well as policy makers in the wake of economic reforms in particular. However, several discussions, inferences and recommendations are based on outdated perceptions and misconceived notions regarding the poor, their consumption patterns and institutional constraints. What is important to note is that policy recommendations are made without any verification of the information base in terms of its appropriateness, and the validity of perceptions. This has been so particularly in the context of the debates on poverty, food insecurity, and different policy options.[2]

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[2] See, for instance, Dev, Kannan and Ramachandran (2003), Prabhu, and Sudarshan (2003). The classic example is the series of studies on agricultural growth and trickle down in India led by Ahluwalia (1978). These studies in general interpret an inverse association between estimates of per capita agricultural income and head count ratio measure of poverty as evidence of trickle down process of growth in agriculture. They infer on the absolute living standards of the poor by examining a time series sample estimates of poverty ratios and not those of real consumption. Contrary to their inference, actual sample information on levels of living does not show any secular improvement at all but only a decline and recovery to the initial level of the sample period (Suryanarayana, 2000). Ahluwalia (1978) is a limiting

This trend persists even in the New Millennium. One important illustration could be the studies on food insecurity.[3] The High Level Committee on Long Term Grain Policy (Government of India (GoI), 2002) concluded that the subset of food insecure is larger than the subset of income poor as defined by the Planning Commission. The Committee has arrived at this conclusion without any reference to contemporary food security norms and temporal food consumption behaviour of different decile groups of population in rural and urban areas across states and India as a whole. This is followed by the Planning Commission, which in its Eleventh Five Year Plan (GoI, 2008) mistook observed reductions in the mean-based estimates of average food consumption and calorie intake of the total population for actual reductions in the nutritional status of the poor. In addition, citing outcome measures of under-nutrition,[4] the Plan has recommended universal Public Distribution System (PDS) without even verifying the corresponding distribution profile.[5] The GoI has constituted another Expert Group to Review the Methodology for Estimation of Poverty. The Expert Group has gone into redefining the poverty line using the National Sample Survey (NSS) data from the 61st round for the year 2004-05 little appreciating the data inadequacies, if any.[6]

This paper illustrates the need for data verification in policy making with reference to (i) some anomalies in the NSS data on the household distribution of per capita consumer expenditure and targeted PDS from the 61st round; and (ii) the explanation provided for them.[7] The paper examines (i) how valid is the explanation and hence, the recommendation for universalizing the PDS made by the High Level Committee on Long Term Grain Policy (GoI, 2002), and the Planning Commission (GoI, 2008); and (ii) how appropriate is the NSS data for redefining the poverty line.[8] The paper is structured as follows: Section 2 provides some examples on faulty situation assessments of and policy recommendations for reducing economic deprivation. Section 3 provides information on the distributional profile of the targeted PDS in India based on the 61st round NSS data and errors in targeting. Section 4 discusses and verifies the NSS Organisation's explanation for the apparent anomalies. The final section concludes the paper.

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case, which provides an estimate of 53.90 per cent corresponding to the poverty line of Rs 23.30 per capita per month for 1965/66 when the actual data shows the cumulative population distribution corresponding to the expenditure class limit of Rs 24 as 49.81 per cent (GoI, 1976; p. 43).

[3]   The World Food Summit (1996) has defined food security to exist "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life" (http://www.fao.org/docrep/003/w3613e/w3613e00.htm). The dual dimensions refer to economic and physical access.

[4]   Percentage of underweight children under-3 in the total child population under-3 was 47 per cent in 1998/99 and almost the same at 46 per cent in 2005/06 (GoI, 2008; p. 128).

[5]   A programme is called universal when its beneficiaries are self-selected.

[6]   See http://www.planningcommission.gov.in/reports/genrep/rep_pov.pdf

[7]   Rao (2010) deals with a much larger set of issues related to current crisis in policymaking and the need for a policy framework based on sound information and indicators.

[8]   For an evaluation of the recommendations of the Expert Group on Long Term Grain Policy from a methodological perspective, see Suryanarayana and Silva (2007)

2. Policy Making for the Poor

A sad commentary on the state of governance in India is that, despite being a poor-in-majority country until recently, policy makers and academic experts keep debating on the following major issues:

      i.   revising the definitions and norms for poverty;[9]

      ii.   comparability of data sets over time;

      iii.   scope for integrating different data sets and methodologies for estimation of poverty; and

      iv.   limitations of targeted poverty interventions even after nearly six decades of planned pursuit of development for 'Growth with Poverty Reduction'.

One question that has received little attention is the appropriateness of the very information base for defining poverty norms and estimates and choice of policies. For instance, the NSS data used in most of these studies is designed to obtain unbiased estimates of averages and not distribution parameters.[10] As the NSS Organisation itself points out "Meals prepared in the household kitchen and provided to the employees and/or others would automatically get included in domestic consumption of employer (payer) household. There is a practical difficulty of estimating the quantities and values of individual items used for preparing the meals served to employees or others. Thus, to avoid double counting, cooked meals received, as perquisites from employer household or as gift or charity are not recorded in the recipient household. As a general principle, cooked meals purchased from the market for consumption of the members and for guests and employees will also be recorded in the purchaser household. This procedure of recording cooked meals served to others in the expenditure of the serving households leads to bias-free estimates of average per capita consumption as well as total consumer expenditure. However, donors of free cooked meals are likely to be concentrated at the upper end of the per capita expenditure range and the corresponding recipients at the lower end of the same scale. Consequently, the derived nutrition intakes may get inflated for the rich (net donors) and understated for the poor (net recipients). This point has to be kept in mind while interpreting the NSS consumer expenditure data for studies relating to the nutritional status of households" (GoI, 2006)

This would imply that the NSS estimates of food grain consumption of the employee households in the rural sector, who are generally poor labour households, would be underestimates and that of rich employer households would be overestimates. This would result in overestimation of inequality and poverty.[11] As per the Second Agricultural Labour Enquiry of 1956-57, agricultural labourers were paid in kind for about 50 per cent of the man days worked.[12] Consistent with empirical evidence, the NSS estimates of cereal consumption for the bottom decile groups for the 1950s and 1960s are very small. The estimates for the richest decile group are very high, in some years as high as 26 kilograms per capita per month that is almost a kilogram per capita per day,

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[9]   For a comprehensive review of conceptual and statistical issues, see Kumar *et al*. (1996).

[10] See Minhas (1991; p. 5).

[11] See also Naidu (1983) and Minhas (1991).

[12] Government of India's *Agricultural Labour in India*, Report on the Second Survey, Volume I, All India (p. 107) cited in Jose (1978; p. A-16).

which is an impossible proposition. This would corroborate, in other words, the proposition that the NSS approach would involve substantial underestimation of food grain consumption, virtually the consumption basket, of the poorer labour class and hence, significant overestimation of poverty for the 1950s and 1960s. With change in composition of the labour market, wage payment contracts and structural changes in the economy, this kind of differential bias in estimation across economic classes of the rural population would change. Recent evidence for rural and urban India for the year 2004-05 shows that the number of meals consumed from the employer as perquisite or part of wage is virtually zero (GoI, 2007c). In fact, with casualization, and hence, monetization of the labour and commodity markets, the differential bias must have disappeared altogether. Hence, distributional changes in the NSS household consumer expenditure data sets often reflect changes in the underlying institutional and contractual relations and not in consumer preferences or the actual distribution of economic welfare (Suryanarayana, 2000).

Such issues as those discussed in the preceding paragraph would also call into question the relevance of base-year weighted cost of living indices to price-adjust poverty lines over time to account for changes in prices, both absolute and relative. In fact, studies have explored options to explain changes in consumption patterns in general, cereal consumption in particular, at the all-India level in terms of changes in relative prices. One is not sure how valid this approach would be. This is because the all-India data set is simply an aggregation over the consumption preferences of states specialized in rice, or wheat, or jowar etc. with varying preference sets and opportunity costs across states. In such a scenario, neither such a utility function with respect to all types of cereals would really exist nor would the necessary conditions for specifying an aggregate all-India Engel/demand function be fulfilled. Hence, simple explanation/exploration in terms of a rational behaviour of a representative consumer with respect to options across different types of cereals would not make much sense.[13] In other words, a pertinent question for verification would be if it would be valid to specify and estimate (i) an aggregate demand model of an all-India representative consumer to explain observed changes in consumption patterns; and (ii) an associated Engel function to derive a poverty line.

Further, in pursuit of unbiased estimates of averages, the survey is generally carried out in the form of successive sub-rounds spread over an agricultural year in order to take into account seasonal variations in a monsoon dependent agricultural economy. However, there are cases when the NSS round covered only a calendar year or did not last for a full year, which definitely must have affected the annual estimates and hence, comparability of estimates from different surveys.

However, policy experts have paid little attention to these issues and gone ahead defining and estimating poverty norms from the NSS data on consumer expenditure conducted during the 28th round. This survey was not spread out over the full agricultural year but lasted from October 1973 till June 1974. One would expect consumption estimates for the bottom decile groups to be much more sensitive to seasonal variations than those for the richer decile groups. Given that the poverty norms were estimated by inverse linear interpolation to such data on calorie content and consumer expenditure, one is not sure how reliable would be the estimate of

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[13]   Kumar *et al.* (2008) obtains a norm for subsistence food consumption by specifying and estimating an Engel curve; the study discusses possibilities for obtaining an index of poverty based on commodity-specific deprivation estimates.

the poverty norm? Similar issues haunted the debates on revamping the PDS to promote the food security of the poor at the least cost in the wake of economic reforms.[14]

The syndrome persists even today. For instance, there is a general belief that the NSS 61st round data set is relatively nuisance-free. The Expert Group on Poverty has used this data set to look into issues and define revisions in the methodology for poverty estimation. The same information base is also used for analysis of issues related to food security and public policy choice in the *Eleventh Five Year Plan*. Based only on mean based estimates of averages for recent years and not distributional profiles, the *Eleventh Five Year Plan* has concluded that calorie intake of the poor has declined and recommended policy options for augmenting incomes and universalizing the PDS (GoI, 2008).

It may be noted that (i) the recommendation for a universal PDS to promote food security in the country has been made largely with reference to estimates of nutritional input and outcome measures and their correlations, which is not methodologically satisfactory. In addition, the assessment is carried out without (ii) defining contemporary food security norms; (iii) studying the temporal food consumption behaviour of the poor and non-poor sections; and (iv) examining the distributional profile of the targeted PDS. Each of these limitations is important for the following reasons:

(i) To begin with, health outcomes/impacts are due to both short-term, medium-term and even long-term causes and hence, contemporary correlations between input and outcome/impact measures would make little sense. This is because health outcomes depend on non-food factors such as sanitary conditions, water quality, infectious diseases and access to primary health care. As Kumar *et al.* (2009) point out measures of deprivation based on stock variables like health are distinctly different from those based on flow variables and both are likely to be poorly correlated.

(ii) Food security norm: A major limitation of the policy discussion on food security is the lack of a well-defined concept and norm. Even today the decisions on food requirement and estimates of incidence of calorie deficiency/food insecurity are made with reference to a norm of 2400 calories for rural India, a norm considered by the National Planning Committee of the Indian National Congress in 1938 (Nehru, 1946), that is, more than seven decades ago. With economic growth and development involving structural and technological changes, calorie requirements must have declined as reflected in the observed consumer behavior of Indian household since Independence.

(iii) Differential trends in food consumption and calorie intake across decile groups. Time series evidence shows that with increasing real income and consumption levels, the food consumption and calorie intakes of the richer (almost seven) decile groups in rural and urban India have declined almost on a sustained basis, and those of the poorest two/three decile groups

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[14] Another limitation of the information base for policy is its narrow static focus on a contemporary snapshot. As pointed out by V.M. Rao "Insecurity, vulnerability, uncertainty have impact on the poor going beyond their immediate consequences. For example, food insecurity could create a debt trap weakening the initiatives, which the poor themselves must ultimately take. PDS and NREGS are important not only for their direct impact on poverty, but are also important because adequate food and employment security will raise the poor above the threshold to activate their own motivation, enterprise. Without this, skill formation, productive use of assets, which belong to the phase beyond providing relief to the poor, will remain weak. The poor will remain stuck at the stage of receiving relief that too inadequate and undependable."

increased but still fall below the conventional normative minimum. As a result, statistical estimates show an increase in incidence of calorie deficiency with reference to the same norm in both rural and urban sectors (Suryanarayana, 2003). In other words, the decline in energy consumption of a majority of the population does not seem to be due to constraints on economic/physical access. Kumar *et al.* (2009) also find a decline in cereal as well as income (consumer expenditure) deprivation between 1987/88 and 1999/2000. Contrary to the general perception, low levels of cereal consumption and calorie do not seem to be binding constraints since otherwise declining cereal per capita consumption and calorie intake would have spelt health disasters in the country. In such a scenario, one is not sure if the recommendations for cash transfer/universal PDS are based on a sound understanding and appreciation of realities and trends.

(iv) Distributional profile of the targeted PDS. The following section takes up the last issue on the distributional profile of the targeted PDS.[15]

3. Errors in Targeted Public Distribution System

The Government of India introduced targeted PDS in June 1997 (GoI, 1997). It provided for differential pricing of food grains for the poor and non-poor as follows. Households below the poverty line (BPL) would be entitled to an increased 20 kg of food grains per family per month at 50 per cent of the economic cost and those above the poverty line (APL) would have to pay the economic cost without any change in their entitlement. The State Government is to ensure transparency and accountability in the implementation of the programme. The programme is to be implemented by identifying the poor subject to the constraint that the number of poor should not exceed the estimates of poverty across States for the year 1993-94 made using the methodology recommended by the Lakdawala Committee on Estimation of Proportion and Number of poor (GoI, 1997).

As per the GoI guidelines, the BPL families are to be identified by the State Governments with the help of the Gram Panchayats and Nagar Palikas. The thrust would be on minimizing exclusion errors in targeting.[16] In order to achieve this, emphasis is on the inclusion of the really poor and vulnerable sections. The list of such groups included landless agricultural labourers, marginal farmers, rural artisans/craftsmen such as potters, tappers, weavers, blacksmiths and carpenters in the rural areas, and slum dwellers and daily wage earners in the informal sector like porters, rickshaw-pullers, cart-pullers, fruit and flower sellers on the pavement in urban areas (GoI, 1997).

The GoI introduced *Antyodaya Anna Yojana* (AAY) to reduce hunger among the poorest of the BPL population. In the first phase, this programme sought to identify and provide one crore poorest of the poor BPL families food grains (25 kg per family) at a highly subsidized rate of Rs.2 per kg. for wheat and Rs. 3 per kg for rice. For this programme, the poorest of the *BPL* households are to be identified with reference to criteria like

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[15]   The former two issues (ii & iii) have been discussed in some detail elsewhere (Suryanarayana, 2003 & 2009 and Suryanarayana and Silva, 2007).

[16]   Errors in targeting could be of two types, namely of Type I or Type II. Type I error occurs when a targeted welfare programme does not benefit the intended beneficiaries and Type II when the programme benefits the unintended beneficiaries (Cornia and Stewart 1993).

1) Occupational characteristics, say, landless agriculture labourers, marginal farmers, rural artisans/craftsmen (potters, tanners, weavers, blacksmiths, carpenters, slum dwellers) and daily wage earners (porters, coolies, rickshaw pullers, hand cart pullers, fruit and flower sellers, snake charmers, rag pickers, cobblers, destitute and other similar categories) irrespective of rural or urban areas;

2) Household characteristics, that is, households headed by or single member households of widows or terminally ill persons or disabled persons or persons aged 60 years or more with no secure means of subsistence or support from the society; and

3) Social characteristics, that is, all primitive tribal households (GoI, 1997).

It would be useful to examine how successful is this targeted programme. The NSS data for 2004-05 reveals serious errors in targeting. For instance, 51 per cent of households in the lowest size class of "less than 0.01 hectares" do not possess any ration card at all. On the other hand, majority (77 to 86 per cent) of the households while in all other size classes had a ration card of some kind, the proportion is the highest (86 per cent) in the classes "0.41-1.00 hectares" and "1.01-2.00 hectares." As regards AAY card, 2.7 per cent of households in the bottom class and even the top class (above 4.01 hectares) possess it (Table 1).

Table 1. Percentage of *Antyodaya* (AAY) & Below Poverty Line households by size class of Land Possessed: Rural All India

Size class of land possessed (hectares)	Per 1000 no. of hhs possessing ration card of type					Average MPCE (Rs)
	AAY	BPL	Other	No ration card	All	
less than 0.01	27	218	245	510	1000	528.43
0.01 – 0.40	40	316	417	227	1000	535.65
0.41 – 1.00	30	275	555	139	1000	541.64
1.01 – 2.00	16	211	633	140	1000	569.30
2.01 – 4.00	11	176	657	156	1000	613.01
above 4.01	8	105	704	183	1000	741.25
all sizes	29	265	518	187	1000	558.78

Source: GoI (2007b)

Note: MPCE = monthly per capita consumer expenditure

However, it would be worthwhile to verify the errors in targeting by examining the distributional profile of the AAY/BPL cardholders across expenditure classes (Table 2). This is for the following reasons: (i) land possessed alone would not indicate the actual economic status for reasons like differences in quality and productivity; and (ii) targeted PDS is implemented subject to the bound set by consumption-based estimates of poverty. Official poverty lines for rural and urban India for the year 2004-05 are Rs 356.30 and Rs 568.60 respectively; 28 per cent of the rural and 26 per cent of the urban population were poor in 2004-05 (GoI, 2007a). However, about 29 per cent of the rural and only 13 per cent of the urban population benefited from targeted PDS (Table 2). Among the beneficiaries of this programme, 70 per cent in the rural and 43 percent in the urban sector was non-poor (Table 4). The NSS data for the 61st round reports size distribution of households across twelve percentile classes of monthly per capita consumer expenditure (MPCE) for both rural and urban sectors. The estimates show that the poorest four MPCE

classes, which accommodated the poorest thirty per cent of the population, did not exhaust the set of AAY/BPL cardholders. More than 50 per cent of the households in these MPCE classes did not have the AAY/BPL ration cards (Table 3). Households across all expenditure classes possessed either the AAY or the BPL ration card, though, as a percentage, the number of such households generally declined with expenditure levels in both rural and urban sectors (Table 3). In rural India, even the richest percentile class (consisting of the richest five per cent of the rural population) included households possessing the AAY/BPL ration card. Nearly one (0.8) per cent had the AAY card and about 11 per cent had the BPL card. In urban India, at least one-hundredth of the richest five per cent had the BPL card. In sum, majority of the households with AAY/BPL ration card are in the non-poor/richer MPCE classes. This would imply serious Type I and Type II errors in PDS targeting. These estimates make a sad commentary on the state of targeted *PDS* in India.

Table 2. Distribution of Population by PDS Cards: Rural and Urban India (2004-05)

Type of PDS card	Rural	Urban
AAY	2.80	0.94
BPL	26.01	11.58
Others	55.27	61.34
No card	15.92	26.13
Total	100.00	100.00

Source: Tabulated from the unit-record data

4. Explanation and its Verification

The findings of the preceding section show that there is little basis for the kind of recommendations made by the Eleventh Plan. Type I error should be the issue of serious policy concern because the targeted PDS appears to be already universal. A moot question would be how valid is this interpretation? The National Sample Survey Organisation (NSSO) explains this feature as follows: "*It should be mentioned here that the MPCE of a household is based on its consumption expenditure during the last 30 days. A poor household that bought a durable good during the 30 days prior to the date of survey might conceivably be placed in a higher MPCE class than the class in which its usual MPCE lies.*" (GoI 2007b, p.16). This would mean that majority of the "*usually*" poor households fall in the NSS non-poor expenditure classes and the NSS database is not of much use for studies on poverty. This is because the statement, if valid, would amount to stating that the NSS estimates of consumption distribution do not represent the "*usual MPCE*" and hence, do not make any sense. It would even call for revising estimates of rural poverty upwards by 20-percentage point for rural India and 5.35-percentage point for urban India. The revised estimate would be 48.3 per cent for rural India and 31 per cent for urban India. If the explanation were invalid, it would mean how badly implemented is the targeted poverty alleviation programme. Therefore, it is important to examine the validity of the NSSO explanation for the observed distribution of AAY/BPL cards across the entire range of consumption distribution and hence, the reliability of the NSS information base.

Table 3. Percentage of *Antyodaya* & Below Poverty Line households by MPCE class and their reliance on the PDS: All India

Rural Sector				Urban Sector			
MPCE class (Rs)	% of hhs with Antyodaya or Below Poverty Line card	% of consumption from PDS by A&BPL hhs		MPCE class	% of hhs with Antyodaya or Below Poverty Line card	% of consumption from PDS by A&BPL hhs	
		Rice	Wheat			Rice	Wheat
0-235	48.8	30.27	35.84	0 – 335	33.4	41.94	31.25
235-270	44.3	27.90	28.43	335 – 395	28.3	38.79	30.61
270-320	40.8	27.97	29.51	395 – 485	26.4	33.34	32.18
320-365	38.3	26.95	26.44	485 – 580	19.9	37.04	33.34
365-410	33.9	26.40	30.39	580 – 675	17.8	35.25	28.67
410-455	33.1	25.51	28.01	675 – 790	11.6	32.56	22.98
455-510	31.0	27.91	27.99	790 – 930	10.1	34.28	20.84
510-580	25.7	27.28	27.65	930 – 1100	6.9	32.35	14.57
580-690	23.8	28.54	29.27	1100 – 1380	4.1	23.20	22.89
690-890	19.8	28.13	23.90	1380 – 1880	2.2	26.79	5.22
890-1155	15.2	27.43	18.07	1880 – 2540	1.5	17.36	8.91
1155 & more	12.0	21.85	24.03	2540 & more	0.9	25.35	30.27
All classes	29.4	27.40	28.16	All classes	11.3	34.95	28.08

Source: Estimates based on GoI (2007b)

Note: % of A&BPL hhs = Percentage of households with *Antyodaya* or Below Poverty Line ration card in each expenditure class

Table 4. Distribution of *Antyodaya Anna Yojana* and BPL cards between the Poor and the Non-Poor: Rural and Urban India (2004-05)

	Poor	Non-poor	Total
Rural	30.47	69.53	100.00
Urban	57.26	42.74	100.00

Source: Tabulated from the unit-record data

To begin with, the NSSO explanation may be verified with reference to the distribution of AAY/BPL card between the poor (BPL) and non-poor (APL) classes as defined by the GoI for the rural and urban sectors. The estimates show that only 30.47 per cent of the rural poor have AAY/BPL card; PDS seems to be better targeted in the urban sector where this percentage estimate is 57 per cent (Table 4).

The NSSO explanation for this apparent profile of Type I and Type II errors in PDS targeting is that the poor incurred durable expenditure during the 30 days preceding the date of interview and hence, the NSS (30-day-reference period) estimates of consumption were overstated leading to their inclusion in class intervals above the poverty line (GoI 2007b, p. 16). This boils down to the hypothesis that the poor and non-poor households possessing AAY/BPL PDS cards differ essentially in terms of durable expenditure and are comparable with respect to

other items of consumption, that is, non-durables. Tables 5 to 7 provide estimates of total monthly per capita consumer expenditure, per capita expenditure on durables and non-durables separately for select percentiles of the following population sub-groups. They are (i) poor; (ii) non-poor; (iii) aggregate (poor & non-poor combined); (iv) poor with AAY/BPL card; (v) non-poor with AAY/BPL card; and (vi) aggregate with AAY/BPL card in the rural and urban sectors respectively. Some relevant findings are as follows:

i.   The percentage budget share of durables appears to be too small to validate the NSSO explanation: While the rural poor spend, on an average, less than half percent of their total consumption budget, the rural non-poor spend about 4 per cent and the rural population as a whole about 3.5 per cent (Table 5).

ii.   The hypothesis under review pertains to the sub-sets of population with AAY/BPL card and the profile is not very different for them too. The poor with AAY/BPL card spends 0.38 per cent, the non-poor with AAY/BPL card about 3.21 per cent and the combined of these two sub-groups about 2.50 per cent of its consumption budget (Table 6).

iii. Mean-based estimates of averages for skewed distribution can mislead. Hence, one may look at the order-based estimates provided in these tables. What is striking is that nearly 75 per cent of the population in all categories does not spend anything on durables (Tables 5 & 6).

iv.   The profiles are similar across corresponding sub-groups in urban India too (Tables 7 & 8).

The findings presented above are based on simple descriptive statistics and it would be worthwhile to statistically verify and validate the NSSO explanation. One option could be to examine if the NSS estimates of consumer expenditure on non-durable and durable items respectively differ significantly between the poor as a whole, poor and non-poor households with AAY/BPL card. The regression estimates show that they are indeed different (Table 9). Hence, the actual information does not corroborate the NSSO explanation.

This issue may be verified further with reference to the geographical profile of the targeted PDS beneficiaries. This is because the Governments in several states like Kerala and Tamil Nadu have gone about targeting the PDS to a much larger subset of the population than that recommended by the Planning Commission. In fact, the PDS is universal in Tamil Nadu.[17]

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[17] "Public Distribution System in Tamil Nadu is a universal system to cover all the needy families by supplying rice at a price much lower than the BPL price fixed by the Government of India under the Targeted Public Distribution System. Rice is sold at Rs.2.00 per kg from 03.06.2006 to the card holders…. As per the Government of India estimate, the number of BPL families in Tamil Nadu is 48.63 lakhs. This State is not following the system of classification of families as Above Poverty Line (APL)/Below Poverty Line (BPL) families based on income criterion as followed by the Government of India and other States for distribution of grains (rice) under Public Distribution System. In other words, there is no BPL/APL classification in our State right from the date of introduction of TPDS by the Government of India. Out of the total 1.89 crore family card-holders in this State, except about 10.25 lakhs card-holders who have given their option for drawal of extra sugar instead of rice, the remaining 1.78 crore card-holders are drawing rice under Public Distribution System" (http://www.tncsc.tn.gov.in/html/pds.htm as on 26 March 2011). While the Tamil Nadu Government clearly states that its PDS is universal, the NSS shows that the percentages of households with AAY/BPL card are 1.5/19 (rural) and 0.6/12.8 (urban) in Tamil Nadu (GoI, 2007b; p. 13).

Since the all-India profile is an aggregation across states, it could be that the targeting errors largely reflect some state-specific peculiarities like universal PDS with high consumption/income levels. However, the estimates of spatial profile of the beneficiaries by different fractile groups do not provide much evidence to corroborate this proposal (Table 10). More than 10 per cent of the beneficiaries among the all-India rural richest decile group are from Uttar Pradesh; Tamil Nadu does not even figure in the profile of states with perceptible shares (more than five percent) of beneficiaries across fractile groups. In other words, the PDS seems to be generally universal with substantial Type I errors.

Table 5. Consumption Profiles of Poor, Non-poor and Total Population: Rural India (2004-05)

Percentiles	Monthly per capita consumption (Rs) of								
	BPL population			APL population			Total population		
	Total	Durables	Non-durables	Total	Durables	Non-durables	Total	Durables	Non-durables
p1	140.50	0.00	140.08	359.42	0.00	357.18	177.83	0.00	177.20
p5	190.70	0.00	190.25	372.50	0.00	369.83	236.42	0.00	235.75
p10	215.00	0.00	214.28	387.92	0.00	385.00	270.71	0.00	269.38
p25	252.78	0.00	251.83	436.30	0.00	432.50	341.75	0.00	339.42
p50	293.40	0.00	292.27	537.69	0.00	531.58	455.67	0.00	451.00
p75	326.33	0.00	325.00	713.20	2.60	700.52	626.00	1.43	616.67
p90	343.79	2.50	342.80	1006.33	19.29	971.60	887.88	12.22	864.22
p95	350.00	5.71	349.00	1290.11	51.17	1231.60	1152.04	33.33	1106.10
p99	355.02	21.25	354.64	2490.10	420.00	2095.93	2165.00	275.00	1876.50
Mean	284.84	1.10	283.74	666.82	26.39	640.43	558.62	19.23	539.39

Source: Tabulated from the unit-record data

Table 6. Consumption Profiles of Population Groups and Sub-groups with targeted PDS cards: Rural India (2004-05)

Percentiles	Monthly per capita consumption (Rs) of								
	BPL population with Antyodaya or BPL card			APL population with Antyodaya or BPL card			Population with Antyodaya or BPL card		
	Total	Durables	Non-durables	Total	Durables	Non-durables	Total	Durables	Non-durables
p1	137.17	0.00	137.17	358.75	0.00	354.90	153.48	0.00	153.48
p5	177.41	0.00	177.00	367.80	0.00	364.89	210.75	0.00	209.88
p10	201.55	0.00	200.80	378.42	0.00	375.50	243.00	0.00	241.63
p25	244.29	0.00	242.57	415.04	0.00	411.38	304.00	0.00	302.33
p50	287.40	0.00	286.40	487.00	0.00	481.03	391.33	0.00	388.47
p75	323.40	0.00	322.00	617.70	2.00	605.77	516.00	0.00	509.50
p90	342.00	2.50	341.00	804.25	16.25	782.20	695.45	7.50	680.78
p95	348.75	5.56	347.63	1007.50	50.00	958.33	844.00	24.25	818.46
p99	354.78	18.75	354.20	1887.58	282.40	1574.17	1432.30	160.00	1335.95
Mean	278.72	1.05	277.66	574.45	18.46	555.98	453.80	11.36	442.44

Source: Tabulated from the unit-record data

Table 7. Consumption Profiles of Poor, Non-poor and Total Population: Urban India (2004-05)

Percentiles	Monthly per capita consumption (Rs) of								
	BPL population			APL population			Total population		
	Total	Durables	Non-durables	Total	Durables	Non-durables	Total	Durables	Non-durables
p1	197.00	0	195.83	545.19	0	541.38	241.79	0	241.40
p5	256.17	0	255.33	572.55	0	568.06	333.90	0	331.87
p10	290.73	0	289.50	605.90	0	600.17	394.13	0	391.43
p25	355.13	0	353.13	722.83	0	714.70	533.35	0	529.00
p50	421.59	0	418.88	976.50	0	958.70	792.00	0	778.03
p75	479.69	0	476.20	1427.50	4.00	1394.83	1219.20	2.14	1197.00
p90	513.53	4.4	510.73	2140.79	35.00	2066.95	1882.43	24.00	1835.88
p95	526.83	10	525.14	2838.63	100.00	2688.00	2514.50	67.50	2422.00
p99	536.11	46.25	535.50	5438.33	750.00	4638.85	4689.98	493.00	4284.80
Mean	410.80	2.33	408.48	1273.76	56.83	1216.93	1052.49	42.85	1009.64

Source: Tabulated from the unit-record data

Table 8. Consumption Profiles of Population Groups and Sub Groups with Targeted PDS cards: Urban India (2004-05)

Percentiles	Monthly per capita consumption (Rs) of								
	BPL population with Antyodaya or BPL card			APL population with Antyodaya or BPL card			Population with Antyodaya or BPL card		
	Total	Durables	Non-durables	Total	Durables	Non-durables	Total	Durables	Non-durables
p1	196.25	0.00	192.80	540.40	0.00	513.50	203.42	0.00	201.67
p5	236.22	0.00	236.07	553.20	0.00	547.40	267.75	0.00	267.56
p10	270.58	0.00	269.63	568.90	0.00	562.94	307.56	0.00	304.55
p25	330.00	0.00	329.57	614.57	0.00	607.50	393.25	0.00	390.51
p50	401.20	0.00	398.75	718.83	0.00	705.60	516.34	0.00	511.83
p75	465.06	0.00	462.42	913.38	3.00	894.00	696.65	1.14	683.73
p90	504.22	5.00	502.25	1178.50	24.00	1138.31	959.50	10.00	931.75
p95	520.14	10.83	520.14	1423.70	75.00	1354.00	1160.67	29.17	1108.57
p99	536.11	50.00	534.25	2274.10	666.67	1976.35	1883.10	261.67	1719.43
Mean	393.69	2.31	391.38	836.95	32.14	804.81	599.97	16.19	583.79

Source: Tabulated from the unit-record data

Table 9. Test of the NSSO Explanation: Rural India

Regression results

	Rural India		Urban India	
Regressors	*Per capita expenditure on durables*	*Per capita expenditure on non-durables*	*Per capita expenditure on durables*	*Per capita expenditure on non-durables*
Household is poor and has AAY/BPL card	10.30 (0.00)	100.43 (0.00)	26.77 (0.00)	423.80 (0.00)
Household is poor	(-) 27.71 (0.000)	(-)378.84 (0.000)	(-)56.53 (0.000)	(-)837.05 (0.000)
Household has AAY/BPL card	(-) 10.38 (0.017)	(-)110.81 (0.000)	(-)26.79 (0.257)	(-)447.02 (0.000)
Constant	28.84 (0.000)	666.88 (0.000)	58.86 (0.000)	1251.61 (0.000)
F-statistic	*** (0.000)	*** (0.000)	*** (0.000)	*** (0.000)

Note: *** indicates very large number

Figures in parentheses are p-values

Table 10. Geographical profile of Targeted PDS Beneficiaries by fractile groups: Rural & Urban India (2004/05)

State	Bottom quartile	25 – 50 percentile	50 -75 percentile	75- 90 percentile	Top decile	Total population
Rural India						
Andhra Pradesh	11.91	16.56	20.55	24.99	25.15	17.57
Bihar	7.24	6.07	3.73	1.25	0.77	4.99
Chhattisgarh	5.25	3.23	1.93	1.35	1.57	3.23
Gujarat	3.18	5.94	6.6	8.77	4.64	5.5
Karnataka	8.36	10.37	8.06	7.64	3.78	8.48
Kerala	0.93	1.81	4.18	7.83	16.03	3.65
Maharashtra	9.82	8.92	9.61	9.16	9.07	9.41
Madhya Pradesh	11.18	6.38	4.63	2.36	2.81	6.78
Orissa	13.82	5.63	2.83	1.61	1.34	6.81
Uttar Pradesh	10.04	8.19	8.02	6.09	10.46	8.61
West Bengal	6.36	9.69	10.41	9.75	6.7	8.74
Rural India	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Urban India						
Andhra Pradesh	17.83	23.60	23.35	17.17	26.79	20.62
Gujarat	3.28	7.72	3.49	2.29	6.12	4.66
Karnataka	10.40	9.25	6.74	9.27	0.96	9.23
Kerala	3.47	5.53	9.04	12.89	10.27	5.58
Maharashtra	12.60	10.09	8.83	8.61	9.53	10.97
Madhya Pradesh	8.97	4.69	2.56	1.92	12.93	6.32
Tamil Nadu	9.31	13.47	15.18	21.2	16.70	12.23
Uttar Pradesh	9.38	4.89	9.5	6.92	3.71	7.83
West Bengal	7.34	6.75	9.12	3.26	5.93	7.25
Urban India	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Notes:

(i) Each column provides percentage distribution of the targeted PDS beneficiaries across states; figures reported are only for states where the number exceeds five at least for one cell.

(ii) The estimates corresponding to rural/urban India indicate the share of rural/urban beneficiaries across all states and union territories corresponding to each fractile group defined at the all-India rural/urban level.

Source: Tabulated from the unit-record data

5. Conclusion

Studies on poverty in India have generally not bothered to examine the veracity of the information base and its implications before defining the poverty line, making estimates of poverty, interpreting them and making policy recommendations. This applies to academic research as well as policymaking. The Eleventh Five-Year Plan of the GoI has recommended options for universal PDS to promote general food security. The Expert Group on redefining the poverty line has made its recommendations on the poverty line and estimates of poverty. Both these recommendations are based largely on NSS data sets without verification. The expert bodies do not seem to be aware of the fact that the NSS data set reveals virtually universal coverage of the targeted PDS in both rural and urban India. They do not even verify the NSS explanation for this apparent anomaly that genuinely poor households are spread over even the upper percentile classes, which, if valid, would vitiate the NSS estimates as representative estimates of the underlying distribution and hence, its utility as an information base. This paper looks into the validity of the NSSO explanation and finds limited basis for the same. In other words, the targeted PDS seems to be generally universal. As regards food insecurity, it is no longer one of constraints on economic/physical access for the majority of the population. The majority seem to have opted for reduced food consumption and calorie intake by choice since their real incomes as well as per capita availabilities have increased over time. This has happened without any health disaster. Therefore, the real issue is one of inadequate food consumption of the poor and hence, Type I error in the targeted PDS and consumer education, which is not recognised and appreciated in the current policy discussions on food insecurity. This could be because the NSS is top-down. Its estimates deteriorate as we move down; in fact, there are no estimates at all below the district level. One option to overcome this kind of problems and facilitate an understanding of ground realities could be to set up an institutional capacity for information based on the bottom-up approach. Such a system, based on the gram panchayats for collection, updating and maintenance of wide-ranging data on households, individuals, village infrastructures and resource base, would be a complement to the current top-down system. This would go a long way in addressing issues connected with the dynamics of rural development and change (poverty and human development inclusive) and choice of appropriate policies.

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