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Abstract

In the context of the current public policy focus on rising food prices and their implications for food security, this paper examines two major issues raised: (i) Universalization of the public distribution system; and (ii) its implications for procurement and buffer-stocks. This paper is based on the recent evidence on the profile of public distribution system, its targeted version in particular, household's reliance on the public distribution system and the open market, and its policy implications. The paper concludes that the need of the hour is not universalisation of the PDS but a revision of the food security norm, a BPL-friendly PDS and its efficient functioning.

Key words: BPL (Below Poverty Line), Stable food prices, Targeting Effectiveness

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Agflation and the PDS: Some Issues

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The threat of agflation that is, rising food prices has received much public and policy attention in India as well as the world over in recent weeks.¹ Some political parties in India have demanded even universalisation of the public distribution system (PDS). Of course, the government seems to be aware of the constraints on such a policy option as evident from the agriculture minister who has tried to explain them in terms of the huge procurement and buffer stock requirements for the PDS and their adverse implications for food grain prices and hence, for the food security of the poor.

1. Issues

Two broad issues have been raised: (i) A case for universalisation of the PDS; and (ii) its implications for procurement and buffer stocks. One is not sure how valid is the case for universalisation and whether there is any other issue that more than meets the eye. This is because the Government has announced several targeted measures to improve policy effectiveness on food security of the poor in particular during the reform era initiated in 1991. It has classified the PDS cardholders as between poor, that is, those below the poverty line (*BPL*) and non-poor, that is, those above the poverty line (*APL*) households to define food grain and subsidy benefits by differential pricing and quantity entitlements. It has introduced another category by starting the *Antyodaya* scheme in December 2001 to provide for 25 kg of food grains at highly subsidised prices of Rs 2 per kg for wheat and Rs 3 per kg for rice for one crore poorest *BPL* families. Therefore, it would be important to examine the issues in the context of the latest available information on the current state of the PDS, which has been the subject of considerable public focus for reform.

2. Importance of Stable food prices

The importance of an effective policy for stable food grain prices as an instrument in ensuring sustained poverty reduction cannot be overemphasized. Empirical studies have observed enough evidence to corroborate this proposition. A comprehensive study has shown that a 10 % increase in the food grain price in the current year would increase rural poverty by 10.6 % in the next year while a 10 % increase in food grain output would reduce rural poverty by only 6.2 % in the current year (Bhattacharya *et al.*, 1991; p. 133). Another relevant finding in the current context of non-agriculture led growth process is that rural poverty would increase by 5.4 % in response to a 10% increase in non-agricultural income. The same study has also shown that the government policy of procurement-cum-distribution had only marginal impact on poverty.

Because of relative price stability and economic growth since the mid-1990s, we would not re-estimate the Bhattacharya *et al.* (1991) model and verify its policy implications. Moreover, as already pointed out, much water has flowed during the reform era in terms of policy pronouncements for revamping and improving the targeting effectiveness of the PDS. Hence, it would be worthwhile to examine the PDS and its profile across socio-economic groups and

¹ The term 'agflation' refers to food inflation caused by increases in demand for food resulting from (i) human consumption; and (ii) use as a bio fuel.

the likely implications for food security in an era of food inflation. We propose to examine the findings based on the seventh quinquennial Consumer Expenditure Survey conducted by the National Sample Survey (NSS) Organisation of the Government of India during July 2004-June 2005.

3. PDS Profile

As per the NSS findings, 81 % of the rural and 67 % of the urban households in the country as a whole had ration cards in the year 2004-05. How far was it targeted? As against the estimated incidence of rural household poverty of 24.5 %, three per cent of the households in rural India possessed the *Antyodaya* card and hence, benefited as ultra-poor and another 26.5 % benefited as *BPL* ration card holders; 52 % of the rural households were ordinary card holders while the rest (18.7 %) were without any card. Urban poverty was 25.7 % of the households; less than one per cent of the urban households had *Antyodaya card*, 10.5 % had *BPL* card, 55.6 % had ordinary PDS card and 33.1% had no card (Table 1). Thus, the PDS is predominantly rural in terms of absolute as well as percentage number of households possessing ration cards. It benefited majority of the households and virtually universal in the sense that more than two-thirds of the households in the urban and four-fifths in the rural areas possessed ration cards while the maximum percentage of market dependent households for rice/wheat was 92 per cent in rural/urban India (Table 3).

Table 1: Distribution of households by ration card type, and incidence of household poverty: major states (2004/05)

State	Rural Sector					Urban Sector				
	Percentage of households with				Household poverty (%)	Percentage of households with				Household poverty (%)
	<i>Antyodaya</i> card	<i>BPL</i> card	Other card	No card		<i>Antyodaya</i> card	<i>BPL</i> card	Other card	No card	
Andhra Pradesh	2.8	54	16	28	9.61	1.5	26.6	18	54	22.95
Assam	0.6	12	63	25	19.75	0.2	3.2	40	56	2.79
Bihar	2.3	15	60	23	38.06	0.8	4.7	42	52	26.46
Chhattisgarh	4.4	35	32	29	35.61	2.1	15.2	40	43	35.55
Gujarat	0.8	36	50	13	14.72	0.1	8.4	67	24	11.29
Haryana	2.6	16	68	13	11.17	1.5	9.9	61	28	10.67
Jharkhand	3	23	51	23	40.84	0.8	7.5	33	58	15.43
Karnataka	9.6	42	26	23	17.45	2	14.4	33	51	26.31
Kerala	1.8	28	57	13	10.83	0.9	19.8	60	19	14.57
Madhya Pradesh	3.3	31	38	28	33.12	1.9	12.7	43	43	37.04
Maharashtra	4.4	31	46	19	24.95	0.3	8	67	25	25.49
Orissa	2	42	23	33	44.97	1.3	11.8	29	58	39.32
Punjab	0.1	12	76	12	7.65	0	3.9	66	30	4.64
Rajasthan	2.8	16	78	4	15.34	0.6	2.4	82	15	25.68
Tamil Nadu	1.5	19	69	11	20.09	0.6	12.8	64	22	19.01
Uttar Pradesh	2.8	14	65	19	28.58	0.7	7.2	57	36	22.49
West Bengal	3.2	27	61	8	24.33	0.8	8.8	71	20	9.89
All-India	2.9	26.5	51.8	18.7	24.5	0.8	10.5	55.6	33.1	20.13

Note: The term 'major state' refers to a state, which had a population of 20 million or more as per the 2001 Census.

Source: GoI (2007b; p. 13) and estimates of household poverty were made using the NSS unit record data and state- and sector-specific poverty lines published by the Planning Commission (GoI, 2007a)

The profile observed for the country as a whole generally held across major states with variations around the national average. The states of Andhra Pradesh, Karnataka and Orissa stood out for high proportion of *BPL*-card households. Andhra Pradesh had the maximum percentage number of *BPL*-card households (rural: 54 %; urban: 27 %) as against estimated rural household poverty of 10% and urban at 30%. Karnataka had *BPL*-card households of 42% (rural) and 14.4 % (urban) as against household poverty estimates of 17% (rural) and 26% (urban). Orissa provided the *BPL*-card to 42% of rural households and 11.8% of urban households as against the estimated poverty ratios of 45 % (rural) and 39 % (urban) (Table 1).

As regards the socially vulnerable groups in rural India, 5 % of the Scheduled Tribe (ST), 4.5 % of the Scheduled Caste (SC), two per cent for other (including Other Backward Castes (OBC)) households possessed *Antyodaya* card. As regards the *BPL*-card, 40 % of the ST, 35 % of the SC, 25 % of the OBC and 17 % of the other households were the beneficiaries. In sum, three-fourths of the ST and more than four-fifths of the SC, OBC and Other social groups possessed ration card in one form or the other (Table 2).

The urban profile was slightly different: More than one per cent of the SC and ST households possessed *Antyodaya* card while the percentage was less than one for other groups. The percentage number of households holding the *BPL* card was the highest for the SCs (17 %), followed by ST and OBC households (about 14 % each) and Others (5 %). In the urban sector, about one-half of the ST and more than two-thirds of each of the SC, OBC and Other social groups had access to the PDS outlets (Table 2).

Table 2: Distribution of households by ration card type, and incidence of household poverty: major social groups – All India (2004/05)

Social group	Rural Sector					Urban Sector				
	Percentage of households with				Household poverty (%)	Percentage of households with				Household poverty (%)
	Antyodaya card	BPL card	Other card	No card		Antyodaya card	BPL card	Other card	No card	
SC	5.0	39.6	30.8	24.6	43.35	1.3	13.6	37.6	47.5	29.81
ST	4.4	34.9	43.7	17.0	31.73	1.6	17.3	49.8	31.3	33.12
OBC	2.3	24.5	54.5	18.7	22.91	0.9	14.4	51.5	33.2	24.22
Others	1.9	17.3	63.0	17.7	13.01	0.4	5.2	61.8	32.6	12.06
Total	2.9	26.5	51.8	18.7	24.50	0.8	10.5	55.6	33.1	20.13

Source: GoI (2007b; p. A-198 & p. A-216) and estimates of household poverty were made using the NSS unit record data and state- and sector-specific poverty lines published by the Planning Commission (GoI, 2007a)

4. Reliance on the PDS

Most important issue that should cause concern is not that of universal coverage but quality of food grains sold, availability and transaction costs, which deter the cardholders from availing themselves of the PDS. For instance, though 81% of the rural households in the country as a whole had ration cards, only 24% reported rice consumption from the PDS and only 11% for wheat. As regards urban India, 67% of the households had ration cards but only 13 % for rice and 11 % for wheat used the PDS (Table 3). The extent of their dependence on the PDS for rice and wheat was very limited in sense that on an average a rural / urban

household obtained about/less than 10 per cent of its consumption of rice/wheat from the PDS (Table 4). In general, the rural and urban households did not rely on the PDS at all.

Among the major states where the PDS operation is pronounced and significant, the following features may be noted:

Table 3: Percentage of households reporting consumption during a 30-day period (in 2004-05) from PDS and from any source: major states

State	Percentage of Households Reporting Consumption during a 30-Day Period							
	Rice				Wheat			
	From PDS		From any source		From PDS		From any source	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	62.2	31.1	96	94	0.6	0.7	27	56
Assam	9.0	2.3	100	93	0.2	0.3	56	78
Bihar	1.0	0.7	100	98	1.7	1.5	96	97
Chhattisgarh	21.7	13.2	99	97	5.3	5.4	31	76
Gujarat	31.5	7.2	94	94	28.7	6.8	83	91
Haryana	0.1	0.0	82	92	4.0	5.2	99	98
Jharkhand	4.4	2.8	99	92	4.3	2.0	71	89
Karnataka	58.5	21.0	98	91	45.6	14.6	74	81
Kerala	34.6	23.3	98	93	12.2	12.1	60	72
Madhya Pradesh	17.9	8.7	80	93	20.3	10.3	94	98
Maharashtra	27.5	6.0	93	93	25.8	6.9	86	91
Orissa	21.5	5.8	98	93	0.2	1.0	36	68
Punjab	0.1	0.1	74	85	0.3	0.6	100	96
Rajasthan	0.0	0.2	41	70	12.7	1.9	87	95
Tamil Nadu	78.9	47.7	97	93	8.9	10.7	29	61
Uttar Pradesh	5.8	2.1	96	96	5.6	2.6	99	98
West Bengal	12.8	5.4	99	94	9.0	3.5	61	82
All-India	24.4	13.1	92	92	11.0	5.8	72	83

Source: GoI (2007b; p. 18)

- Though 90 % of the rural and 77 % of the urban households in Tamil Nadu had ration cards, 79% of the rural and 48 % of the urban households reported having obtained rice from the PDS for their consumption; as regards wheat about 10% of the rural and urban households used the PDS also (Table 3). However, the extent of their reliance on the PDS was much less: on an average, a rural household obtained only 40% of its rice/wheat consumption from the PDS while the urban household got 28% of its rice and 23% of its wheat consumption from the PDS (Table 4).
- Other states where the PDS played an important role and the proportions of households, which reported consumption from the PDS, are as follows: For rice, Andhra Pradesh (rural: 62%; urban: 31 %), Karnataka (rural: 59%; urban: 21%) and Kerala (rural: 35%; urban: 23%). The estimated percentages of households which used the PDS wheat also for consumption and which were pronounced pertain to the states of Karnataka (rural: 46%; urban: 15%), Gujarat (rural: 29%), Maharashtra (rural: 26%), and Madhya Pradesh (rural: 20%; urban: 10%) (Table 3). In all these

states, dependence on the PDS, that is, corresponding percentages of purchases from the PDS were generally much less (Table 4).

Table 4: Reliance on the PDS: percentage of consumption from the PDS by category of households: major states (2004-05)

State	Rural Sector				Urban Sector			
	Rice		Wheat		Rice		Wheat	
	A&BPL hhs.	All hhs.	A&BPL hhs.	All hhs.	A&BPL hhs.	All hhs.	A &BPL hhs.	All hhs.
Andhra Pradesh	33.74	23.26	5.16	3.16	36.49	14.55	2.78	1.28
Assam	26.04	3.90	0.48	0.15	30.27	1.74	0.00	0.08
Bihar	1.75	0.54	5.97	1.08	2.36	0.61	9.33	1.35
Chhattisgarh	23.33	11.54	30.85	16.19	36.50	10.75	41.67	5.12
Gujarat	31.36	13.35	41.06	14.81	28.67	3.24	22.98	3.07
Haryana	0.00	0.03	12.99	2.43	0.00	0.02	29.76	4.69
Jharkhand	5.55	1.54	17.56	4.07	14.35	1.99	11.18	1.53
Karnataka	73.61	46.51	83.55	54.38	60.21	18.17	63.73	13.68
Kerala	42.37	20.18	40.95	26.67	40.39	15.99	47.98	21.74
Madhya Pradesh	30.71	15.71	32.12	11.97	29.49	5.05	38.29	7.02
Maharashtra	48.08	21.25	61.02	26.21	37.97	4.63	43.09	6.83
Orissa	13.85	7.01	1.96	0.56	15.06	2.94	3.52	0.94
Punjab	0.53	0.10	1.57	0.22	0.00	0.38	0.69	0.60
Rajasthan	0.00	0.00	45.26	10.49	1.33	0.16	25.43	1.73
Tamil Nadu	51.77	40.37	61.64	40.24	48.90	28.05	51.17	23.38
Uttar Pradesh	18.89	3.50	12.56	2.29	15.71	1.84	10.90	1.23
West Bengal	5.87	2.29	45.67	15.93	7.64	1.87	29.48	3.50
All-India	27.40	13.16	28.16	7.32	34.95	11.24	28.08	3.82

Note: A&BPL hhs. = Households with *Antyodaya* and *BPL* cards.

Source: Computed from different tables in GoI (2007b)

5. Targeting Effectiveness

The targeted versions of the PDS, in spite of the good intentions, involved errors of both omission (of the eligible poor households) (called Type I error in targeting) and excess coverage of the ineligible non-poor households (called Type II error) even today.² The NSS 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 *Antyodaya* & *BPL* cardholders. More than 50 per cent of the households in these MPCE classes did not have the *Antyodaya* & *BPL* ration cards (Table 5). Households possessing the *Antyodaya* and the *BPL* ration cards, though generally declining in percentage number, were found across higher percentile classes of expenditure in both rural and urban sectors (Table 5). In rural India, even the richest percentile class (consisting of the richest five per cent of the rural population) included households possessing the *Antyodaya* and the *BPL* ration cards: Nearly one (0.8) percent had the *Antyodaya* card and about 11 % had the *BPL*-card. In urban India, at least one-hundredth of the richest five per cent had the *BPL*-card. In other words, there is considerable scope for reducing both Type I and Type II errors in the targeted versions of PDS.

² See Cornia and Stewart (1993) for details regarding errors in targeting.

Table 5: Percentage of A&BPL households by MPCE class and their reliance on the PDS: All India

Rural Sector				Urban Sector			
MPCE class	% of A&BPL hhs	% of consumption from PDS by A&BPL hhs		MPCE class	% of A&BPL hhs	% 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

Notes: (1) % of A&BPL hhs = Percentage of households with *Antyodaya* and *BPL* ration cards in each expenditure class. (2) It should surprise to find majority of the households with *Antyodaya* & *BPL* ration cards in the non-poor/richer MPCE classes; the estimated poverty lines for rural and urban India for the year 2004-05 are Rs 356.30 and Rs 568.60 respectively (GoI, 2007a). GoI (2007b) 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; Footnote # 3). One is not sure how valid could this explanation be since it would mean that majority of the “usually” poor households fall in the NSS non-poor expenditure classes. *If this were really so, this Table makes a sad commentary either on the state of poverty statistics or on the poverty alleviation programmes in India.* 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; if the explanation were invalid, it would mean how badly implemented are the targeted poverty alleviation programmes even after nearly two decades of reform.

Source: Estimates based on GoI (2007b)

What is important to note is that the extent of dependence on the PDS by the *Antyodaya* & *BPL* card households is limited and about the same across percentile classes of expenditure (as observed in the profile for the country as a whole (Table 5)). While the *Antyodaya* & *BPL* card households in the poorest five per cent of the rural households obtained 30% of their consumption of rice from the PDS, the percentage varied around 27% for *Antyodaya* & *BPL* beneficiary households falling in the upper expenditure groups. As regards urban India, the dependence on the PDS for rice of the *Antyodaya* & *BPL* cardholders varied from 42 % among the poorest to 25 % among the richest. As regards wheat, the extent of dependence on the PDS varied around 28 % in both rural and urban sectors (Table 5). This would imply that

even the *Antyodaya* & *BPL* card households depended to a proportionately larger extent on the open market and hence, levels as well as stability of open market prices matter to ensure food security of the poor. It was only in Karnataka that the PDS met more than three-fourths of the rice/wheat consumption of the rural *Antyodaya* and *BPL* card households and about two-thirds of those of their urban counterparts (Table 4).

6. Implications and Issues

What does the discussion so far imply? What are the issues that call for policy attention?

- 1) If by universalisation of the PDS, the emphasis were on access to the PDS as a market source for food grains, then the PDS is virtually universal. All the more so in the rural sector because a significant proportion of the rural households are cultivator households and hence, do not rely on the market for food grains.
- 2) Still only a minor subset of the ration cardholding households depended upon the PDS. In general, even the *Antyodaya* & *BPL* card households obtained only about 30 per cent of their food consumption from the PDS. This could be because of either inadequate PDS entitlement or reasons like poor quality, high transaction costs, inadequate physical access and availability. Hence, more than univesalisation, the policy emphasis should be on rendering the PDS quite *BPL*-friendly by addressing these factors, which hamper poor households' willingness and ability to purchase from the PDS.
- 3) If the emphasis were on scrapping the differential pricing scheme on the basis of economic criteria and transferring subsidies to everyone, this would not serve any public welfare in a society, which has witnessed widening consumption/income inequalities during the reform era. Between 1993/94 and 2004/05, the share in consumption of the richest 10 % of the population has increased from 23 to 26 % in rural India and from 28 to 30 % in urban India.
- 4) In addition, NSS estimates provide evidence of a gradual decline in food grain consumption of the richest five/six decile groups *by choice* and gradual increase in the food grain consumption of the remaining (poorest) decile groups till 1999/2000 in both rural and urban India (Suryanarayana and Silva, 2005). Over the decades, with economic development involving structural and technological changes, levels of physical activity and corresponding energy requirement have declined. This could be one reason for the observed decline in food grain consumption and calorie intake by the upper decile groups of population in rural and urban India. Even the Government of India has acknowledged this fact and has called for a review of the Recommended Dietary Allowances (RDA) for Indians during the Tenth Five Year Plan (GoI, 2002; pp. 324-325). However, nothing much seems to have been done to revise the food security norms though several countries the world over have revised their respective norms downwards. Hence, the food security norms are still based on RDA worked out several decades ago. Hence, estimates of food insecurity based on outdated norms would not make much sense.
- 5) Estimates of food insecurity in India are generally made with reference to outdated norms worked out during the 1960s/1970s. Estimates of buffer stock, if based on similar norms, would be overestimates. And exaggerated estimates of buffer stock requirements and their periodic announcements by the Government would only

provoke speculative hoardings and escalated food grain price inflation. In other words, a review of the RDA for the Indians is the need of the hour and should be taken up on priority basis.

- 6) Most important, even assuming that the dated norms are valid today, any relaxation of the PDS pricing policy would call for additional procurement of food grains and end up virtually mopping up the entire marketed surplus. This will have adverse implications for food grain prices in the open market (Suryanarayana, 1995), which is the major source food for even the *Antyodaya* cardholders.

In sum, the need of the hour is not universalisation of the PDS but a revision of the food security norm, *BPL*-friendly PDS and its efficient functioning.

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