

Access to the Targeted Public Distribution System: A Case Study in Rajasthan

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This article examines the government of India's 1997 criteria for selection of households for below poverty line ration cards. The main conceptual problems are that the criteria are static and uniform across the entire country. Using primary data (collected in 2002) from 400 randomly selected households from eight villages of Rajasthan, the exercise here calculates the proportion of "wrongly excluded" (i.e., who qualify according to government criteria but did not get a BPL card) and "wrongly included" households. Of the one-third of sample households that were classified as BPL, nearly a quarter have been wrongly included. Besides, 44 per cent of the households which should have been counted as BPL were wrongly excluded. However, one must consider the appropriateness of the selection criteria along with these large selection errors.

The public distribution system (PDS) has been the subject of much debate, especially since it went from being a universal system (at least in theory) to being a targeted system in 1997. The introduction of the targeted public distribution system (in short, TPDS) in 1997 did two things. First, the population was divided into two cardholding categories: above poverty line (APL) and below poverty line (BPL) groups. APL prices were 80 per cent of the economic cost, whereas BPL prices were half of the economic cost. This led to a sharp fall in APL offtake and purchases.¹ Second, the TPDS restricted PDS entitlements to 10 kg per month per card for both APL and BPL cardholders.² This article takes a closer look at the means-test on which the TPDS relied in 1997 for selecting households into the two cardholding categories.³

1 Data and Sampling

For this study, data was collected from nearly 400 households in eight villages by means of a household and a village questionnaire. Apart from collecting data on the background characteristics of the households and individuals, the household questionnaire also collected data on the severity of the drought of 2001, the use of coping strategies, the PDS, and food-for-work programmes. This data collection was supplemented by group discussions and informal discussions with various people in the villages, including the sarpanch, ward panches, patwari, gram sewak and others. The village questionnaire was used to gather information on public (and other) amenities in the village and included a section for gathering information from the ration shop owner.

Two villages from each of four districts were chosen for the survey. A multistage sampling procedure was adopted. The first stage was the selection of districts, followed by selection of villages and finally of households within the sample villages. The districts were selected through a purposive sample. Since the survey could not cover very large parts of the state, or provide a sample in which all regions got adequate representation, the survey was carried out in four districts, chosen to reflect regional variations. The sample districts were Barmer, Bikaner, Jaipur and Udaipur. These districts not only give a fair geographic spread, but also reflect agro-climatic variations and differing levels of development in different parts of Rajasthan.

Table 1 (p 52) summarises the main development indicators for the four districts in the sample. Rural Bikaner and Jaipur enjoy better infrastructural indicators compared with Barmer and Udaipur. In terms of educational outcomes, e.g., literacy rates, Udaipur and Jaipur lie at the top of the pile. Udaipur has the most

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favourable indicators for women – the female-male ratio in rural Udaipur is 982 and female literacy rate is 10 per cent. However, in absolute terms, most districts have dismal indicators – the highest rural literacy rate is observed in Jaipur where it is only 35 per cent. Barmer lies at the bottom of the pile no matter which indicator we look at. Only 4 per cent of rural women in Barmer are literate, less than a third of the rural population has access to medical facilities, and there are merely 896 women for every 1,000 men.

A two-stage random sampling procedure was adopted to select the villages. The first stage was a selection of clusters, which

Table 1: Basic Features (1991) of the Survey Districts

	Barmer	Bikaner	Jaipur	Udaipur
Total population	14,35,222	12,11,140	47,22,551	28,89,301
Proportion (%)				
Rural population	90.0	60.3	85.2	82.9
Scheduled castes, rural	15.8	23.1	18.5	10.5
Scheduled tribes, rural	6.2	0.2	16.4	42.2
Rural female-male ratio (females per 1,000 males)	896	894	903	982
Rural literacy rate, 7+years (%)				
Female	4.2	8.8	12.3	10.3
Male	31.8	37.6	55.5	41.1
Total	18.8	24.1	35.1	25.8
Proportion (%) of rural population served by following facilities				
Education	85.6	97.5	93.6	92.2
Medical facilities	27.4	54.4	45.8	46.5
Drinking water	99.1	98.6	99.9	100.0
Pucca road	38.5	56.0	51.7	46.9
Power supply	42.7	84.1	81.3	67.6
Main cereals	Pearl millets	Pearl millets, wheat	Pearl millets, wheat, barley	Maize and paddy
Soil type	Sandy	Sandy	Alluvial	Red

Sources: Census of India 1991, Series 21 Rajasthan, Part XII A&B, District Census Handbook (Directorate of Census Operations, Rajasthan). Village level data from the 2001 Census was not available at the time of writing.

were taken to be revenue villages according to the 1991 Census. Though the population of revenue villages tends to vary quite a lot, the bulk of the population lies in villages with a population ranging between 800 and 1,500. A simple random sample of villages would give rise to bias in the estimates of population characteristics because it would give equal probability to selection of houses in small and large villages as it would to houses in medium-sized villages. This suggests that to get unbiased sample estimates for the population, households in medium-sized villages should have a higher probability of selection than those in small or large villages. This can be achieved by employing probability proportional to size sampling [Deaton 1997:15]. This has been done after excluding villages with population of less than 800 and of more than 1,500 from the sampling frame.

Another consideration in the selection of villages was whether it would be possible to stay in the village for the duration of the fieldwork. The sampling frame was further restricted to those villages within each district in which I was sure to find a family to live with. This gave a list of 35 to 101 villages per district from which the sample villages were chosen at random.⁴

Random sampling was also used to draw a list of “replacement villages”. The final sample includes four “sample” villages (Biramsar, Dulmera Station, Baasri Jogiyan and Sukaliya), three

“replacement” villages (Morda, Kharad and Badli) and one other village (Birothi).⁵

At the second stage a random sample of 400 households was chosen from the voter list of the village prepared by the district authorities.⁶ The sample also contains a few households that were neither in the list of sample households nor in the list of replacement households. This includes extremely destitute people who were encountered during the survey.⁷

The interviews were carried out with one or more adult members of each family. The respondents could be male or female; I tried to maintain a balance between the number of male and female respondents. Sometimes different sections were answered by different members.

2 Profile of BPL Households

Just over one-third of the sample households were classified as BPL. Another 4 per cent had Antyodaya or Annapoorna cards. Antyodaya and Annapoorna cardholders are supposed to be even poorer than other BPL households, and are entitled to subsidised foodgrain at prices lower than BPL prices.⁸ The term “BPL+” will be used from time to time to refer to the combined category of BPL, Antyodaya and Annapoorna cardholders. This corresponds to the set of households that are effectively included in the PDS.

APL households comprised the largest category, accounting for two-thirds of the sample households. The APL households in my sample were not purchasing any foodgrain from the PDS as the APL issue prices were higher than market prices.

Table 2 describes the profile of households in various categories. As this table indicates, BPL households are generally poorer than APL households. For instance, average land owned by BPL households is less than average land owned by APL households (this is true whether we look at irrigated or unirrigated land).

To supplement the other markers of economic disadvantage mentioned above, we have computed here an independent indicator: “predicted monthly per capita expenditure (MPCE)” in the

Table 2: Household Characteristics (by type of ration card)

	APL	BPL	Antyodaya	Annapoorna
Total number of households ¹	228	128	13	4
(Proportion of households)	(61.6)	(34.3)	(3.5)	(1.1)
Average predicted MPCE (Rs)	504.2	430.4	485.2	424.0
Proportion (%) below poverty line in terms of predicted MPCE ²	14.0 (207)	35.7 (112)	14.2 (7)	0 (2)
Average household size	7.6	6.8	5.8	5
Caste				
Scheduled tribe	19	38	6	1
Scheduled caste	49	19	2	0
Other backward castes	121	34	4	2
General	39	37	1	1
Average land owned (bighas), 2001	13.1	7.1	3.1	11.5
Irrigated	2.6	0.4	0.1	2.5
Unirrigated	10.4	6.6	3.0	9.0
Number of livestock owned, 2001	14	8	6	4
Cows and buffaloes	5	3	3	2
Sheep and goats	9	5	3	2

(1) Out of 388 sample households, information on the type of ration card possessed was not available for nine households and not clear for six households.

(2) Figures in brackets indicate the number of observations on which the proportions are based. Households with the relevant card type and predicted MPCE less than Rs 344 have been expressed as a proportion of the total number of households with that type of ration card.

(3) These tabulations are based on the type of ration card possessed in 2002.

pre-drought period. A two-stage procedure is used to identify disadvantaged households. The first step involves identifying the correlates of poverty-based on household-level data from the 55th round of the National Sample Survey or NSS (pertaining to 1999-2000). Using ordinary least squares (OLS), we can estimate the coefficients for the predictors of MPCE (household characteristics such as land owned, education, gender of household head, etc). The second stage combines these estimated coefficients with the characteristics of the sample households to calculate their "predicted MPCE".⁹ Using this, we find that the predicted MPCE is lower for BPL households (Rs 431) than for APL households (Rs 505).

Table 3 presents further information on access to the PDS (in other words, inclusion in the BPL⁺ category) among different social and economic groups. Column (a) reports the "access rate" for each social group, defined as the proportion of households that has access to the PDS. In column (b) the same figures have been normalised by dividing them by the access rate in the entire sample (i.e., 37.7 per cent). For instance, column (a) shows that a little over two-thirds of all ST households had access to the PDS. Column (b) shows that the access rate for ST households was nearly twice as high as the average access rate.

The next column (c) of Table 3 shows the distribution of BPL⁺ households across each socio-economic category. It shows for instance, that 60 per cent of BPL⁺ households owned less than five acres of land, whereas only 4 per cent owned 25 acres. Similarly, 30 per cent of BPL⁺ households were ST households. Since STs comprised only 17 per cent of all households, they were "over-represented" among BPL⁺ cardholders, in the factual sense that their share of BPL⁺ cards was higher than their share in the population.

Column (c) points to an "over-representation" of disadvantaged groups in the BPL⁺ category: those with little land, low levels of education, a low standard of living, etc, are more likely to be included in the PDS. This is true of all the indicators used in Table 3. In other words, means-targeting did succeed, to some extent at least, in identifying disadvantaged households.¹⁰ However, further scrutiny of the selection procedure and its effectiveness is in order.

3 Means Testing and Targeting Errors

The TPDS, which was introduced with the objective of providing subsidised foodgrains only to poor families, required the identification of such poor households. The identification of poor households is fraught with problems. Often, income is used as the basis of identifying the poor. In the absence of reliable data on people's

incomes, identification of the poor becomes a near impossible task. Even when information on incomes is available, reaching poor households entails another problem: since economic status of households is not static, those who are poor (and therefore in need of PDS grain) will keep changing. An alternative approach is to identify households based on various correlates of poverty

such as landlessness, education, etc. This is the approach used by the government of India in the BPL census. The problem with this approach is that it involves the use of uniform criteria in a country where there are vast diversities in economic as well as in agro-climatic conditions. Even in a particular socio-economic context, it is quite difficult to "predict" poverty in a reliable manner using observable criteria.

This section begins with a critical discussion of the criteria (or, proxies) used by the government for classification of people as poor and non-poor and the problems in the use of these criteria.¹¹ First there is a brief discussion of the official methodology. We will also look at the extent to which these criteria were actually implemented in the field.

The official guidelines for the selection of BPL households in 1997 have two sections. The first section pertains to those assets and consumer durables, the ownership of which automatically disqualifies households from eligibility for BPL cards. These include television sets, refrigerators, fans, two- or four-wheelers, threshers, tractors, power tillers and more than five acres of operational landholdings. Families in which someone has a regular job or who live in pucca houses are also automatically disqualified. The second

section of the questionnaire is for those households that have not been eliminated by the first set of criteria. This section of the questionnaire looks at their consumption expenditures.

Conceptual Problems

Some of the criteria in the first section of the 1997 guidelines are faulty and inadequate.¹² For instance, the landownership criterion does not take into account adequately differences in the quality and productivity of land. The criterion is especially unhelpful in western Rajasthan because most of the land is of very poor quality (often amounting to ownership of only sand dunes). Several families with five bighas of uneven land, consisting mainly of sand dunes were treated on par with other families with five bighas of level land. While some concession has been made in this regard, whereby the land ceiling has been raised for such regions, it remains a faulty means of identification of poor households.

The appropriateness of the landownership criterion also depends on the extent to which land is the main source of

Table 3: 'Access' to the Public Distribution System

	Proportion of Households with Access		Percentage Distribution of Households with Access
	(a) (%)	(b) Normalised ²	
All households	37.7		100
Caste			
ST	67.7	1.80	30.3
SC	31.0	0.80	15.2
OBC	24.1	0.64	27.6
General	49.4	1.26	26.9
Landholding size			
Less than 5 acres	50.3	1.29	60.6
5.01-15 acres	32.1	0.84	19.7
15.01-25 acres	26.3	0.70	15.3
More than 25 acres	16.2	0.43	4.4
Education of head of household			
Illiterate	38.7	1.01	63.5
Literate	36.8	0.96	36.6
Standard of living index			
Low	57.7	1.52	54.9
Medium	35.6	0.94	34.0
High	14.7	0.39	11.1
Regular job			
No-one with regular job	42.0	1.10	91
Someone with regular job	19.4	0.51	9
Predicted MPCE group			
Up to Rs 344	56.2	1.47	33.9
Between Rs 345 and 600	32.8	0.82	51.2
More than Rs 600	25.4	0.67	14.9

(1) "Access" refers to households that have either BPL, Antyodaya or Annapoorna ration cards (in other words the BPL+ category).

(2) Proportion of households with access in the relevant category divided by proportion of households with access in the sample as a whole (i.e., 37 %).

Source: Based on primary data collected during fieldwork.

livelihood. In an arid region this is often not the case. For instance, in many parts of western Rajasthan, disqualifying families with large landholdings may be inappropriate as cattle rearing, not agriculture, is their main source of income. There are similar problems with the other criteria. For example, landless widows have been denied BPL+ cards because they live in pucca houses even though these houses had been built under the Indira Awas Yojana.¹³

Even if the selection criteria are perfect and implementation of the selection process is done correctly, means-tests are bound to result in selection errors. This is because BPL selections take place at an interval of five years. Means-tests take a static view of the economic condition of the population. It assumes that people who are poor today will remain poor next year, whereas in fact, incomes fluctuate from year to year or even between seasons within a year. The drought of 2000-03 in Rajasthan in fact impoverished many APL households. While some of these households are relatively well-off, this does not necessarily imply that they are also less vulnerable to drought. For example, a relatively well-off farmer in Biramsar (Bikaner) took a loan to install tube-wells on his farm. Following this, the rains had failed for four years continuously. This meant that he was straddled with the loan and interest payments on the one hand, and it had become difficult for him to feed his family on the other.¹⁴

Implementation Problems

Apart from conceptual problems with means-testing, there are problems in implementation as well. Often implementation errors can be traced to favouritism in the selection process by the officials in charge. Inadequate communication of the guidelines to the "investigators" is another common cause of the incidence of implementation errors. For example, according to government guidelines a widow who is supported by a salary earning son need not be included in the BPL list. In practice, however, investigators sometimes interpret this to mean that a widow living with adult sons is not eligible for a BPL card, whether or not the sons have a salaried job. Similarly, the guidelines refer to "operational" landholdings, but this is interpreted as landholdings, whether or not they are operational.

Discussions with villagers and village officials revealed that even though school- teachers and gram sewaks (i.e., those who most commonly carry out the BPL survey) had proposed the names of many families for BPL cards. When the cards were allotted some of the proposed names had been struck off by "higher" authorities. This arbitrariness may be related to the fact that while local officials and institutions have been given the power to carry out the survey, the final decision is made by "higher" authorities based on the targets set by the central government for the total number BPL families in the state.¹⁵

Lack of transparency in the selection procedure also hinders its proper implementation. For instance, during fieldwork it was very difficult to ascertain the criteria

for selection of BPL households. Most people in villages were unaware of these criteria.¹⁶

Thus, there are problems at the very first stage of the TPDS. Some of the criteria used by the government are faulty, and the process of implementation is also defective in various ways such as: (a) lack of public awareness regarding the selection criterion, (b) distortion of the selection criteria due to poor communication to the actual surveyors, (c) arbitrarily striking off names from the proposed lists to meet the central targets, etc, and (d) manipulation.

Targeting Errors

Having discussed the basic problems of means-based targeting we now move on to scrutinise the implementation errors, taking the official methodology as given. Cornia and Stewart (1995) formulate two types of targeting errors that occur frequently: Type I errors where there is a failure to include poor households and Type II errors where the non-poor are incorrectly included. Both types of errors need to be taken into account in assessing the effectiveness of targeting.¹⁷

To compute these errors, they have devised two alternative formulas [see Cornia and Stewart 1995: 350-53]:

$$\text{Type I errors} = P^{NC}/N \text{ or } P^{NC}/P$$

$$\text{Type II errors} = NP^C/N, \text{ or } NP^C/NP$$

where N=Population, P=Poor population, NP=Non-poor population, N = P + NP and the superscripts C and NC refer to whether the population has been covered and not covered, respectively, by the programme. If $P^C + NP^{NC} = N$ implies that there are neither F nor E type mistakes.

In the analysis here, I have used the second formulation of Type I and Type II errors. This is because it seems more meaningful to know what proportion of all "poor" households have been excluded by the selection process (rather than knowing the share of wrongly excluded households in the total population). In addition I have computed NP^C/N^C , i.e., the incorrectly included households as a proportion of all included households. In this context, this can also be thought of as the proportion of "rogue" BPL+ cards among all BPL+ cards. This ratio is also informative, in addition to Type II errors as defined by Cornia and Stewart.

The focus here is specifically on "implementation" errors. In other words, Type I and Type II errors are calculated on the assumption that households meeting the official criteria are actually poor. For instance, Type I error refers to the proportion of official eligible households that are actually excluded (i.e., deprived of a BPL card). The "conceptual" problems, associated with the fact that the official criteria may not be appropriate in the first place, are ignored for the time being.

As shown in Table 4 (first column), Type I and Type II errors in my sample were 44.3 per cent and 23.5 per cent respectively. In other words, close to half of all households officially eligible for a BPL+ card did not get one, and about one fourth of those who were not eligible did get a BPL+ card.

Table 4: Targeting Errors

	Implementation Errors ¹		PDS vs RWS
	(a) Actual vs Ideal	(b) 'True' on RWS ²	(c) 'True' on PDS ²
Type I	44.3	17.6	43.8
Type II	23.5	73.1	33.7

(1) In the calculation of "Implementation errors", "poor" households have been identified using the criteria formulated by the government. "Ideal" is the distribution that would have resulted if government criterion had been implemented perfectly. "Actual" refers to the distribution of ration cards among sample households. "Actual" and "ideal" variables are binary variables that take the value 1 for BPL cards and take the value 0 for APL cards. If the two distributions were identical, then we would find no Type I or Type II errors.

Type I errors is the ratio of "poor" households (as determined by the government's criterion) who do not have BPL cards to total poor households. Type II errors refer to the ratio of non-poor households who have BPL cards to total non-poor households in the sample.

(2) "True" refers to the distribution of cards that would have resulted if those with a "predicted MPCE" of Rs 344 or less had been given a BPL card (or employment on RWS) and those with predicted MPCE of more than Rs 344 had been given APL ration cards (or, no employment on RWS). See the discussion in the next section.

Further, about one-third of the BPL⁺ cards turned out to be “rogue” cards, in the sense that the cardholders were not eligible.¹⁸

Hirway (2003) studies six villages in three different types of zones of Gujarat. Based on a list of five consumer durables she finds that 34 per cent were wrongly included. On the basis of productive assets she finds that 24 per cent of non-poor households have been included in the BPL lists. This means that between 24 and 34 per cent of the BPL cardholders do not actually deserve a card but have been given it. She finds that Type 1 errors are much lower – only 14 per cent of truly deserving households have been left out of the BPL lists. Many of these wrongly excluded households in her study were either migrant households or “very poor households at the bottom”.

The Swaminathan and Mishra (2001) study looks at misclassification of households, but they have done this using three criteria only: operational landholding size, type of house and ownership of assets.¹⁹ On the basis of type of house and operational landholdings separately, Type 1 errors were as high as 85 per cent in each case. Based on asset ownership as well, Type 1 errors are of the same magnitude.²⁰ In a field study of five Andhra villages, Indrakant (2000) finds high errors of wrong inclusion and hardly any wrongly excluded households (ibid: 265-66).²¹

It is also possible to look at Type II errors separately for each of the assets the ownership of which are supposed to make a household ineligible. For instance, we can look at the proportion of tractor-owning households that had a BPL⁺ card. Asset-specific Type II errors turn out to be higher than the composite Type II error (23.5 per cent) for ownership of land, pucca houses and for those with someone in the family with a regular job.²²

The fact that Type 1 errors are particularly high may be a reflection of the stringent poverty targets set by the central government. This meant that even though by the government’s own criterion some households should have been classified as BPL⁺, they were not, because of the upper limit on the proportion of poor population set by the expert group based on NSS data of a previous year. In my own sample, almost half of the households were eligible for the BPL⁺ category based on the official criteria, but the target poverty ratio for Rajasthan set by the central government is only 27 per cent.²³ Thus, Type 1 errors are inevitable if the central targets are to be met.

Conclusions

Only about one-third of the households have access to the PDS. There are conceptual problems (such as uniform criteria for the entire country and a static view of a household’s economic status) with the official criteria used for the selection of BPL households. Conceptual issues relate to the appropriateness of the criteria

used for the selection, and implementation issues to the honesty and rigour with which the survey is implemented.

During fieldwork, there was evidence that validated both conceptual and implementation concerns. Notable among the conceptual concerns is that poverty is treated as a static state. Once a household has been categorised in one of the two groups (APL or BPL), it is assumed that the status of that household will remain the same for the next five years, until the BPL lists are updated. I found little justification for such an assumption in the rain-fed agricultural economy of Rajasthan. The practice of using uniform criteria across the entire country with very little attention being paid to variations in geographic or socio-economic conditions is also questionable. For instance, small landholdings in a highly diversified economy may not be as much of a marker of poverty as in a primarily agricultural society. Similarly, apart from distinguishing between irrigated and unirrigated land, little account is taken of the differences in the productivity of land.

Moving on to implementation issues, there is some justification for concern regarding the exclusion of a large number of needy households from the TPDS especially given that some better off households managed to make it to the BPL lists. Another concern is that even if no single ineligible household had been issued a BPL card, some poor households (based on the government’s criteria) would still have been excluded. The reason for this is the poverty targets that are given to each state by the central government. Having carried out their BPL census, state governments were forced to “match” the number of poor households to the target based on estimates of the expert group. This exercise introduced another element of bias as arbitrary procedures were used to weed out “excess” households from the initial BPL list in order to meet the given targets.

The survey findings reinforce these concerns about the BPL list. The BPL list is not quite as faulty as has been claimed in some non-governmental organisation and media reports, suggesting for instance that rich households were more likely than poor households to have a BPL card. The BPL list does achieve *some* degree of targeting, in the sense that there is some correlation between the possession of a BPL card and various indicators of economic disadvantage. Having said this, there are also large targeting errors. For instance, we found that 44 per cent of the households officially eligible for a BPL card had been excluded from the BPL list.

The means-testing procedure involves major targeting errors, relative to what would emerge if the official criteria were properly applied. As mentioned earlier, the official criteria themselves may not be appropriate, and this raises the further question whether the “targeting errors” examined here actually enhance or undermine the effectiveness of means-testing. That question, however, cannot be answered based on the available data.

NOTES

1 From March 2000 onwards, APL prices were set at economic cost, eliminating the subsidy completely for APL card holders (BPL prices continued to be half of the economic cost). Source: High Level Committee Report on Long Term Foodgrains Policy. <http://fcamin.nic.in/dfpd/EventDetails.asp?EventId=644&Section>

=Policy&ParentID=644&child_continue=1&child_check=0

2 The entitlements have since been revised and differ from state to state.

3 The BPL criteria were revised in 2002 but have not been commented upon here.

4 For selection of villages for the sampling frame I was helped by various non-governmental

organisations (NGOs) and other local networks. The NGOs were URMUL in Bikaner, SURE in Barmer, Sewa Mandir in Udaipur, SWRC and Vishaka in Jaipur. As it turned out, in three cases the NGO did not really work in the sample village but did in a neighbouring one. As a result, they were able to introduce me to an acquaintance with whom I then stayed

for fieldwork. In the other four villages, Biramsar, Dulmera Station, Birothi and Morda, people knew about the NGO through whom I had made contact, and quite often had benefited from it in some way or another. In one village, the local contact did not work for an NGO but for a youth group with whom I was acquainted.

- 5 Birothi was the last village accessible on the road to the sample village.
- 6 Though voter lists contain the names of individuals, the names of each family appear together and are marked with a different number. It was therefore possible to identify each household from the voter list.
- 7 For example, it included a landless family in Birothi where the household head was blind and who had two young children. In Baasri Jogiyan village of Jaipur, it included an old destitute Banjara who lived alone on the outskirts of the village with other Banjara families.
- 8 Antyodaya households are supposed to be the poorest of the poor (this was initially a sub-category of the BPL category). They are entitled to 35 kg of grain per month, at Rs 2/kg for wheat and Rs 3/kg for rice. Annapoorna card holders are entitled to 10 kg of grain per month free of cost. These cards are meant for persons who are eligible for old-age pension but are not actually receiving one.
- 9 This approach assumes that the relationship estimated for Rajasthan as a whole using NSS data also holds, approximately at least, in the sample villages. "Predicted MPCE", estimated in this way, is at best a statistical proxy for actual MPCE, and should be interpreted as such. See Khera (2006) for more details on the estimation of "Predicted MPCE".
- 10 This finding contrasts with the claim that privileged households were able to manipulate the selection procedure to such an extent that they were more likely than other households to have a BPL+ card. This claim appears to be quite common among NGOs and in media reports (personal observation).
- 11 See government of India (1997), and Swaminathan and Mishra (2001) for more details. Sundaram (2003: 896) describes in detail the characteristics that have to be taken into account for those households that are not eliminated by the first set of criteria. These refer to the "old" guidelines that were used in the selection process in 1997. Since then, "new" guidelines have been evolved by the Planning Commission. These have not been discussed here.
- 12 See government of India (2002) for further criticisms of these criteria. Indrakant (2000) also finds evidence of inappropriateness of criteria and poor implementation in Andhra Pradesh.
- 13 The Indira Awaas Yojana is a scheme of subsidised loans for poor families to construct pucca dwellings.
- 14 Another example of sudden impoverishment is the loss of the main breadwinner of a family. While the National Family Benefit Scheme provides for such families the number of people who actually benefit from it is very small.
- 15 This target is based on the Planning Commission's expert group's estimate of the poor population in each state. Similar evidence is also available from the Maharashtra village study by Swaminathan and Mishra (2001).
- 16 None of the 380 households I interviewed were able to tell me what these criteria are. At best they had a vague idea – "jinke paas tractor hota hai unko nahin milta". Only one gram sewak could tell me about these criteria, according to which families with the following features are ineligible for BPL ration cards – more than 5 bighas of

unirrigated land, relaxed to 15 bighas in Marwar; large cattle holdings; pucca house; durable consumer goods such as radios, televisions, refrigerators, etc; government/regular jobs; many adult earning members in the family.

- 17 Note that Type I and Type II errors correspond quite closely to the non-exclusion criteria and targeting criteria discussed by Drèze and Sen (1989), chapter 7.
- 18 Using the first formulation of targeting errors, we get 23.85 per cent Type I errors and 15.59 per cent Type II errors.
- 19 Their reason for focusing only on three criteria was because they found during interviews with bureaucrats in the area that the government had used only these three in its actual survey. This is true even in the sample villages that I have studied.
- 20 Further evidence of such misclassification in Dharavi, Bombay can be found in Bunsha (2002). Bunsha (2002) also provides some anecdotal evidence of other problems with the PDS such as access, irregularity, poor quality, etc.
- 21 The survey was carried out while the RPDS was in operation. The exact date of the survey has not been specified.
- 22 For durable consumer products, the Type II errors are negligible. This is probably a good thing: for instance, there is one household in the sample that has been denied a subsidised ration card just because they owned a ceiling fan.
- 23 Source: www.fcamin.nic.in

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