

Casting the Net

India's Public Distribution System after the Food Security Act

JEAN DRÈZE, PRANKUR GUPTA, REETIKA KHERA, ISABEL PIMENTA

A broad-brush assessment of the public distribution system is presented in six of India's poorest states—Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, and West Bengal—soon after the National Food Security Act, 2013 came into force. Important gains have been made, including broader coverage, lower targeting errors, accelerated PDS reforms, and a greater political commitment to food security. In four of the six reference states, the PDS seems to be doing reasonably well, but Bihar and Jharkhand still have a long way to go. Even in the leading states, much remains to be done to achieve the purpose of the NFSA: ending food insecurity.

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Jean Drèze (jaandaraz@gmail.com) is a visiting professor at the Department of Economics, Ranchi University. Prankur Gupta (guptaprankur@protonmail.com) is a research scholar at the Charles H Dyson school of Applied Economics in Management, Cornell University. Reetika Khera (reetika@riseup.net) is an associate professor of economics at the Indian Institute of Technology Delhi. Isabel Pimenta (anaisabelpimenta@gmail.com) is an economist, currently working at the European Commission in the Directorate General for International Cooperation and Development, Brussels.

India's National Food Security Act (NFSA) (2013) is one of the largest social security initiatives in global history. It covers more than 800 million people through the public distribution system (PDS) alone, aside from mandating nutritious midday meals for children and maternity benefits for pregnant women. Oddly, however, the rollout of the act has received little attention from the research community and mainstream media.

This is a serious blind spot, considering that the provisions of the act are of great importance for the poor. The PDS, in particular, is a significant source of economic security for many. The recent starvation deaths in Jharkhand highlight the dangers of disrupting this critical lifeline of the rural poor (Drèze 2017b; Dutta 2018).

Monitoring the implementation of the NFSA is also important from the perspective of future planning. The successful implementation of the act is likely to require regular course correction. For instance, if the selection of eligible households is to improve over time, then lessons must be learned from earlier attempts in order to avoid inclusion and exclusion errors.

This paper presents a broad-brush assessment of early experiences with the NFSA in six of India's poorest states, with specific reference to the PDS.¹ Much of it draws on a field survey conducted by student volunteers in June 2016. This was not a large-scale survey, but we shall combine it with insights from a series of other surveys conducted in the same states.²

The National Food Security Act

The NFSA, enacted in mid-2013, requires the government to extend foodgrain subsidies under the PDS to 75% of the population in rural areas and 50% in urban areas. The recipients fall into two categories, jointly known as "eligible households"—priority households and Antyodaya Anna Yojana (AAY) households. Priority households are entitled to 5 kg of foodgrains per person per month at the nominal price of ₹3, ₹2, and ₹1 per kg for rice, wheat, and millets, respectively. Antyodaya households, the poorest of the poor, are entitled to 35 kg of foodgrains per month at the same prices, irrespective of the size of the family.

The proportion of eligible households varies by state, as well as between rural and urban areas; thus, the minimum coverage of the PDS is higher in the poorer states—for example, it is 86% in rural Jharkhand.³ The selection of eligible households is the responsibility of the state governments. The act also provides for a range of PDS reforms, aimed at ensuring transparency and avoiding leakages.

Chhattisgarh enacted its own food security law, the Chhattisgarh Food Security Act (CFSa), in December 2012. The CFSa is similar to the NFSA, with some notable differences. Unlike the NFSA, the CFSa explicitly defines eligibility criteria; for instance, all households headed by single women are entitled to an Antyodaya card, unless they meet pre-specified exclusion criteria. Also, eligible households receive more entitlements under the CFSa than under the NFSA. Initially, under the CFSa, both priority and Antyodaya households had similar entitlements (with minor differences in issue prices), defined in per household—rather than per capita—terms: 35 kg of foodgrains and 2 kg of pulses or black gram per month.⁴ In April 2015, however, Chhattisgarh amended Schedule 1 of the CFSa to offer per capita entitlements for priority households. Unlike the NFSA, the CFSa does not pre-specify a minimum coverage for the PDS—the coverage derives from the eligibility criteria. Because the eligibility criteria are fairly broad, the coverage is close to universal in rural areas.

This paper focuses mainly on the benefits rather than the costs of the PDS. The costs are not easy to estimate. The food subsidy accounted for a little below 1% of India's GDP (gross domestic product) in 2016–17, but this is best considered an upper bound since it includes not only the consumer subsidy, but also the producer subsidy and the cost of buffer-stock operations aimed at price stabilisation.

The Survey

The survey mentioned earlier (hereafter referred to as NFSA Survey 2016) was conducted between 1 and 10 June 2016 by student volunteers in Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh (MP), Odisha, and West Bengal (hereafter the “reference states”). The reference states are all situated in eastern India and are contiguous with each other. The survey covered three randomly selected villages in each of the 12 sample blocks (two blocks per state, in different districts). In each of the 36 sample villages, the teams carried out an exhaustive door-to-door survey, verifying ration cards and collecting basic data on PDS purchases for all households; a small proportion of households, about 2.5%, could not be interviewed because no adult was at home on the day of the survey. Close to 3,800 households were surveyed. The survey teams also made unannounced visits to PDS shops in the sample villages and analysed their official lists of ration cards.

Because the survey was designed to be a low-budget exercise, we selected one district in each state based on accessibility from Ranchi (the survey headquarters, so to speak)—Gaya (Bihar), Balrampur (Chhattisgarh), Anuppur (MP), Sundargarh (Odisha), and Purulia (West Bengal). These districts are typically near the state border (with Jharkhand) and relatively far from the state capital. To balance this out, the second district was selected closer to the state capital, bearing in mind the need for reasonably good connectivity with the first district as well as with Ranchi.⁵ In Jharkhand, we selected Gumla as the district close to the state capital and Dumka as the more remote district.

Within the districts, block selection was random. Within blocks, sample villages were selected at random among those with a population of 75 to 125 households. Large villages were

excluded to ensure that a full door-to-door survey was feasible within one day, and tiny villages were avoided to ensure that each survey day was well used. The exclusion of large villages means that the sample was biased, if at all, towards relatively poor and less well-connected areas and households.

Integrity of the NFSA Lists

The NFSA Survey 2016 was mainly an exhaustive door-to-door survey in 36 sample villages. The survey teams, however, were also in possession of the official list of ration cards for each village. The households on these lists were divided into three groups—sample households, households that could be traced (they were known to live in the village) but were not interviewed (for example, due to temporary outmigration), and “untraceable households” (those that no one in the village had heard of). The survey teams were trained to scrutinise the official list after the door-to-door survey and make a shortlist of the untraceable households in each village.⁶

Unfortunately, these shortlists were lost after the survey. However, from surviving summaries and the debriefing workshop proceedings, we can say something about the extent of the problem.

In West Bengal, the entire exercise proved unmanageably tedious because the state has an odd system of issuing individual (instead of household) ration cards. In Chhattisgarh, MP, and Odisha, the proportion of untraceable households was negligible. In Bihar and Jharkhand, a significant proportion of the households on the official list were untraceable—perhaps 5%–10%. An untraceable household, however, does not necessarily mean that it is a bogus or ghost household. It was clear, for instance, that the lists in Bihar and Jharkhand had some location errors—sometimes a ration card was tagged to the wrong village or ration shop, perhaps due to data-entry glitches. In Jharkhand, and to a lesser extent in Bihar, the lists were still in the process of being finalised at the time of the survey.⁷

This is not to deny that bogus cards may exist, but their proportion appears to be relatively small. For Jharkhand, this finding is consistent with a recent, large-scale study (Muralidharan et al 2018a/2018b) which estimates that the proportion of bogus ration cards in Jharkhand is “at most 2.6%.” Judging from the state of the ration card lists in the sample villages, the proportion is likely to be even smaller in other reference states, with the possible exception of Bihar.

This is an achievement of sorts, considering the notorious unreliability of the earlier ration card lists, known as “BPL lists.” It reflects the effectiveness of the massive clean-up of ration card lists that occurred during the rollout of the NFSA, when all the lists were redone based on simpler criteria and more reliable data. It is important to note that this cleanup preceded the imposition of mandatory Aadhaar linking to avail PDS benefits, discussed later in this paper. Perhaps, Aadhaar integration helped take it further, for example, by eliminating the odd duplicate, but the bulk of the hard work had been done earlier.

Eligibility Criteria

As mentioned earlier, the selection of eligible households (priority and Antyodaya) for the NFSA is the responsibility of state

governments. When the act was drafted, the Socio-Economic and Caste Census (SECC) of 2011 was widely considered a possible basis for the selection exercise. The release of SECC data was delayed for several years, also delaying the rollout of the NFSA in many states. Eventually, some states—including three of the reference states—used the SECC data to identify eligible households, but others did not.

In contrast with the convoluted “scoring system” of the earlier below poverty line (BPL) surveys, many states defined NFSA eligibility in terms of simple inclusion and exclusion criteria.⁸ The first step was to specify inclusion and exclusion criteria, and also whether the latter override the former or vice versa. Table 1 presents a summary of the main eligibility criteria used in the reference states.

The simplest way of identifying eligible households is what might be called the “exclusion approach.” In this approach, the government notifies a list of simple and transparent exclusion criteria, and every rural household is eligible by default unless it meets some of these criteria. To illustrate, in rural Jharkhand, the main exclusion criteria are as follows—regular government employment, ownership of a four-wheeler, ownership of more than five acres of irrigated land (or 10 acres of any kind of land), and possession of a *pacca* (concrete) house with more than three rooms.⁹ This approach is relatively straightforward and limits the risk of exclusion errors—an important concern in the context of an act that seeks to ensure that vulnerable households get food rations as a matter of right. However, as we shall see, this requires reliable household listings. Most reference states used the exclusion

approach, or some variant of it, and possibly some inclusion criteria as well (Table 1).

Identification of Eligible Households

Even when based on a relatively simple method such as the exclusion approach, identifying eligible households is a mammoth exercise (for a taste of its complexity, see Satpathy 2017). The reference states were just concluding this mammoth task at the time of the survey.

Chhattisgarh, where PDS coverage was near-universal before the enactment of the state law, was a little ahead of the other reference states, but even here, the task of identifying eligible households was far from easy. Chhattisgarh notified inclusion and exclusion criteria and adopted a “self-declaration approach.” Application cum self-declaration forms were to be submitted to the gram panchayats. Households were expected to honestly self-select the correct ration card category.

As mentioned earlier, the CFSA initially endorsed the old system of household entitlements rather than per capita entitlements. This created a problem at the identification stage, because some households began to split up—or pretended to split up—in the hope of getting several ration cards instead of just one. As a result, the number of single-member households in Chhattisgarh shot up. In a knee-jerk reaction, the state government called for the cancellation of all single-member cards, at the risk of causing temporary hardship to those who actually lived on their own (2.25 lakh single-member cards were cancelled). Eventually, the state government amended the CFSA—a new category was created for single-member households,

with an entitlement to 10 kg of free rice per month, and the foodgrain entitlement of priority households was fixed at seven kg per person per month.

Apart from Chhattisgarh, Bihar was a pioneer in the sense that it was among the earliest to undertake the identification exercise (Drèze et al 2015). Bihar applied simple exclusion criteria to SECC data to prepare the initial list of priority households. The village-wise draft lists were displayed in public, and individual households were given copies of their SECC data. People who had been missed by the SECC, or who were dissatisfied with their status, could apply for corrections. The reliability of this correction process, however, is hard to determine. Thus, the main problem with this approach is that it relies heavily on the integrity of SECC data.

Jharkhand and West Bengal use models similar to that of Bihar. In each case, the difficulty seems to be in dealing with gaps and inaccuracies in the SECC data. For example, privileged households often try to sneak onto the NFSA list at the correction stage. Meanwhile, eligible households often make unsuccessful applications to add missing names to their ration cards (for example, those of children born after 2011). The sheer volume of correction work tends to be difficult to manage.

Table 1: Eligibility Criteria in Rural Areas

State	Eligibility	Main Exclusion/Inclusion Criteria
Bihar	All households that do not meet any of the exclusion criteria.	Exclusions: Government job; motorised vehicle (three- or four-wheeler); house with three or more <i>pacca</i> rooms; 2.5 acres of irrigated land; any household member earning more than ₹10,000 per month.
Chhattisgarh	All households that meet at least some of the inclusion criteria, and none of the exclusion criteria.	Exclusions: Similar to Bihar and Jharkhand. Inclusions: * Beneficiaries of the CM Food Assistance Scheme prior to CFSA 2012; landless agricultural labourers; marginal or small farmers (up to five acres of land); registered casual workers.
Jharkhand	All households that do not meet any of the exclusion criteria.	Exclusions: Permanent government job; motorised four-wheeler; more than five acres of irrigated land, or 10 acres of any land; house with three or more <i>pacca</i> rooms.
Madhya Pradesh	All households that meet at least some of the inclusion criteria.	Inclusions: Many categories including former BPL households; all SC/ST households; registered landless agricultural labourers; registered construction workers; disabled persons; and pensioners.
Odisha	All households that do not meet any of the exclusion criteria.#	Exclusions: Permanent government job; motorised vehicle (three- or four-wheeler); any household member earning a salary or pension of more than ₹10,000 per month; household paying income tax.
West Bengal	All households that meet at least some of the inclusion criteria, and none of the exclusion criteria.	Exclusion: Similar to Bihar and Jharkhand. Inclusion: Many categories including all SC/ST households; single-room <i>kaccha</i> house; no adult member aged below 59; no literate adult above 25 years; landless households living mainly off casual labour.

* These are inclusion criteria for priority households; there are separate criteria for Antyodaya households. “Registered casual workers” refer to those registered under the Unorganised Workers Social Security Act, 2008 or Buildings and Other Construction Workers Act, 1996.

In Odisha, exclusion criteria are waived for “automatically included” groups (mainly homeless households, destitute households living on alms, PVTG [Particularly Vulnerable Tribal Groups] households, and former AAY households).

These criteria were applied at the time of the survey (June 2016). Some of them have been simplified for presentation purposes.

MP, also among the early movers, relied on a pre-existing database (Samagra Samajik Suraksha Mission, or Samagra for short) to identify priority households. Samagra had been built in the preceding years as a general-purpose database for welfare schemes. Eligible households were identified using this database, based on an extensive list of inclusion criteria (Table 1). In the initial months, eligible households were given “NFSAs slips” which laid out their new entitlements, along with the basic details of the household (ration cards were issued later). In principle, the Samagra database can be continuously updated at the gram panchayat level, though it is not clear to what extent that is possible at the moment. The importance of decentralised management is explained below.

Like Chhattisgarh, Odisha adopted a self-declaration approach. After eligibility criteria were notified, people were asked to self-declare (by filling out a form) whether they were eligible. There were two concerns to this approach—whether marginalised people (including those living in remote areas) would receive the self-declaration forms and be able to fill them out, and whether those who were ineligible could be trusted to declare their status. The active involvement of gram panchayats helped in both respects. To screen for false declarations, the government also launched several verification drives through which ineligible households that had claimed priority cards were deleted and even fined (Mohanty 2017). Exemplary action was taken against some of those who had tried to cheat, deterring others to some extent.¹⁰ An option was also provided for households to voluntarily surrender illegitimate cards. This process, however, took much longer than the SECC-based approach—Odisha adopted it mainly because of repeated delays in releasing the SECC data.

Public Distribution System Coverage

The biggest gain from the NFSAs for the poorest states was the expanded coverage of the PDS. In fact, the PDS can be described as “near-universal” in the six reference states, at least in rural areas where the mandatory coverage varies from 75% in West Bengal to 86% in Jharkhand.

This expansion is illustrated in Table 2, where we compare the PDS status of sample households before and after the NFSAs.

Table 2: Coverage of the PDS before and after NFSAs (Joint Percentage Distribution of Sample Households by Type of Ration Card)

Before NFSAs	After NFSAs				All#
	AAY	Priority	Other*	None	
AAY	7	6	0	1	14 (15)
BPL	2	33	2	3	41 (43)
APL	1	13	4	2	20 (21)
Other	0	1	0	0	1 (1)
None	1	14	0	3	19 (20)
Missing	1	3	0	1	5 (-)
Total	13	71	6	10	100 (100)

* Mainly special categories (RKSYS-1, RKSYS-2) and “composite” cards in West Bengal (where different household members occasionally have cards of different types), and lingering BPL and APL cards.

In parentheses, the corresponding figures when missing observations (for pre-NFSAs ration cards) are omitted.

(1) “After NFSAs” refers to June 2016 (when the survey took place). “Before NFSAs” means two years before that (see note 11).

(2) In Chhattisgarh, Ekal (AAY) and special (AAY) cards were counted as AAY; in West Bengal, “special priority” cards were counted as priority.

Here, “after NFSAs” refers to the period after June 2016 (the date of the survey), and “before NFSAs” refers to two years before, based on the recollection of respondents.¹¹ As a first approximation, we can assume that households with significant PDS entitlements (for example, not restricted to kerosene) had an Antyodaya or BPL card in the pre-NFSAs period and Antyodaya or priority cards in the post-NFSAs period. Based on this convention, we can conclude that PDS coverage in the sample villages rose by 25 percentage points or so—from a base of 58%—between mid-2014 and mid-2016.

Strictly speaking, some households outside these three categories (AAY, BPL, and priority) also receive significant PDS entitlements.¹² We shall use the term “entitled households” to refer to all those in actual possession of a ration card (or an equivalent, such as NFSAs slips in MP) that gives them foodgrain entitlements under the PDS. The proportion of entitled households in the sample villages increased from 59% to 85% between the two periods.

The weighted average of the state-specific proportions of entitled households among the sample households (using the 2011 Census rural population as weight) is 84%. This is quite close to the corresponding weighted average of state-specific mandatory rural coverage under the NFSAs (82%). Note, however, that the latter applies to population coverage, not household coverage. As discussed below, the actual coverage in population terms is lower than the household coverage—by 10 percentage points or so in our sample.

The expansion of PDS coverage post-NFSAs, as made visible in the survey, is consistent with secondary data. The National Sample Survey data suggest that the proportion of rural households using the PDS for foodgrain purchases in the reference states was a little below 50% in 2011–12.¹³ Today, according to official data, it is very close to the minimum rural coverage (82%) prescribed by the NFSAs; this also applies statewide.¹⁴

Inclusion and Exclusion Errors

In spite of the difficulties mentioned earlier, the post-NFSAs ration card lists in the reference states seem far more reliable and credible than the earlier BPL lists.¹⁵ The latter suffered from massive inclusion and exclusion errors. To illustrate, three national household surveys show that, around 2005, about half of all poor households in rural India did not have a BPL card.¹⁶ The reduction in exclusion errors, of course, was facilitated by the expansion of PDS coverage under the NFSAs. The formulation of simpler and clearer methods to identify eligible households, however, also helped to avoid exclusion as well as inclusion errors.

The rates of inclusion and exclusion errors can be estimated for the sample villages since the survey covered (almost) all the households in each village. The survey teams were trained to assess, based on direct observation and brief enquiries, whether a sample household was eligible in terms of the official criteria applicable in the concerned state. Exclusion errors refer to cases where an eligible household is not “entitled” (that is, in possession of a valid ration card), and inclusion errors refer to cases where an entitled household is not eligible. As Table 3 (p 40) shows, both exclusion and inclusion errors were below 10% in most cases, suggesting the relatively reliable identification of eligible

households. The fact that the exclusion errors are just around 5%, compared to 50% or so in the BPL approach, is particularly encouraging even after noting that some of this improvement is due to expanded coverage.

Table 3: Inclusion and Exclusion Errors

State	Mandatory Coverage under NFSA (% of Rural Population)	Proportion of Eligible Households among Sample Households (%)	Proportion of Entitled Households among Sample Households (%)	Inclusion-Error Rate: Proportion of Entitled Households That Are Not Eligible# (%)	Exclusion-Error Rate: Proportion of Eligible Households That Are Not Entitled (%)
Bihar	85	80	81	13	13
Chhattisgarh	84	87	95	8	4
Jharkhand	86	98	76	1	24
Madhya Pradesh	80	89	87	2	4
Odisha	82	95	89	1	8
West Bengal	75	83	83	9	9
Six states*	n/a (82)	89 (86)	85 (84)	5 (7)	11 (10)

* In parentheses, population-weighted average of state-specific figures (using rural population, based on 2011 Census, as weight).

The “inclusion-error rate” could be also be defined as the proportion of ineligible households that are entitled. In that case, inclusion-error rates would be high. In Bihar, for instance, about half of all ineligible households are entitled.

“Eligible households” are those that meet official eligibility criteria (Table 1). “Entitled households” are those actually in possession of a ration card (or equivalent) that gives them foodgrain entitlements under the PDS (see main text). The same calculations can be done in terms of individuals rather than households, but the results are similar.

In Bihar and West Bengal, the percentage of inclusion and exclusion errors match, at close to 10% in both cases. This means that, in principle, both could be corrected without modifying the coverage. In Jharkhand, inclusion errors are virtually nil, but there are several exclusion errors. The reason seems to be that, on the one hand, most rural households in Jharkhand are eligible, and on the other, the actual coverage of the PDS in Jharkhand was still relatively low in June 2016 (it increased later). In Odisha, as in Jharkhand, most of the sample households were eligible, and targeting errors were heavily tilted towards exclusion errors.

It is possibly interesting that MP is doing really well as far as identification is concerned, with inclusion and exclusion errors at only 2% and 4%, respectively. This suggests that the Samagra database is reasonably reliable. If so, this is an important pointer to the possibility of developing decentralised household lists that are regularly updated at the gram panchayat level, instead of relying on “static” and centralised databases such as the SECC.

Switch to per Capita System

Before the NFSA came into force, PDS entitlements in the reference states, and in most other states, were defined in terms of household rather than per capita (typically, for foodgrain, each household was entitled to 25 kg or 35 kg). Under the NFSA, priority households received entitlements on a per capita basis.

The per capita system is certainly more logical and equitable than the earlier system of allotting entitlements to households as a whole. This transition, however, created a new type of exclusion error: “missing names,” that is, the omission of some household members from the ration card. Children born after 2011, for instance, were often excluded from ration cards in states where the SECC data were used to draft the official list of ration cards. Sometimes, adults were also overlooked in the

SECC list because of migration or other reasons; occasionally, the SECC would skip an entire hamlet. As Table 4 indicates, the proportion of missing names in priority ration cards was a little over 10%, rising to 18% in Bihar and Chhattisgarh. On this count, again, MP is doing better than the other sample states, reinforcing the impression that the Samagra database has some credibility.

Table 4: Missing Names

State	Proportion of Missing Names in Priority Ration Cards (%)
Bihar	18
Chhattisgarh	18
Jharkhand	15
Madhya Pradesh	7
Odisha	10
West Bengal	12
Six states*	13 (13)

* In parentheses, weighted average of state-specific figures (using rural population as weight).

Because of the missing names, the actual coverage of the PDS in population terms—the proportion of entitled persons in the sample population—is significantly lower than the coverage in household terms—74% and 85%, respectively, in the sample villages. Thus, at the time of the survey, there was still much scope for adding missing names or excluded households to the ration card list, within the mandatory coverage provided under the NFSA.

Beyond the issue of missing names, the transition to per capita entitlements enhanced the general need for regular and reliable updating of ration card lists (in response to changes in household composition). So far, this remains an elusive goal in all the reference states. The transition also means that many small households lost, rather than gained, from the NFSA.

Purchase–Entitlement Ratios

A helpful indicator of the integrity of the PDS is what we have called the “purchase–entitlement ratio” (PER) in earlier writings (for example, Khara 2011b; Drèze et al 2017). This refers to what entitled households are able to purchase from the PDS as a proportion of their entitlements.¹⁷ For instance, if a household that is entitled to 30 kg of foodgrain per month actually gets, say, 27 kg per month, then the PER would be 90%. Since PDS foodgrain allocations at different levels (such as district, block, and village) are typically based on aggregate entitlements at the relevant level, the PER can be read as an indicator of the cumulative leakages in the system. If there are any leakages down the line, they would be reflected in a lower average PER in the concerned area.¹⁸

It is also useful to distinguish between the PER so defined (let us call it the “unconditional PER,” or UPER)—from the “conditional PER” (CPER), where the latter is calculated in the same way, but after excluding entitled households that did not buy any rice or wheat from the PDS in the relevant month (let us call them “zero purchase households”). The idea is that there are many possible reasons for nil PDS purchases (including temporary migration and temporary disruptions in the supply chain) that are not necessarily related to leakages. Thus, both CPER and UPER are of interest. When zero purchase households and other entitled households have the same average entitlements, which is approximately true in our sample, a simple relationship holds between UPER and CPER:

$$\text{UPER} = (1 - p) \cdot \text{CPER}$$

where p is the proportion of zero purchase households in the relevant month.

We calculated PERS using two different indicators of PDS purchases. First, we asked respondents how much they “normally” receive from the PDS in a particular month. Second, we asked them to tell us specifically how much they had bought in the two calendar months that preceded the survey (April and May 2016). The results are presented in Table 5, where “April–May” refers to the unweighted averages of the month-specific figures.¹⁹

Table 5: Purchase–Entitlement Ratios

State	“Normal Month” (%)	April–May 2016*		
		Conditional PER (%)	Proportion of Entitled Households with “Zero Purchase” (April/May) (%)	Unconditional PER (%)
Bihar	84	90	20/85	44
Chhattisgarh	98	99	-/4	96
Jharkhand	85	89	26/35	62
Madhya Pradesh	98	105	32/12	83
Odisha	99	100	14/5	91
West Bengal	95	95	1/1	94
Six states#	93 (92)	97 (96)	19/22 (18/34)	76 (73)

* The month of May only for Chhattisgarh, where April rations were distributed in March (see note 19). March distribution was not recorded, but the survey responses and team’s observations indicate that most sample households in Chhattisgarh did get their April rations in advance. Advance distribution also shows in official data.

In parentheses, weighted average of state-specific figures (using rural population as weight). Figures for Chhattisgarh in April are treated as missing observations.

Three of the six sample states (Chhattisgarh, Odisha, and West Bengal) seem to have a relatively well-functioning PDS, with UPERs above 90% in April–May 2016 and almost all households reporting that they normally receive their full PDS rations. For Chhattisgarh and Odisha, this finding is in line with a string of earlier studies.²⁰ West Bengal looks like the latest entrant to the league of effective PDS reformers, but this is best considered a tentative finding until it is corroborated (or qualified) by other studies. It is worth noting, however, that our findings for West Bengal are consistent with those of a recent survey on the PDS in the Bankura district.²¹

High UPERs in these states reflect a combination of high CPERs and a low incidence of “zero purchase”—most people were able to buy their rations in April–May, and got the full amount. Shortfalls in the CPER from 100% reflect the fact that many PDS dealers try to extract “cuts” from their customers, known as *katauti* in some Hindi-speaking areas. Successive surveys over the years show that the cuts tend to decline over time, as PDS users become more assertive and PDS dealers more accountable. In Chhattisgarh and Odisha, where private PDS dealers have been replaced by community institutions (gram panchayats in Odisha, multiple institutions in Chhattisgarh), the cuts are virtually nil now, judging from Table 5.

In MP, as in Chhattisgarh and Odisha, almost all the respondents said that they normally receive their full rations. This is consistent with an earlier survey conducted in 2015, where we found evidence of a dramatic improvement in the PDS in MP post-NFSA (Drèze and Khera 2015b). In April–May 2016, however, the UPER was a moderate 83%. The shortfall is mainly because a substantial proportion (about one-third) of sample households did not receive their food rations in April, for reasons that are not entirely clear. In one of the two sample

blocks, most were compensated with double rations in May, which is why the CPER is above 100% in MP.

Turning to Bihar and Jharkhand, some caution is required while interpreting Table 5. The figures must be read in light of the fact that in both states, PDS leakages were above 80% throughout the 2000s (Khera 2011a: Table 2). Against this background, the fact that the sample households reported getting more than 80% of their entitlements in a normal month seems encouraging. However, the figures in the first column are probably more like CPERs than UPERs. If a household gets, say, 80% of its entitlements in nine months out of 12, and nothing in the remaining three months, it is likely to report getting 80% in a normal month (the CPER), rather than 60% (the UPER). Indeed, the figures in the first two columns of Table 5 are quite close to each other. The CPER for April–May 2016 for Bihar and Jharkhand is around 90%, which is still encouraging, but both states clearly experience a high incidence of zero purchases. The bulk of this problem, especially in Bihar, is due to what might be called “gap months,” when no foodgrain distribution takes place in an entire village or hamlet in a particular month.

In the case of Jharkhand, earlier surveys show that though much progress has been made in successfully avoiding gap months, the problem has not disappeared. In both sample blocks, we were told, temporary disruptions in the supply chain had affected PDS distribution during the reference period. In a follow-up survey, conducted in June 2017 in 32 randomly selected villages (spread over eight districts) in Jharkhand, we found that regular distribution every month had become the norm. Except for a significant minority of households that experienced transaction problems due to compulsory biometric authentication, most households had received six months’ rations out of six in the preceding six months.²² Thus, the general situation in Jharkhand is likely better than what Table 5 suggests.

In Bihar, on the other hand, there is considerable evidence that gap months continue to be a problem. Aside from frequent disruptions in the supply chain, many PDS dealers in Bihar regularly divert an entire month’s foodgrain quota without their customers being able to protest. Some dealers in Bihar were quite brazen about this practice. One of them candidly said “Mein do mahine ka kha leta hoon” (I “eat” two months’ rations every year). Perhaps, he was trying to boast—or pretend—that he did not go further and, in that sense, was relatively “honest.”

Even by Bihar standards, however, the high proportion of zero purchase households in May 2016 (85%), which pulls down Bihar’s UPER, is likely an anomaly. One recent survey of 5,000 randomly selected households in rural Bihar found that priority households miss, on average, four months’ food rations over the year.²³ This seems broadly consistent with other recent surveys of the PDS in Bihar, reviewed in Drèze et al (2015).²⁴ The general situation in Bihar is not entirely clear; however, as with Jharkhand, it is likely better than what we found in the two sample blocks in April–May 2016.

Much of the lingering ambiguity in these findings relates to the extent and causes of gap months. Siphoning off a whole month’s food rations is a fairly extreme act—not the sort of thing

that people take lying down, or that a vigilant administration would fail to prevent. But, it does happen, and even if zero purchases are due to supply bottlenecks rather than embezzlement in most cases, a serious delivery failure would remain. There is still some homework to do on this in the reference states, especially in Bihar and Jharkhand.

Gainers and Losers

Many rural households in the reference states (and elsewhere) gained from the NFSA, but some did not. The main gainers were households that previously had no significant foodgrain entitlements and became priority or Antyodaya households under the act: both poor households that had been left out of the earlier BPL lists, and less-poor or non-poor households that benefited from the enhanced coverage of the PDS. The main losers were former BPL households with only a few members, who used to receive more before the NFSA (25 kg to 35 kg per month, depending on the state) than they do today under the per capita system with a priority card. Some Antyodaya households also lost, as they were transferred to the priority category, or were even left out altogether.

Table 6a: Gainers and Losers (Households)

State	Percentage Distribution of Sample Households by Status*		
	Gainer	Loser	No Change
Bihar	52	21	27
Chhattisgarh	24	33	44
Jharkhand	53	33	15
MP	62	18	20
Odisha	45	41	14
West Bengal	54	30	15
Six states#	48 (52)	29 (27)	22 (22)

* Row entries add to 100, except for rounding.
In parentheses, weighted average of state-specific figures (using rural population as weight).
Figures are based on comparing effective entitlements in June 2016 (after NFSA) and two years earlier (before NFSA). In Chhattisgarh, the CFSa applied in both periods but the transition to per capita entitlements occurred in between (see main text).

Table 6b: Gainers and Losers (Individuals)

State	Percentage Distribution of Sample Population by Status*		
	Gainer	Loser	No Change
Bihar	58	15	27
Chhattisgarh	25	30	45
Jharkhand	55	30	15
MP	72	10	18
Odisha	48	36	16
West Bengal	55	28	16
Six states#	54 (56)	23 (22)	23 (22)

* Row entries add to 100, except for rounding.
In parentheses, weighted average of state-specific figures (using rural population as weight).

We asked sample households about their foodgrain entitlements two years prior to the survey, that is, before the implementation of the NFSA (except in Chhattisgarh, where the CFSa was operational by mid-2013). This enabled us to identify the gainers and losers by comparing food entitlements before and after the NFSA (Tables 6a and 6b). Note that, as before, we are looking here at effective entitlements (based on ration cards) rather than legal entitlements.

About half of the sample households gained from the NFSA, and close to 30% lost (Table 6a). The rest stayed in the same place in terms of quantity entitlements, but in three reference states, they benefited to some extent from the reduction in issue prices under the NFSA.²⁵ If we also count them as gainers, most households benefited from the act. Even after taking into account the benefits of lower issue prices, however, the proportion of losers would not be much below 30%. When calculations are done in terms of individuals rather than households (Table 6b), the proportion of gainers is a little higher, because

large households tend to gain from the per capita system. For the six states together, the proportion of losing individuals is around 22%, and would be a little lower still if we take into account the reduction in issue prices under the NFSA. But, even if it is only 20% or so, this reduction in entitlements is a matter of concern.

The concern only grows when we look at the pre-NFSA status of the gainers and losers (Table 7). Ignoring price changes, those belonging to households formerly classified (rightly or wrongly) as BPL had a similar chance—about 40%—of gaining or losing from the NFSA. Some of the BPL losers are relatively well-off households that should not have been on the BPL list in the first place, but others are poor households that have been adversely affected by the per capita system. APL (above poverty line) household members, on the other hand, were virtually assured of not losing, and had a high chance (80%) of gaining. The reason is that most of them did not receive significant foodgrain entitlements before the NFSA, but they turned into priority or even Antyodaya households as PDS coverage expanded under the act.

The existence of a substantial minority of losers is, to some extent, an inevitable consequence of transitioning to per capita entitlements as opposed to household entitlements. One important category of victims is widows living alone and elderly couples. In principle, the Antyodaya programme should have protected them. As discussed below, however, this safeguard fell short.

The Antyodaya Programme

The NFSA prescribes the continuation of the Antyodaya programme (intended for the poorest of the poor), but for some reason, central and state governments have paid little attention to it. The central government even made a brief attempt—aborted under public pressure—to phase it out (Drèze 2015).

Perhaps because of this declining policy interest, the number of Antyodaya cards fell sharply in many states immediately after the act came into force. In the sample villages, the number of Antyodaya cards in June 2016 was about 20% lower compared to two years earlier; only Bihar and Chhattisgarh more or less preserved their pre-NFSA coverage. More importantly, almost 50% of households that used to have an Antyodaya card had lost it by June 2016 (Table 8).

Table 8: Antyodaya

State	Proportion of Entitled Households in Antyodaya Category (%)	Absolute Number of Antyodaya Cards among Sample Households		Proportion of Pre-NFS Antyodaya Households That Had No Antyodaya Card Post-NFSA (%)
		Before NFSA (Mid-2014)	After NFSA (Mid-2016)	
Bihar	8	51	47	16
Chhattisgarh	28	141	147	40
Jharkhand	16	108	74	73
MP	11	102	65	39
Odisha	7	63	46	40
West Bengal	15	76	56	74
Six states	14	541	435	49

Table 7: Gainers and Losers by Pre-NFSA Status (Individuals)

Pre-NFSA Status*	Percentage Distribution of Sample Population by Status#		
	Gainer	Loser	No Change
BPL	41	38	22
APL	80	5	15
AAY	8	32	60
None	100	0	0

* For the share of each category in the sample, see Table 2.
Row entries add to 100, except for rounding.

It is possible that some of those who lost their Antyodaya cards had not been eligible in the first place.²⁶ This is difficult to verify as the eligibility criteria are not clear.²⁷ The observations of the survey teams suggest that the post-NFSA distribution of Antyodaya cards was somewhat haphazard, possibly due to this lack of clear eligibility criteria. Quite likely, many households lost their Antyodaya cards for no valid reason after the act came into force (we met some of them during the survey).

The Antyodaya programme is an important means of providing enhanced support to the poorest households, but it requires urgent attention. The eligibility criteria lack transparency. Supreme Court orders are not being followed. Some households were arbitrarily deprived of their Antyodaya card post-NFSA. The entire programme seems to have fallen off the radar.²⁸

Quality of PDS Foodgrain

In line with our previous PDS surveys, we found that a large majority of cardholders were reasonably satisfied with the quality of PDS foodgrain—79% of respondents felt that it was “good” or “fair” (Table 9).²⁹ Two states, however, had serious problems with regard to low-quality PDS foodgrain—Bihar and West Bengal.

Table 9: Quality of PDS Foodgrain

State	Percentage Distribution of Entitled Households by Perceived Quality of PDS Foodgrain*				
	Good	Fair	Poor	Rice Was OK but Not Wheat	Wheat Was OK but Not Rice
Bihar	20	37	23	6	13
Chhattisgarh	63	34	2	0	0
Jharkhand	40	52	5	2	0
MP	20	53	16	2	9
Odisha	50	36	12	0	1
West Bengal	27	31	10	32	0
Six states#	38 (30)	41 (40)	11 (15)	6 (9)	4 (6)

* Based on the most recent quota. Row entries add to 100, except for rounding.

In parentheses, weighted average of state-specific figures (using rural population as weight).

In West Bengal, the main problem was the poor quality of flour packets (on this, see Drèze and Maji 2016; Haldar and Basu 2018). Some respondents said that they fed the flour to cattle, or that they had to sieve the flour twice for it to be edible. Private contractors, it seemed, were making money by supplying low-quality flour packets for public distribution.³⁰ Perhaps the flour packets should be replaced with wheat or rice. If flour distribution continues in West Bengal, the quality of the flour packets should be strictly monitored.

Bihar quite likely has an adulteration problem; downgrading PDS foodgrain—for example, by mixing rice with straw, or substituting PDS rice with inferior rice—enables corrupt dealers to make some extra money. A full 42% of respondents in Bihar complained about the low quality of PDS wheat, or rice, or both.³¹ Here, again, Bihar seems to lag far behind the other reference states, despite significant improvements in recent years.

PDS Reforms

All the reference states have emulated, to a varying extent, the PDS reforms initiated in Chhattisgarh about 12 years ago.³² These include broader coverage, clearer entitlements, separation of transport agencies from distribution agencies (known as “doorstep delivery”), viable distribution commissions, fixed

distribution schedules, electronic weighing, computerisation, and a range of transparency and grievance redressal measures. However, arguably, the most critical reform in Chhattisgarh was the deprivatisation of ration shop management; private dealers were removed in favour of collective institutions such as gram panchayats, cooperatives, and women’s self-help groups (SHGs). Deprivatisation has been less widely emulated, perhaps because it tends to be fiercely resisted by private dealers and requires firm political will. Among the reference states, Odisha is the only one (other than Chhattisgarh) that went the whole hog; most ration shops there are now managed by gram panchayats. In MP, many ration shops are managed by cooperatives.³³ In some states, new ration shop licences are often reserved for women’s SHGs or cooperatives, but existing private dealers are rarely removed. In Jharkhand and (especially) Bihar, the overwhelming power of private dealers over their customers remains a major problem. Even in West Bengal, some of the private dealers we met were far from inspiring. One of them casually told the survey team, “Of course, I cheat—so did my father, and hopefully my son will do the same.”

Another area for improvement in PDS reform is effective ration card management. Computerised ration card management, which began in a handful of states in the early 2000s, was well underway in many others by the time the NFSA was implemented. The rollout of the act forced laggard states to catch up, with impressive results in some cases (for example, in Jharkhand and West Bengal). Computerisation enables transparency and is an important step in keeping corruption at bay. None of the reference states, however, have been able to establish a system that continuously and reliably updates the list of ration cards—adding the names of newborns, updating the list when people move (for example, after marriage), deleting the names of people who die, and so on. As noted earlier, an attempt was made in MP to use the Samagra system for this purpose, but not everyone was aware of this facility; those in charge of updating records did not always do their job (and some, we were told, were charged for it); and there were some complaints about Samagra data not being well-integrated with food department data, so that revisions in the former were not always reflected in the latter. Aside from effective ration card management, other areas of ongoing reform efforts include reliable recording of last-mile transactions, portability of benefits, and grievance redressal.³⁴

The active involvement of gram panchayats in the rollout of the NFSA was evident in at least three states (Chhattisgarh, MP, and Odisha), and those states certainly seemed to benefit from it. Given certain constraints, they were able to decentralise important aspects of implementing the act, such as the identification of eligible households and the management of ration shops. As discussed below, however, the NFSA has also created some centralisation tendencies.

State-specific Issues

We proceed with a brief account of some state-specific issues.

Odisha: The survey suggests that the PDS in rural Odisha works reasonably well. This adds to a series of recent studies

(cited earlier) that reached a similar conclusion.³⁵ Odisha, it seems, was the first state to emulate Chhattisgarh's PDS reforms, with similar results.

The main flaw we observed in Odisha in June 2016 was that PDS distribution was lagged by a month. The monthly distribution schedule (which used to be diligently observed across the state) was disrupted, temporarily at least, during the transition to the NFSA system.

West Bengal: At the time of the survey (and even more so before the NFSA came into force), West Bengal had a unique problem—unnecessary complexity in the PDS. Prior to the NFSA, household entitlements were virtually impossible to understand even for the people concerned—there were all sorts of bewildering complications, variations, and exemptions. After the NFSA, the system was simplified to some extent, but it is still far too complex, with, for instance, individual instead of household ration cards (in some households, different members even have different types of cards), multiple ration card categories, double-decimal issue prices, weekly rather than monthly distribution, and special packages for particular areas or groups.³⁶ All this begs further simplification. Indeed, the first step in eradicating corruption is to ensure that people clearly understand their entitlements and other basic features of the PDS.

As mentioned earlier, except for Halder and Basu (2018), we are not aware of other studies on the PDS in West Bengal in the post-NFSA period. Further research is needed to corroborate the findings reported in this paper and take them forward.

Madhya Pradesh: In MP, the survey revealed two innovations of interest—the use of the Samagra database for ration card management, and the use of point of sale (POS) machines in offline mode for last-mile authentication and to record PDS transactions.

The Samagra database, as discussed earlier, is used to update the PDS database from time to time. This is an important innovation, compared with the use of a static ration card database (derived, say, from a baseline survey such as the SECC). However, information from the Samagra database does not automatically reflect in local POS machines. Sometimes, spelling mismatches between the two databases lead to the denial of PDS rations. Further, some respondents said that the gram panchayat secretary demanded money (up to ₹100 in one village) to correct or update Samagra entries. Samagra is best seen as an ongoing experiment, awaiting closer scrutiny.

The system of using offline POS machines is also of interest. Unlike the POS machines used in some states today for Aadhaar-based Biometric Authentication (ABBA)—for example, in Jharkhand and Rajasthan—the POS machines used in MP at the time of the survey did not require internet connectivity or biometrics.³⁷ Upon entering a household's Samagra number (printed on the provisional NFSA slips that acted as temporary ration cards in MP in June 2016), the POS machine confirms the household's entitlements, generates a printed receipt, and records the transaction. Uploading transaction records takes place separately (along with downloading updated household information), as and when connectivity is available. Compared

with ABBA, this system has the major advantage of avoiding a dependence on connectivity and biometrics at the time of transaction. So far as we can tell from the limited observations generated by the survey, it was working reasonably well in MP at that time, but this requires further corroboration.

Jharkhand: In Jharkhand, the rollout of the NFSA was still in progress at the time of the survey, and a number of transition problems were yet to be resolved. For instance, the online ration card lists did not always match what we found on the ground—some households we encountered had new ration cards but were yet to be added to the online list, while others were still waiting for their new ration cards despite being on the list and receiving food rations. When a follow-up survey was conducted one year later (Drèze et al 2017), it was found that there was much greater consistency between the virtual and actual situations, though some households were still waiting for their printed rations cards.

Some of the transition problems we encountered in Jharkhand in June 2016 were exclusion errors, missing names in ration cards, and incomplete PDS reforms (for example, door-step delivery was still lacking in some areas). The battle against corruption, of course, was also far from over despite the state having made considerable progress in recent years. Similarly, much progress has been made in ensuring regular monthly distribution; however, supply disruptions still occur. With accelerated PDS reforms, Jharkhand may well be able to achieve the same standards of PDS management as, say, Chhattisgarh and Odisha.

Bihar: Bihar is a case of the proverbial glass that is half empty or half full. On the one hand, Bihar is the clear laggard among the six reference states, especially when it comes to removing PDS corruption. On the other hand, Bihar has improved a great deal since the 2000s, when leakages were as high as 80%–90% year after year (Khera 2011a; Drèze et al 2015).³⁸ It is also worth noting that Bihar is one of the states that took the lead in implementing the NFSA. And indeed, it set a useful precedent in using SECC data for the selection of eligible households.

Aside from persistent corruption, Bihar appears to have a specific problem with regards to limited logistic capability. In most of the reference states, foodgrain distribution witnessed a quantum jump with the implementation of the NFSA. Bihar, it seems, had great difficulty coping with the logistics. As mentioned earlier, the problem of “gap months” arises both from disruptions in the supply chain and from the tendency of PDS dealers to use that opening to divert an entire month's foodgrain quota from time to time.

The fact that Bihar, and (to a lesser extent) Jharkhand, emerged as the two laggard states in this survey will come as no surprise to anyone familiar with the feudal social structures and low standards of governance in those states. One aspect of the governance problem is that Bihar and Jharkhand's food departments are simply lacking; there are staff shortages and vacancies at all levels. In this situation, they tend to rely on PDS dealers to carry out tasks that government functionaries in other states are responsible for, such as collecting ration card applications or

seeding Aadhaar numbers. Given the corrupt tendencies of PDS dealers (who are often upper-caste exploiters with political connections), this approach is bound to be problematic. Some of this, of course, is a reflection of the state government's low political commitment to food security issues. There have been episodes of political interest in these issues in Bihar and Jharkhand—for example in the run-up to the assembly elections—but they have tended to be short-lived. In states like Chhattisgarh and Odisha, by contrast, there is more sustained interest in food security issues. Correspondingly, the food departments have strong teams with reasonable tenure, and there are better administrative capabilities at lower levels too.

None of this, of course, is immutable. Time will tell whether Bihar and Jharkhand are able to achieve the same level of PDS functionality and integrity as the leading states. All said and done, they are certainly moving in that direction.

Chhattisgarh: We end this section on a happy note. In June 2016, as in earlier surveys, we were impressed with the PDS in Chhattisgarh. Regular distribution every month, without cuts, was the norm. Ration card entries were complete and accurate in most cases. Further, the respondents were generally happy with the local PDS manager. We did, of course, encounter various issues such as missing names in ration cards, some puzzling complaints of cards being cancelled, and the first signs of Aadhaar-related woes. The mandatory taking of photographs at the time of distribution was also causing problems for the elderly, who were not always able to go to ration shops in person. Overall, however, the system's effectiveness was remarkable.

Recent Developments

As mentioned earlier, some states have been able to decentralise important aspects of the implementation of the NFSA. Having said this, the NFSA has also created some centralisation tendencies. Over time, the central government has increasingly used its powers to remotely control the PDS across the country. One striking example concerns the recent imposition of Aadhaar integration on the PDS. This requires all members of entitled households to submit their Aadhaar numbers so that they can be linked with the PDS database. Aadhaar integration had already started causing difficulties in some of the reference states in mid-2016.³⁹

Going one step further, the central government recently started pressurising state governments to introduce ABBA verification to collect PDS entitlements. This requires fingerprint authentication of at least one household member each month, at the time of buying PDS rations. In Jharkhand, compulsory ABBA was introduced in the Ranchi district in August 2016 and was gradually extended to the whole state by May 2017. The results were sobering: major exclusion problems, enhanced transaction costs, and—if anything—a revival of corruption (Drèze et al 2017). In short, this move turned out to be a setback rather than a step forward for PDS reforms in Jharkhand.

Jharkhand's experience shows the dangers of a dependence on internet connectivity and biometrics for PDS authentication, especially in rural areas. Chhattisgarh, hoping to avoid this pitfall, supplied ration shops with tablets shortly before the

2016 survey and instructed them to take a photograph of each PDS transaction, to be uploaded on the net in due course. Two other options are offline POS machines (as in MP at the time of the survey) and smart cards. The smart card option, it seems, is already being used with good effect in Tamil Nadu (Khera 2018).⁴⁰ The central government, however, is relentlessly promoting Aadhaar-based technology.

Concluding Remarks

India's PDS has come a long way in the last 10 years or so. It has turned from a morass of leaky and poorly targeted transfers to a critical form of social support for a vast majority of poor households. In some states, the market value of the monthly PDS transfers for eligible households is now roughly equivalent to one week's earnings under the Mahatma Gandhi National Rural Employment Guarantee Act, without the beneficiaries having to work.⁴¹

This transformation did not begin with the NFSA, but the act contributed to it. In the six reference states, it certainly helped to put the PDS on a more solid footing, with lower exclusion errors, enhanced transparency, greater political visibility, and higher operational standards. Bold PDS reforms are in progress in all the reference states. Chhattisgarh, the pioneer in that field (at least in the eastern region), has set standards that now seem achievable in the other states as well.

Having said this, the transition is far from complete. Bihar and Jharkhand are yet to achieve the standards set by other states, and in Bihar especially, the hold of corrupt PDS dealers is proving hard to break. Further, much remains to be done everywhere to ensure effective ration card management, reliable recording of last-mile transactions, and prompt grievance redressal, among other remaining challenges.

We end by sharing a few thoughts on possible courses of action, not only for the government, but also for researchers and concerned citizens.

First, further evidence on the status of the PDS and NFSA, not only in the reference states but across the country, is urgently required. It is hard to think of an issue of equal import that has received such little attention so far from the research community. Our own study has its limitations, given the relatively small sample size. For many other states (including some like Uttar Pradesh, where the NFSA could make a big difference), even limited evidence of this sort is not available.

Second, the success of the PDS depends on the provision of simple, transparent, and durable entitlements. Some states are already introducing complications, such as multiple categories of ration cards and variable issue prices. Clarifying entitlements is the first line of defence against corruption.

Third, private dealers are begging to be removed, in favour of public institutions.⁴² States like Chhattisgarh and Odisha (and others before them, notably Tamil Nadu) have shown the way—it is largely a matter of political will.

Fourth, the Antyodaya programme needs a new lease on life. With a coverage of about 20 million households in the whole country, it could go a long way towards eliminating destitution. However, this requires clear eligibility criteria and a reliable selection process, consistent with Supreme Court orders.

Fifth, the selection of eligible households requires more thought. Very soon, the current lists of ration cards will be out of date in many states. Is it time to plan another SECC-type national survey? Or is there a better way, based for instance on self-declaration, or the agency of gram panchayats, or even—in some areas at least—on the universalisation of the PDS? The answer is far from obvious.

Sixth, technology can help reform the PDS and reduce corruption, but only if it is appropriate, reliable, and people-friendly. Exploring or evaluating alternatives to ABBA, based, for instance on smart cards or offline POS machines, would be particularly useful.

Finally, despite recent improvements, the PDS still has a long way to go in terms of standards of transparency and accountability. Strict action against corrupt dealers, for instance, would help—they still tend to go scot-free even after being caught. Similarly, most of the reference states are yet to enforce basic transparency norms at the ration shop, such as the maintenance of clear and legible information boards. Effective grievance redressal facilities are also lacking at all levels.

These are just a sample of the issues that emerge from the findings of the survey. They hardly span the NFSA's wide canvas, but we hope that some of the issues are clearer.

NOTES

- 1 Maternity entitlements were yet to be operationalised at the time of writing. Child nutrition programmes (mainly school meals and the Integrated Child Development Services [ICDS] programme) were largely in place before the NFSA.
- 2 Earlier studies on the PDS in the post-NFSA period include National Council of Applied Economic Research (2015) and Puri (2017). For more on the PDS and PDS reforms before the NFSA, see Khera (2011a, 2011b), Drèze and Khera (2013, 2015a, 2017), Drèze (2017a), and the literature cited therein. For an introduction to the wider literature on food subsidies and related issues, see Bhattacharya et al (2018) and Alderman et al (2018).
- 3 State governments, of course, are free to expand the coverage or entitlements beyond NFSA norms at their own expense. Among the six states discussed in this paper, however, only Chhattisgarh (and to a lesser extent, West Bengal) had done so at the time of the survey.
- 4 Most rural households in Chhattisgarh fall under one of the two standard categories (priority and Antyodaya), though the CFSA also provides for excluding well-off households using simple exclusion criteria, and for a residual category of "general households" with reduced entitlements.
- 5 In Bihar, since the first district (Gaya) was actually quite close to the state capital, we chose one away from the state capital (Jamui) as the second district.
- 6 They also looked for duplicate ration cards but found very few.
- 7 It is also worth noting that the NFSA requires ration cards to be issued in the name of the eldest woman in the household. This is a progressive step which made it much harder to match the NFSA list with the door-to-door survey because women's names are not always well known in Indian villages. That was a problem in all the reference states, but perhaps especially in Bihar and Jharkhand where a woman's name tends to be considered very private.
- 8 The contrast between the two approaches is discussed in Drèze and Khera (2010a). Inclusion and exclusion criteria can be used and combined in diverse ways. As discussed in that paper, however, simplicity and transparency are paramount.
- 9 There are a few other exclusion criteria, such as payment of income tax, but these are largely redundant. For example, any household paying income tax in rural Jharkhand is likely to also meet some of the other exclusion criteria.
- 10 See, for example, Press Trust of India (2015), among other similar newspaper reports of that period. For a detailed account of the selection of eligible households in Odisha, see Satpathy (2017).
- 11 The NFSA officially came into force in mid-2013, but PDS-related provisions were implemented later, at different dates in different states, whenever they were ready (for example, with the selection of eligible households). In the reference states, other than Chhattisgarh, this happened sometime within the two years preceding the survey.
- 12 To illustrate, West Bengal has an additional category called RKS-Y-I (Rajya Khadya Suraksha Yojana) with the same entitlements as priority households, but which are paid for by the state government.
- 13 Calculated from unit-record NSS (68th Round) data; similarly, the proportion of households with a BPL or AAY card was around 45% in the reference states at that time. For related statistics, see Himanshu and Sen (2013), Puri (2017), and Bhattacharya et al (2018).
- 14 Detailed information on statewide PDS coverage in November 2016 is available from the central government's *Foodgrains Bulletin* (2017: 47). Note, however, that the coverage figures assume the 2011 population as the denominator.
- 15 For an enlightening case study on BPL lists, see Agrawal and Agrawal (2014). That study pertains to Uttar Pradesh, but similar problems used to apply in the reference states, where the BPL methodology was much the same.
- 16 These are the National Sample Survey, the third National Family Health Survey, and the first India Human Development Survey. See Drèze and Khera (2010a: Table 1) and Desai et al (2010: Table A.13.1a).
- 17 For the purpose of PER computations, household entitlements are calculated using the number of members on the ration card (this is the basis of foodgrain allocations to ration shops). These "effective entitlements" are not necessarily the same as their legal entitlements, because of the possibility of missing names on ration cards.
- 18 Strictly speaking, this statement may not apply if a significant proportion of ration cards are fake. As mentioned earlier, however, we found little evidence of this.
- 19 In Chhattisgarh, most sample households did not purchase PDS foodgrain in April, but this is because they received their April rations in advance (in March). According to food department officials in Chhattisgarh, this is a common practice—April's rations are often distributed in March to ease the storage constraints that crop up in April.
- 20 See Drèze and Khera (2010b), Aggarwal (2011), Puri (2012), Garg (2013), Chatterjee (2014), Drèze and Khera with the PEEP Team (2014), among others.
- 21 See Haldar and Basu (2018), based on a survey of 424 randomly selected households spread over four blocks of Bankura. Among other relevant insights, the authors found a UPER of 96% and reasonably effective targeting. This is the only post-NFSA study of the PDS in West Bengal that we are aware of. For a useful supplement of personal observations, see Rana (2018).
- 22 See Drèze et al (2017: Table 4). In their sample, the CPER was 93%.
- 23 See Dar et al (forthcoming), an insightful study of the PDS in Bihar. In their sample, as in ours, the CPER was close to 90%. Incidentally, their study also sheds light on the continued incidence of hunger in Bihar—in 36% of the sample households, at least one member had gone hungry (for lack of food in the house) in the preceding 30 days.
- 24 An even more recent study of the PDS in Bihar, covering about 1,200 households in 95 villages, arrived at a surprisingly high estimation of UPERs—about 90% on average (National Council of Applied Economic Research 2015).
- 25 In the other three states (Chhattisgarh, Jharkhand, and Odisha), issue prices had already been reduced before the NFSA.
- 26 Some Antyodaya households probably surrendered their cards voluntarily, in exchange for a priority card. Households with more than seven members stand to gain from doing this, and some states (for example, Madhya Pradesh) allowed it. Only a small proportion of Antyodaya households, however, are likely to have used this provision.
- 27 In the initial scheme, Antyodaya households were supposed to be identified by the local community. Later on, a Supreme Court order (dated 2 May 2003) made Antyodaya cards an entitlement for six specific groups of vulnerable households, such as Particularly Vulnerable Tribal Groups (PVTG) and single women with no regular support. But this order was largely ignored in most states, except for the universal coverage of PVTG households under Antyodaya.
- 28 The recent wave of hunger-related deaths in Jharkhand (at least 12 have been reported in the last few months) is another sign that the Antyodaya programme is not working the way it should. Most victims belonged to families that should have been (but were not) receiving food rations under the Antyodaya scheme.
- 29 For similar findings from two earlier surveys (in 9 and 10 states, respectively), see Khera (2011b) and Drèze and Khera with the PEEP Team (2014). Muralidharan et al (2018b) also find relatively high levels of satisfaction with the quality of PDS foodgrain in Jharkhand.
- 30 The flour is supposed to be fortified (with iron and vitamin A). Ironically, the alleged need for fortification is often used as an entry point by private contractors, who actually supply low-quality food packets. There have been many examples, in recent years, of contractors making money by supplying substandard food items to the PDS, the midday meal scheme, and the ICDS. (Among other notorious cases is the plundering of ICDS funds in Uttar Pradesh by Ponty Chadha, a flamboyant gangster-businessman close to the then chief minister, Mayawati, under the garb of supplying a ready-to-eat food mixture called *panjiri*.) West Bengal's experience is another healthy warning about this problematic aspect of fortification schemes.

- 31 In some areas, including in large parts of Bihar and Jharkhand, people strongly prefer *usna* (parboiled) rice to *arwa* (non-parboiled) rice, and complain when they get *arwa* rice from the PDS. Although the issue here is not so much “low quality” as the provision of an unsuitable or unappreciated variety of rice, complaints of this sort would come across in survey responses (Table 9) as instances of low-quality PDS foodgrain.
- 32 For further discussion of PDS reforms in Chhattisgarh see, for example, Drèze and Khera (2010b), Puri (2012), Garg (2013), and Bhattacharya et al (2018). There have been further developments in the last few years, such as the deployment of the “CORE PDS” in urban areas (Joshi et al 2016).
- 33 One of the ration shops in our West Bengal sample (Kasol village, Bankura district) was managed by a cooperative. Interestingly, it performed better than other ration shops in West Bengal (Drèze and Maji 2016).
- 34 Across reference states, whenever an attempt was made to update, deduplicate, or verify ration cards, it led to the unfair exclusion of some eligible households. None of the states appear to have a process of serving show-cause notices before cancellation, to give the concerned households a chance to object.
- 35 One qualification is due—much of the recent evidence pertains to eastern and southern Odisha, especially the former “KBK” (Kalahandi–Bolangir–Koraput) region. The KBK region used to benefit from special PDS provisions, and it is possible that the PDS functions better there than in western Odisha.
- 36 During the survey, individual ration card details (for example, entitlements) were aggregated by the household to calculate the corresponding details at the household level.
- 37 On ABBA in Jharkhand, see Drèze et al (2017) and Muralidharan et al (2018b). One year after being introduced, this experiment looked like a case of “pain without gain.”
- 38 For more on the PDS in Bihar, see also Mooij (2001), Rahman (2014), Choithani and Pritchard (2015), and Dar et al (forthcoming). PDS reforms, it seems, were particularly intensive before the assembly elections in 2015, but it is not clear to what extent the momentum was sustained after that.
- 39 Among these difficulties is the possible need to remove inconsistencies between the Aadhaar and PDS databases. On related issues, see Khera (2017).
- 40 See also Jain et al (2014) on the use of smart cards in Chhattisgarh’s “CORE PDS.”
- 41 This applies in Chhattisgarh (Drèze and Khera 2013). Muralidharan et al (2018b) find that PDS cardholders in Jharkhand would be willing to exchange their PDS rations for cash transfers of ₹1,028 per household per month on average, which is also similar to a week’s earnings under NREGA. Note, however, that this is 36% higher than the market value of PDS entitlements in Jharkhand, which is ₹754 per cardholding household per month on average, according to the same study.
- 42 Fostering competition between dealers (as Chhattisgarh did under the CORE PDS) is another possibility. However, this is not easy to do in rural areas with small and distant settlements.
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