Policy Brief #14

Feeding India's Poor: Plugging Leakages, Without Doing Any Harm

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Key Points:

- *The PDS sustains the food security of India's poor and its coverage has been extended as per the NSFA, which is currently being implemented in 29 States/UTs.*
- *In the interest of addressing leakages in PDS, some states have embarked on end-to-end automation. Others, such as Chandigarh and Puducherry, are providing direct cash transfer (also referred to as DBT) of food subsidy to the beneficiaries.*
- *Both approaches require a pre-requisite step of digitisation of records that helps weed out ghost beneficiaries (de-duplication).*

Introduction

India's Public Distribution System (PDS) effectively serves as a lifeline for the poor[1] with 46% and 34% of rural households dependent on subsidised rice and wheat, respectively, at last count.[2] The PDS has long come under fire for its high cost of delivery and susceptibility to corruption and leakages. However, there is ample evidence[3] to show that where there is a will for serious reform, pilferage of grains can be significantly reduced, and those eligible receive what is due to them. The issue of PDS reform (as an extension of restructuring the Food Corporation of India (FCI)) was last formally studied by the Central Government[4] in 2013. The output report made a case for Direct Benefit Transfers (DBT) in the form of unconditional cash transfers to eligible citizens under the National Food Security Act (NFSA).

This policy brief discusses two distinct approaches, namely, DBT and e-PDS, as undertaken by different states. The findings are discussed from the perspective of delivery to all eligible citizens at the last mile and any early signals on their impact on nutrition, given their fundamental links to PDS. On this basis, recommendations are made to implementing agencies at the state level, as they have a central role in all matters relating to food and agriculture.

DBT Requires Some Operational Fixes: Availability, Accessibility, High Cost of Transactions and Insufficiency Remain Issues

The study of DBT carried out in the Union Territories of Chandigarh and Puducherry[5] revealed challenges linked to the design of the scheme that ultimately affect their acceptance by PDS beneficiaries. The data are consistent with earlier studies[6] on the efficacy of cash transfer schemes for food in India. This recent quantitative and qualitative evidence from the field raises issues[7] around: (1) coordination between Centre and State implementing agencies; (2) access to cash-out points at the last mile; and, critically, (3) sufficiency of the transfers received, as well as (4) concern around diversion.

Aadhaar Facilitates, But is Not Yet Seamless

The lack of access to cash and/or any associated hassle factors in India's banking infrastructure are long standing (read Saddling Up a Dead Horse: Financial Inclusion in India and read How to Make Optimum Use of Agent Networks (2/2)). A key evolution in the last five years, however, has been the big push for realising the Jan Dhan-*Aadhaar*-Mobile (JAM)[8] trinity. Chandigarh and Puducherry[9] offer an interesting comparison, as DBT was only *Aadhaar*-enabled in the case of the latter. Where cash transfers are *Aadhaar*-enabled, the Public Fund Management System (PFMS)[10] becomes a mandatory intermediary for effecting payments. In Puducherry, more than 30,000 beneficiaries could not receive the transfers due to non-approval[11] by PFMS. As a secondary complication, if beneficiaries open a new *Aadhaar*-linked account, it automatically becomes the default account for transfers, which left many beneficiaries confused as to where to expect the transfer. While these might be operational in nature, they have remain unresolved for a long time. This suggests a need for more dedicated efforts to improve Centre and State coordination. The *Aadhaar*-enabled nature of transfers in Puducherry also posed an additional obstacle to reaching all eligible beneficiaries; particularly the most vulnerable ones. *Prima facie, Aadhaar* enrolment is above average at 81%[12] but, digging deeper, the lower *Aadhaar* penetration rates amongst Antyodaya (AAY) and Priority Household[13] ration card-holders become apparent, with almost 13,000 ration cards left out simply due to non-enrolment.

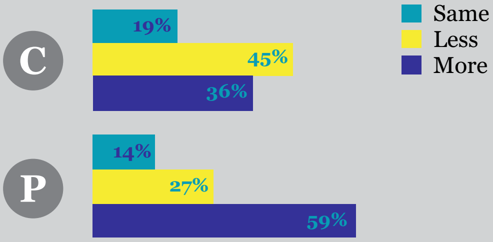
DBT POLICY IMPLICATIONS:

- *The use of Aadhaar as an identifier currently poses some issues as a result of (1) non-Aadhaar enrolment and (2) lag in Aadhaar seeding with either the bank account or the PDS database. Accessing cash transfer is not hassle-free even in relatively urbanised settings and risks exclusion of most vulnerable beneficiaries*

- *Current subsidy amounts do not reflect market prices and are resulting in higher out-of-pocket expenses for beneficiaries, compared to FPS scenario.*

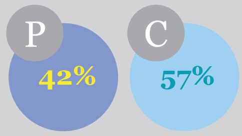
Box 1: Hassle Factors and Transaction Costs from Accessing Cash

How much time spent 'Now' vs 'Fair Price Shop System'?



*Percentage of respondents

Does switch to DBT result in wage loss?

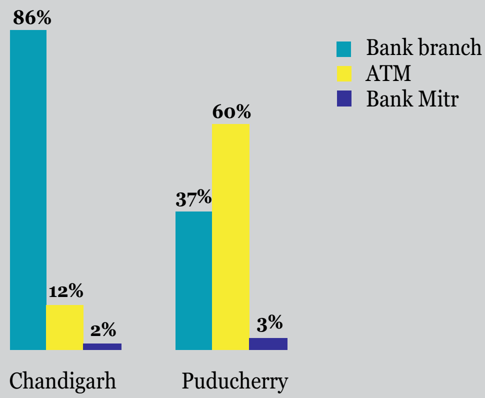


Said '**Yes**'

C - Chandigarh, **P** - Puducherry

In more urban areas, respondents face less 'hassle factors' such as long queues and associated wage loss due to time spent, transport costs, and mistreatment from bank staff and spend less time accessing rations. However, in areas with a considerable rural population, greater hassle factors were experienced. On average, 50% of respondents reported resulting wage loss of Rs.42 (USD 0.66) coupled with Rs.40 (USD 0.62) in transportation expenses, which are significant, given income levels of PDS beneficiaries.

Preferred point of withdrawal for



There is adequate banking infrastructure but...

In **Chandigarh**, bank branches are preferred, as new accounts have been opened as part of PMJDY.

In **Puducherry**, the predominantly male survey respondents prefer ATM. However, a different trend is expected if transfers were made to women.

Overall, the high dependence on banks results in overcrowding of bank branches and associated unpleasant treatment by bank staff. Additionally, as beneficiaries do not receive any intimation (SMS alert) about the subsidy transfer, repeat visits are made to the bank branches, resulting in further inconvenience to both beneficiaries and bank staff.

Insufficiency and Diversion Could Diminish Food Security Goals of PDS

The current subsidy per kilogramme of grain calculated by taking the difference between 1.25 times the Minimum Support Price[14] and Central Issue Prices, is guided by the NFSA, 2013. However, this results in subsidy amounts that are not reflective of market rates; this insufficiency is observed to be greater in the case of rice, which is more expensive. The result is that an AAY household in Puducherry spends four times more[15] (see Box 2) to access the same 35 kg of rice[16] that was previously accessed at the Fair Price Shop. While the logical approach could be to index DBT amount with real market rates, this may pose other technical challenges such as local price fluctuation, inability to track such data and the appropriate frequency of price indexing, as discussed by Khera (2013). A more appropriate method for calculating transfer amounts could be based on the Monthly Per-capita Consumption Expenditure (MPCE) method put forth by the Rangarajan Committee. This expert group[17] estimates that poor and rural households spend more than half of their monthly expenditure on food. The subsidy amount could be derived by taking 25%[18] of income threshold of poverty line and would, therefore, be more reflective of the subsidy

POLICY INNOVATIONS FOR SUBSIDY CALCULATION:

1. ***Indexing to Poverty Line based on MPCE method***

2. ***Indexing to market price using two possible methods below:***

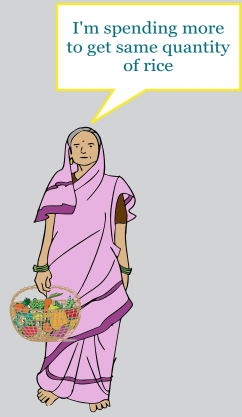
- *Price at the local mandi. Use the moving average of last fifteen days plus a margin of 25% to make it comparable to retail price.*

- *Spot prices at commodity exchange NCDEX[1] manages spot prices of almost thirty-one agriculture commodities traded in India.*

1. National Commodity & Derivatives Exchange Limited (NCDEX) is an online multi-commodity exchange in India, promoted by national-level institutions

received previously at the Fair Price Shop as well as consider market prices.

Box 2: Out of Pocket for Beneficiaries – Grains vs Cash



	Before	*After*
Source	**Fair Price Shop**	**Market**
Rice Entitlement (kg)	351	35
Price/kg (₹)	3	30
Subsidy Amount for 35 kg	945 (271 X 35)	809
Expenditure	105	1050
Total 'Out of pocket' expenses (₹)	**105**	**241**

Notes:

1. This example uses the scenario faced by an AAY ration card-holding and rice consuming family which is entitled to a fixed amount of 35 kg of rice under NFSA, regardless of family size.

2. Before DBT, they would purchase this amount at Rs.3/kg receiving an effective subsidy of (30-3) x 35 = Rs.945, based on the average market price of rice in Puducherry of Rs.30/kg. Total expenditure by the family in this case is 35x3= Rs.105

3. Under the DBT scheme, this family would have to purchase the full 35 kg (which translates to approximately half their monthly requirement) in the open market.

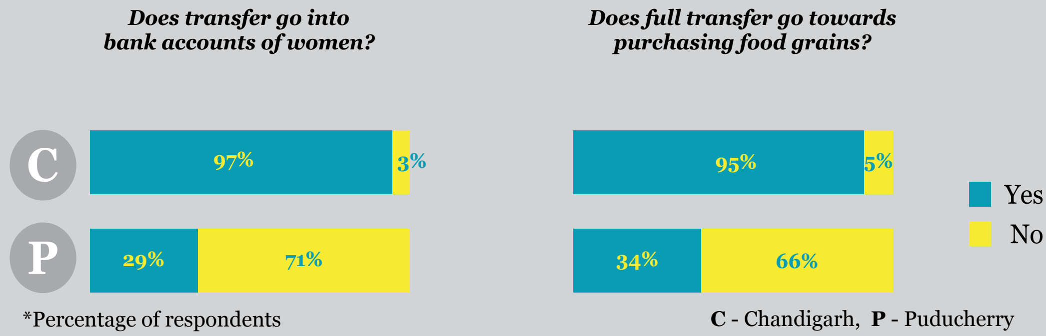
4. This family receives a DBT amount of Rs.809.30, and so would have to pay Rs.1050 - Rs.809 = Rs.241, which is more than twice what they were paying out of pocket previously to access the same amount of rice.

The fungibility of cash also means that there is no guarantee that subsidy will be spent on food. These concerns are not new, and an earlier study across 9 states has raised respondents' fears around 'exploitation' and 'lack of self-control' with regard to expenditure. These concerns also emerged in *MicroSave*'s findings. While both geographies are UTs that enjoy lower taxes on alcohol, the voices of concern were loudest in Puducherry, where the social ills of alcoholism have been well documented.[19] Cheaper alcohol aside, other factors such as depressed agriculture and sale of arable land that have reduced employment opportunities overall, contribute to this social problem as well. Focus group discussions with women revealed a sense of hopelessness on cash being misspent, particularly if disbursed to men and, by extension, a lack of control on whether the subsidy will address nutritional requirements (see Box 3).

> *"At least if the money comes to me, I will manage the budget. If he has to withdraw it, I can be sure that part of it will go to drinks since the shop is just next to the ATM"*
> **Female FGD respondent, Karaikal**

Many global studies[20] employing the Randomised Control Trial (RCT) methodology have found no statistical significance of any increase in expenditures on alcohol and tobacco where cash transfers are implemented. In the interest of maintaining context and cultural specificity, the results from a RCT study on unconditional cash transfers pilot for food conducted in Delhi[21] are examined here. The results are arguably more relevant in spite of its urban sample. The study concluded that there was no significant increase in alcohol consumption due to cash transfers. These results are encouraging and, significantly, also highlight the importance of scheme design. In this study, transfers were only made to bank accounts of women and benefited from the strong presence of a union that contributed to 'messaging effects' through active efforts to promote the social aim of the transfer.

Box 3: Local Social Context Might Influence Use of Transfers



More than 70% of transfers are going to male heads of households in Puducherry and this roughly corresponds to the figure on use for transfers on food.

e-PDS Offers Hope for Fixing a Fractured System

The biggest criticism of PDS is that too much of the subsidised rice and wheat released by the Food Corporation of India (FCI) fails to reach consumers. These 'leakages' typically happen at various points of the supply chain starting from the transport of grains from the FCI to mandal[22]-level godowns, followed by transport to the FPS(s) and, lastly, during off-take by the beneficiaries at the FPS. Various studies[23] have provided estimates of the severity of these leakages, and these were certainly alarming in the early 2000s, hovering around 50%. However, marked improvements have been made even in some of the worst-performing states for PDS, such as Bihar[24]. In more recent years, the implementation of NFSA by an increasing number of states will contribute to less diversion of food grains to open market. Similarly, the rapid uptake of *Aadhaar* (a biometric linked unique identifier), which has enabled weeding out of ghost beneficiaries, has also contributed to considerable reduction in wastage. Andhra Pradesh[25] often emerges as a best-practice model and, in the case of PDS, has implemented end-to-end automation and even gone the extra mile to ensure that all eligible beneficiaries get their entitled amounts of ration. The state managed to save INR 225 crore (USD 35 million) per annum from plugging "leakages".

Viability Conundrum

The e-PDS option is promising in terms of its potential to address leakages, without added hassle for beneficiaries. However, not everyone is equally pleased with the added efficiency as a result of automation. With automation, FPS dealers are stressed, as near elimination of opportunities for diversion means a far less interesting revenue model. While maintaining no sympathy for the FPS dealers who were complicit in the diversion of rations, it must be noted that the issue of viability is an important pre-condition for achieving the objectives of the targeted PDS. With a network of more than 537,000 FPSs[26] in India, this is among the largest distribution networks of its kind in the world.

Current complaints from FPS dealers in Andhra Pradesh, for example, relate to a low commission structure that barely covers cost. Field observations from *MicroSave*'s larger e-PDS study[27] concur with other assessments that the pattern of ownership of FPS has an important bearing on their viability, as it affects the cost structure of FPSs. Another observation has also been that FPS owners derive almost equal revenues from their sales of grains and kerosene. This highlights how removing grains will significantly impact their

DBT POLICY RECOMMENDA-TIONS:

- *Allow the utilisation of other payment modes until Aadhaar enrolment can be fully achieved.*
- *Review calculation formula for DBT subsidy – the MPCE method from the Rangarajan Committee could provide equivalent subsidy to amount received in grains.*
- *Scheme must be coupled with messaging to promote social aim of nutrition and food security to avoid diversions.*
- *Cash transfers made to accounts of women heads of households, only.*

e-PDS POLICY IMPLICATIONS:

- *Reduced leakages mean reduced viability of FPS under current commission structure*
- *PDS will not reach its intended goals without a well-functioning FPS network, particularly in rural and remote areas.*

e-PDS POLICY RECOMMENDATIONS:

- *Allow the testing of alternative business models for FPS – including sale of non-PDS items*
- *However, these pilots should also study the nutritional impact of such models, i.e., if presence of non-essential food/processed items detract from nutritional goals.*

overall viability[28]. The earlier assessments also analyse various scenarios for increasing FPS viability and hypothesise that the freedom to trade in non-PDS items[29] would be essential for sustaining FPS dealers and ensuring regular opening hours. The Rajasthan State Government has ventured in this direction last year by allowing the entry of a corporate entity, the Futures Group, to run a group of ration shops called 'Annapurna Bhandar', which would offer a wider range of household items that will also be sold at discounted prices. While there are no clear answers at this point, this 'viability gap' for FPS dealers has broader implications on the viability of other actors, such as the wholesale dealers, state-level corporations, and the FCI, and requires careful attention.

Conclusion: Weighing the Cost of Hunger

"Poverty is not the same as hunger. Hunger is far worse." This astute remark was made by the Rangarajan Committee. The problems of hunger and under-nutrition[30] across the country are well documented. What's worrying is that in spite of the foresight in trying to prevent this through the PDS and other social schemes, average calorie and protein intakes have been steadily declining over the past few decades, according to the NSS. In multiple studies aimed at understanding beneficiary preferences for cash versus grain, grain is preferred quite clearly and strongly, particularly where the FPS machinery is working well or has seen significant efficiency and accountability gains due to automation. Bihar's overhaul of its earlier corrupt PDS system is encouraging and provides a model for other states facing similar challenges.

The cost-efficiency argument in favour of cash transfers might be a sound one for the exchequer, but the (limited) experience to date suggests that many of the government's transaction costs are transferred to ration card-holders. Unless there are revisions to the current formulas for subsidy calculation and considerable improvements to the cash-out infrastructure and service (which have longer-term realisation timeframes), particularly in rural areas, the public acceptance of cash transfers seems unlikely. Cash transfers could work for PDS in urban settings where proximity to banks and markets are not issues.[31] Ultimately, these decisions have to be taken at the state level, considering the local social context and presence of important pre-requisites, such as better targeted communication campaign, streamlined enrolment process, robust banking network, sufficient DBT amount, and an overarching beneficiary-centric grievance redressal mechanism.[32] In this context, the central government's current measured view on DBT roll-out across all social schemes is a welcome one. The cost of too many of India's poor sleeping hungry would be one that is too much to bear.

About *MicroSave*

MicroSave is an international financial inclusion consulting firm with nearly 20 years of experience, operating in 11 offices across Asia and Africa. We partner with participants in financial services ecosystems to achieve sustainable performance improvements and unlock enduring value.

Notes

1. The latest Socio Economic and Caste Census (SECC) from 2011 reveals that in nearly 75 per cent of rural households, the main earning family member makes less than Rs 5,000 per month (or Rs 60,000 annually). In just eight per cent of households does the main earning member make more than Rs 10,000 per month.

2. National Sample Survey Office (2014): Report No 558: Household Consumption of Various Goods and Services in India 2011–12, New Delhi: NSSO.

3. On PDS reforms (i) in Chhattisgarh, see Drèze and Khera (2015); Khera (2011); Puri (2012), among others; (ii) in Odisha, see Aggarwal (2011) and Chatterjee (2014); (iii) in Bihar, see Drèze et al. (2015)

4. A high-level Committee on Reorienting the Role and Restructuring of the Food Corporation of India was convened and maintained that aggregate leakages at the national levels based on 2011-12 data remain high.

5. *MicroSave* carried out a DBT assessment over a period of 6 months (Aug. 2015 – Jan. 2016) in both UTs at varying time-points of implementation.

6. See Khera (2013). "Cash vs In-Kind Transfers: Indian Data Meets Theory".

7. This note does not discuss issues observed around lack of scheme and subsidy awareness, which effectively excluded eligible beneficiaries, but are viewed to be easily addressed by fairly straightforward measures.

8. *Aadhaar* penetration has surged to 95% of the adult population at the national level and 175 million new bank accounts were opened between 2011-14 – National Economic Survey 2015-16 & World Bank-Gallup Global Findex Survey 2014.

9. Both states have high levels of *Aadhaar* enrolment, with Chandigarh reaching 100% and Puducherry reaching 80.6 %. However, it should be noted that while the average figure is higher in Puducherry, in Karaikal district enrolment figures hover around 63.2%. This figure is relevant as most Karaikal residents are AAY card-holders and hence more susceptible to food insecurity.

10. This is as per guidelines for cash transfers stipulated in the National Food Security Act 2013.

11. Reasons for this could include mismatch of *Aadhaar* details with bank accounts. The state agency is not provided with a rejection list that matches *Aadhaar* numbers to bank accounts.

12. Calculated taking the average (rounded-off) *Aadhaar* enrolment rates of eligible ration card-holders from the two districts of Puducherry and Karaikal, which account for 93% of the 333,533 eligible ration cards in the UT.

13. New classifications under the NFSA, which was passed in 2013.

14. Subsidy amount is taken by taking the economic cost minus Central issue price. Central issue price is the price at which the food grain is allocated to States, while the economic cost is the combination of minimum support price and various other charges incurred by the Centre in procuring food grain.

15. This is calculated purely on the basis of actual costs of grains and does not include any ancillary costs due to transportation or opportunity cost due to wage lost.

16. Under NFSA, priority households (PHH) eligible for 5 kg of grain per unit and Antyodaya households (AAY) get lump sum amount of 35 kg per household.

17. The Monthly Per Capita Expenditure of Rs. 972 rural areas at the all-India level is the recommended methodology to define poverty lines. This ('Counting the Poor: Measurement and Other Issues' by Rangarajan and Dev) measure in no way corresponds to a comfortable standard of living but an absolute minimum. This translates to a monthly per household expenditure of Rs. 4,860 in rural India.

18. Calculations to arrive at 25% are discussed here. A typical AAY HH with 5 members (average household size) eats 60 kg of rice per month and is eligible for 35 kg at subsidised rates under NFSA. Hence, PDS was effectively subsidising slightly more than monthly household consumption. If rural poverty line is Rs. 972, 25% (50% of amount spent on food) amounts to Rs. 243. Correspondingly, this amount would suffice to procure close to 35 kg of rice, based on prevailing market rates for common grade rice (Rs.35) in Puducherry.

19. Puducherry figures in the Top 5 amongst biggest beer, wine and refined/foreign liquor drinking states and UTs nationwide as published in 2011-12 consumption data from National Sample Survey Office, India, as quoted in "India's biggest drinkers" published in *The Hindu*, August 23, 2014.

20. RCTs of commonly studied cash-transfer programmes are Bolsa Família (Brazil) and Oportunidades (Mexico) and have been largely positive, although it should be noted that they were both conditional cash transfers. These studies have also not been designed to answer this question specifically.

21. As gleaned from the full report 'An Experimental Pilot Cash Transfer Study in Delhi' which was a joint initiative by the Government of Delhi and SEWA under GNCTD-UNDP project, 2012.

22. 'Mandal' refers to an administration block in India which includes a number of villages.

23. Drèze and Khera (2015) argued that the APL quota was the most likely source of mass leakages on the basis of studies that found that BPL households were getting about 84% of their entitlements in nine sample states. NFSA removes the APL category and this is expected to further reduce the number of leakages across states.

24. This is discussed in "Food Security: Bihar on the Move" by Drèze et al. (2015).

25. Best practices from Andhra Pradesh's transition to e-PDS have been discussed in *MicroSave*'s IFN titled "Andhra Pradesh's Public Distribution System: A Trailblazer".

26. Latest figure from 2016 Union Budget Speech.

27. *MicroSave* assessed savings resulting from PDS automation across Andhra Pradesh, Chhattisgarh, Gujarat and Telangana.

28. 'Performance Evaluation of Targeted Public Distribution System', Planning Commission, Government of India, 2005.

29. Whether or not these stores would have any negative impact on nutrition by selling processed food at subsidised rates and if the Government should be playing a role in facilitating this, is questioned, but not being discussed here.

30. The vast majority of the population remains seriously undernourished. In rural areas, the average calorie intake per person per day declined from 2,221 kcal in 1983 to 2,020 kcal in 2009-10. Over the same period, the average protein intake per person per day declined from 62 gm to 55 gm. One sees a similar pattern in urban India; the average calorie and protein intake declined from 2,089 kcal and 57 gm in 1983, respectively, to 1,946 kcal and 53.5 gm in 2009-10.

31. This should, however, be viewed in the context of rising levels of urbanisation in India, which has the largest number of both rural and urban poor and is expected to experience the largest absolute growth in urban population between now and 2050, as discussed in World Urbanization Prospects, the 2011 Revision.

32. The chapter "Spreading JAM across India's economy" in the Economic Survey 2015-16.

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