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**DIRECT BENEFITS TRANSFER IN FOOD**  
RESULTS FROM ONE YEAR OF PROCESS MONITORING IN UNION TERRITORIES

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## ABBREVIATIONS

AAY	Antyodaya Anna Yojana	J-A-M	Jan Dhan Yojana - Aadhar - Mobile
AEPB	Aadhar Enabled Payments Bridge	KG	Kilogram
APL	Above Poverty Line		
BPL	Below Poverty Line		
CDG	Chandigarh		
DBT	Direct Benefits Transfer		
DNH	Dadra & Nagar Haveli		
EPOS	Electronic Point of Sale device		
FAQ	Fair Average Quality (applies to Public Distribution System grain)		
FPS	Fair Price Shops		
HH	Households		
Gol	Government of India		
J-PAL	Abdul Latif Jameel Poverty Action Lab		
MIT	Massachusetts Institute of Technology		
NACH	National Automated Clearing House		
NPCI	National Payments Corporation of India		
OOPS	Out of Pocket Spending		
PDS	Public Distribution System		
PFMS	Public Financial Management System		
PHH	Priority Households		
RCT	Randomised Controlled Trial		
UT	Union Territory		
FCI	Food Corporation of India		

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## EXECUTIVE SUMMARY

Government of India (GoI) began to roll-out Direct Benefits Transfer (DBT) in lieu of food rations provided through the Public Distribution System (PDS) in three Union Territories (UTs), i.e. Chandigarh (CDG), Puducherry (PDY), and Dadra and Nagar Haveli (DNH), in September 2015. We conducted a process monitoring study of DBT in food from January 2016 to March 2017. The study comprised three rounds of household surveys conducted with a representative sample of over 1000 households in each UT.

Key findings from the study are:

- 1. Implementation quality, i.e. perceived receipt of payments, has improved over time, but continues to remain a non-trivial challenge.**
  - In the most recent round of beneficiary surveys (conducted in Jan-Feb 2017), we found that:
    - CDG: 67% reported receiving DBT, 20% reported not receiving DBT, and 13% did not know
    - PDY: 67% reported receiving DBT, 24% reported not receiving DBT, and 10% did not know
    - DNH: 65% reported receiving DBT, 16% reported not receiving DBT, and 20% did not know.
  - While many of those reporting “don’t know” had not updated their passbooks, the results suggest that only 2/3 of beneficiaries on average confirm receiving the DBT benefits.
  - However, the fraction of beneficiaries reporting not receiving the DBT has fallen over time.
- 2. Yet, official records suggest very low failure rates, suggesting key gaps in beneficiary awareness of receipt of funds as well as administrative understanding of these gaps.**
  - Though official records indicate a transfer failure rate of less than 1%, around 20% of beneficiaries report not receiving benefits even as of March 2017.
  - It is difficult to know the exact reason for stated non-receipts (such as money going to a different account or passbooks not being updated)
  - While it does not appear that there are leakages in the system, it is crucial to understand whether the gaps are on account of awareness/knowledge of transfers, payments being made into bank accounts beneficiaries do not access, or processing errors.
- 3. Beneficiary communications (especially using mobile phones) can be substantially improved.**
  - Standard information on the transfers, particularly via auto-generated SMS, is not being provided to beneficiaries regularly, potentially leading to awareness gaps on receipts.
  - Beneficiaries do not seem to have a clear way to report their grievances.
- 4. On average, it costs beneficiaries more (in time and money) to travel to banks (to access cash) and markets (to use cash) than in collecting food rations. In contrast, those who use ATMs to access cash spend less time and money on DBT and market purchases than under the PDS.**
  - Using ATMs over banks lowers the time costs of access by 31 minutes on average, but only 37% of beneficiaries possess ATM cards for the bank in which DBT is received.

- With DBT, beneficiaries spend extra per household buying the same amount of grain in the market out of their own pocket, but they purchase higher quality grains from the market.

**5. Yet, we find that beneficiary preference for DBT over in-kind PDS benefits grew over time**

- 65% of beneficiaries across the three UTs now prefer receiving cash transfers over food grains, compared to less than 35% at the start of monitoring.
- Beneficiary preferences are influenced by the choice and flexibility that DBT affords them and higher quality of grain that they can now purchase.
- However, one challenge is that as they purchase higher quality grains, they also perceive that the amount of the subsidy is inadequate, making this a potential source of grievance

**6. Recipients state using cash to increase dietary diversity and improve quality of food grains purchased, but the design of the UT pilots does not allow credible evaluation of the impact of DBT on food consumption and nutrition (since there was no comparable control group).**

- 95% of beneficiaries, state using transfers for expanding dietary diversity.

**Based on these findings, we recommend the following measures to improve programme implementation:**

1. Nodal departments within GoI should increase scheme monitoring using available data, particularly reconciling transactions data with administrative data on beneficiaries to allow for immediate grievance redressal related to reports of non-receipts.
2. State level implementing departments **should expand the use of mobile phones** as a tool to increase interaction with beneficiaries and provide rapid grievance redressal.
  - a. Providing local language SMSes with clear information on transfer status can be implemented quickly and at low cost and effort but can go a long way in increasing awareness and salience of transfers.
  - b. Using outbound calls for information provision, labelling of transfers, grievance redressal and documenting beneficiary feedback across DBT schemes is an efficient and effective way of maintaining connection with beneficiaries.

**Overall, our findings suggest that DBT-based PDS reform holds long-term promise, and that over time beneficiaries prefer DBT to PDS. Yet, given the implementation challenges as well as unknown impact on food consumption and nutrition, we recommend the following approach to DBT-based reforms:**

1. For the next round of DBT-based PDS reforms, GoI work with states *to set up choice-based DBT pilots*, where beneficiaries can choose if they would prefer to avail cash DBT in lieu of in-kind benefits through the PDS. Such an approach insures beneficiaries against welfare losses, and will allow for a politically and ethically risk-free approach to policy experimentation with DBT.
2. These pilots should be accompanied by careful research (with a statistically-valid control group) on food consumption and nutrition impacts of DBT in lieu of PDS.
3. The combination above will allow policy-makers to better understand both beneficiary preferences as well as nutrition impact of cash versus kind approaches to food security.

## INTRODUCTION

### Background

The National Food Security Act (NFSA), mandates that GoI and state governments provide access to adequate quantity of quality food at affordable prices for lower income households. Beneficiaries are categorised as Priority Households (PHH) or Antyodaya Anna Yojana (AAY) Households. In January 2015, the Shanta Kumar High Level Committee on restructuring of the Food Corporation of India (FCI) recommended the gradual introduction of cash transfers in lieu of food grains provided through the PDS, beginning with large cities with more than one million population. Following this, the Ministry of Consumer Affairs, Food and Public Distribution, GoI, invited states and UTs to pilot and adopt the J-A-M (Jan-Dhan, Aadhar, Mobile) framework for remitting the cash equivalent of in-kind food entitlements to beneficiaries' Aadhar-linked bank accounts.

CDG and PDY, were the first to pilot this scheme beginning transfers in September 2015, followed by DNH in March 2016. The pilots cover all administrative areas within CDG and PDY, and population covered previously by 14 Fair Price Shops (FPS) in DNH. All administrative areas of CDG are urban, 43% of PDY is urban, and the programme has only been launched in urban areas of DNH. The nodal departments of the UT state governments<sup>1</sup> manage the enrolment of beneficiaries and preparation of monthly payment lists, while GoI's Department of Food and Public Distribution, and Public Financial Management System (PFMS) process and transfer payments to beneficiaries' bank accounts.

Under the new scheme, the cash entitlements have been calculated based on the formula  $1.25 \times \text{Minimum Support Price} - \text{Central Issue Price}$ <sup>2</sup>. Minimum Support Price (MSP) is the price at which the central government procures the food-grains from the farmers. Central Issue Price (CIP) is the price at which grains are made available to the states for distribution at FPS. CIP is deducted from the MSP for subsidy calculations as the beneficiaries were already paying that amount (Rs 2 for wheat and Rs 3 for rice as fixed under NFSA) under the earlier TPDS system also.

Table 1. Scheme Summary

Entitlement	CDG	PDY	DNH
<b>PDS Entitlement for PHH</b>	3KG Wheat + 2KG Rice per person @ Rs. 2 and Rs. 3 each/kg	20 KG Rice per card @ Rs. 3/kg	3KG Wheat + 2KG Rice per person @ Rs. 2 and Rs. 3 each/kg
<b>DBT Entitlement for PHH</b>	Rs. 101.52 per person	Rs. 125.85 per person	Rs. 122.68 per person
<b>PDS Entitlement for AAY</b>	21 KG Wheat + 14 KG Rice per card* @ Rs. 2 and Rs. 3 each/kg	35 KG Rice per card @ Rs. 3/kg	21 KG Wheat + 14 KG Rice per card @ Rs. 2 and Rs. 3 each/kg
<b>DBT Entitlement for AAY</b>	Rs. 710.64 per HH	Rs. 880.96 per HH	Rs. 858.76 per HH
<b>Recipient Households (As of February 2017)</b>	60,209	1,62,854	8967

AAY entitlements are fixed at 35 kg per card (in the ratio of 3:2 for wheat and rice)

<sup>1</sup> Department of Food & Supplies and Consumer Affairs & Legal Metrology in CDG; Department of Civil Supplies & Consumer Affairs in PDY; Department of Food & Civil Supply and Consumer Affairs in DNH.

<sup>2</sup> As per the Cash Transfer of Food Subsidy Rules, 2015, issued by GoI's Department of Food and Public Distribution, published on 21 August 2015 in the Gazette of India.

To monitor DBT in lieu of in-kind food entitlements, we conducted three rounds of surveys in the Union Territories to monitor timeliness and consistency of payments, highlight implementation challenges, and document beneficiary awareness, expectations and preferences. After each survey, we analysed and collated results, and presented interim findings to the department.

In the following sections, we have summarised the approach and methodology used in the process monitoring, presented key findings on three key metrics of interest (scheme coverage, and consistency, and regularity of payments; beneficiary expectations, preferences and grievances across the old and new schemes; and costs incurred by beneficiaries in both schemes), discussed some of the issues in data collection and analysis, and finally presented some high-level recommendations on the way forward. Graphs presenting detailed results are in Appendix 1.

## PROCESS MONITORING DESIGN

### *Goals and Approach*

The process monitoring exercise was set up to identify implementation gaps that remain to be filled and provide feedback relevant to scaling decisions. At the start of the monitoring exercise, the team set out three high-level goals:

1. Recording scheme implementation quality across multiple time periods: through beneficiary recall of monthly transfers and verification of bank passbooks to the extent possible;
2. Understanding beneficiary satisfaction with the scheme: by polling preferences between the old and new schemes and reasons for these preferences; and
3. Documenting key elements of the user experience: such as capturing costs incurred in accessing both schemes, stated uses of cash, and the relationship between beneficiary profile, implementation quality and preference for the new scheme.

The process monitoring was NOT designed to assess impacts on food consumption and nutrition because there was no suitable control group resulting from the decision to roll-out the DBT pilot across the selected locations in one shot as opposed to in a phased manner.

We aimed to meet these goals by triangulating information provided by beneficiaries with administrative and transactions data (if available) on payments made to them. In addition, we also aimed to set up a prototype to conduct remote scheme monitoring using telephones that could be easily replicated within the government and help integrate beneficiary feedback into DBT dashboards.

We collected data using three rounds of household level field-based surveys in each UT in roughly quarterly intervals across the year, and conducted a pilot of phone-based data collection from Delhi to set up a

<b>Table 2. Timelines of the Study</b>		
	<b>Data Collection</b>	<b>Implementation Months Covered</b>
<b>Round 1*</b>	February - March 2016	September 2015 - January 2016
<b>Round 2</b>	July 2016	September 2015 - May 2016
<b>Round 3</b>	February - March 2017	October 2016 - February 2017
* Round 1 did not cover DNH which went live in March 2016		



prototype for government-managed high-frequency monitoring of DBT initiatives.

## Methodology

Per the MoU, we conducted nearly identical quantitative surveys with a representative sample of beneficiary households in three rounds between January 2016 and March 2017.

### Sampling Strategy

**Frame:** In Round 1, we used either the preliminary NFSA list or the Ration Card list for each UT as the sampling frame. Based on an understanding that beneficiary lists were still being verified, we modified the sampling frame to beneficiaries currently on the DBT payment list.

	# of Area/FPS	Surveyed Units		
		R1	R2	R3
<b>CDG</b>	81	74 (91%)	58 (72%)	49 (60%)
<b>PDY</b>	377	362 (96%)	273 (72%)	218 (58%)
<b>DNH</b>	14*	-	14 (100%)	14 (100%)

\* In DNH the scheme has only been rolled out to 14 of 76 FPS

**Stratification:** Stratification characteristics include geography (administrative area, FPS location, and/or location type), ration card/NFSA category, and number of monthly payments recorded as received in the previous surveys.

**Size:** For Round 1, based on discussions with government officials, we agreed to cover a representative sample of 2500 beneficiary households each in CDG and PDY. In subsequent rounds, to optimise between margin of error (between 3-5%) and efficiency, we calculated that a sample size of approximately 500 beneficiary households per UT would be sufficient. In Round 2, again based on the government's preference for a larger sample, we followed up with a sub-set of 1000 households each from Round 1 for CDG and PDY, and 1000 households from DNH (from the payments list). In Round 3, we followed up with 500 households from Round 2 in each of the UTs. Over the course of the year, we have tracked at least 500 beneficiaries in each UT in each of the rounds, and presented final compiled results for this cohort.<sup>3</sup> The compiled results are available as Appendix 1.

We tried to ensure that the profile of respondents in our sample closely matched programme inclusion criteria for receiving entitlements. NFSA considers the women head of households as the primary beneficiary, and categorises beneficiaries into PHH and AAY based on household income and assets. 85% of our sample are women listed as the primary beneficiary on the ration card or payments list and 2.7% of our entire sample is AAY. We tried to ensure that as far as possible the respondent to the survey was the primary scheme beneficiary (i.e. female head of household). In the remaining cases (9.6% in CDG, 16% in PDY and 1% in DNH) survey respondents are largely spouses, children or mothers of the primary beneficiary. Over 90% of our sample are also the recipients of the transfers in their bank accounts.

<sup>3</sup> Analysing the responses of the 500 repeated beneficiaries and the larger samples for which data was collected, we find negligible differences in aggregated results. On point estimates around two key outcomes of interest, i.e. preference for DBT, and number of months that the household received payment, differences between the repeat cohort and larger sample are in the range of 1-2 percentage points. Differences in margins of error of the point estimates are larger for repeat cohort since the sample is smaller.

**Table 4. Sampling Summary**

	# Households*		
	P1	P2	P3
<b>CDG</b>	2,453	943	491
	stratified on area and card category, from preliminary NFSA list	sampled from P1 respondents on payments list; stratified on number of months payment received from Sep'15 to Mar'16	simple random sample from P2 response data; no stratification
<b>PDY</b>	2,527	1,012	527
	sampled from compiled FPS list (covering only two districts - Karaikal and Puducherry); stratified on FPS & card category	sampled from P1 response data (dropped beneficiaries from Karaikal); stratified on location type (urban/rural) and number of months payment received from Sep'15 to Mar'16	simple random sample from P2 response data; no stratification
<b>DNH</b>	0	1,015	505
	no data collection	sampled from RC list; stratified on FPS	simple random sample from P2 response data; no stratification

\* Numbers reported are number of HHs from which we have complete, clean data

## Instrument Design

Across three rounds, the household survey was composed of six modules. Module 1 collected information on the profile of the PDS beneficiary and the ration card that he/she held. Module 2 focused on details of monthly cash transfer for food and passbook verification of that bank transfer (from Round 2 onwards). Module 3 asked about market purchase history for food items available via the PDS (wheat, rice, flour, sugar and salt), market prices faced by beneficiaries and the cost of accessing ration from market. Module 4 was focused on banking access and familiarity. Module 5 was focused on beneficiary experiences and preferences. Module 6 was about socio-economic characteristics of the household including religion, caste, income, assets, and other household balance sheet items. In addition, in Round 1, we also collected information on beneficiary experience and cost of accessing then operational FPS, and their DBT readiness at the time in terms of bank and Aadhar information. Survey questions were addressed to the NFSA beneficiary into whose bank a/c the transfer was being made. In those cases where we could not reach the beneficiary, we surveyed another household member, one who had banking and market purchase knowledge. Survey Instrument is available as Appendix 2.

## FINDINGS AND LESSONS FROM 1 YEAR OF PROCESS MONITORING

The process monitoring focussed on 3 metrics:

- scheme coverage, and consistency, and regularity of payments;
- beneficiary expectations, preferences and grievances across the old and new schemes; and
- costs incurred by beneficiaries in both schemes.

The study instruments were not designed to understand or quantify exclusion errors that may have resulted from the implementation of NFSA. The sample was drawn from the payments list draw up by the UTs after NFSA implementation and focusses on the experiences of beneficiaries who are already in the system.

## Key Findings

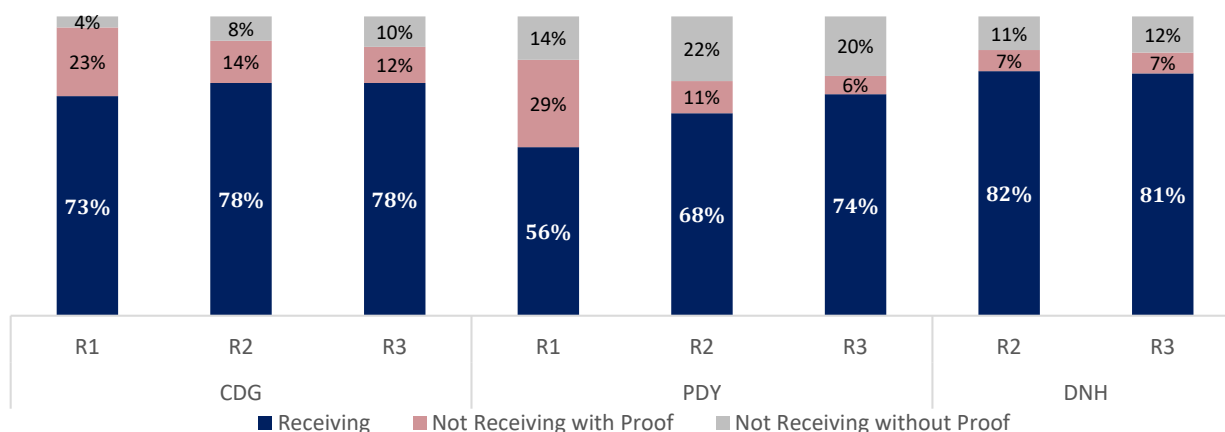
### Coverage, Consistency and Regularity of Scheme Implementation

**Finding 1.** Implementation quality improved between the three survey rounds on the counts of coverage of beneficiaries and regularity of payments, but a significant proportion of beneficiaries still report not receiving transfers.

Upon comparing monthly transfers into beneficiary bank accounts in the different survey rounds, we find:

- At the end of Round 1 surveys (i.e March 2016), the proportion of beneficiaries (with awareness about transfers) stating that they received transfers stood at 47%. These were unverified and based on beneficiary recall. In Rounds 2 and 3, we asked beneficiaries to show us passbooks for all bank accounts in the household. We verified passbook entries based on different codes typically used to record DBT credits. At the end of Round 3, the proportion of beneficiaries (with awareness about transfers) and as verified by passbook entries had increased to 78%.

**Average Proportion of Beneficiaries (with knowledge of transfers) Receiving DBT over Three Rounds**



- Once we include those who are unaware of transfers, the proportion of beneficiaries receiving transfers falls to 67%. However, this proportion has also risen during the year (from 59% at the end of Round 1). Those unaware of transfers may not have updated their passbook before or during survey operations for Round 3 or may be unaware of the bank accounts into which entitlements are transferred. In Round 3 (covering October 2016-Jan 2017), a significant proportion of beneficiaries had not updated passbooks due to gridlock in the banks on account of demonetisation.
- The proportion of beneficiaries not receiving transfers with passbook proof, has fallen across all three UTs, indicating that implementation kinks (such as incorrect seeding of bank information) were likely ironed out in the preceding round.
- At the start of Round 1, about 17% beneficiaries in our sample were not receiving any transfers despite being on the payments list. At the end of Round 3, about 53% of these beneficiaries were

receiving transfers. Of beneficiaries receiving transfers at the start of monitoring, 5% now say they stopped receiving transfers along the way and their primary bank accounts bear this out.

- e) 2% in CDG, 2.4% in PDY, & 3.6% in DNH claim they have never received transfers in their subsidy bank accounts as of January 2017.

Per the payments process, once the beneficiary's credentials have been verified and their bank account and Aadhar linked to the payments list, they should receive payments each month. Since the sample is drawn from UTs' payment advice, and government records report fewer than 1% transaction failures, nearly all respondents should have received and identified DBT. While it does not appear that there are leakages in the system, it is crucial to understand whether the gaps are on account of awareness/knowledge of transfers, payments being made into bank accounts beneficiaries do not access, or processing errors.

***Finding 2.*** *Standard information on the transfers, particularly via auto-generated SMS, is not being provided to beneficiaries regularly, potentially leading to awareness gaps on receipts.*

During Round 3, beneficiaries largely report not receiving SMSes when the transfers are made into their bank account, despite this being part of the standard operation procedures of DBT. Based on beneficiary recall of SMSes received, we find:

- a) In Round 3, despite 65% of beneficiaries across the three UTs reporting that they had seeded a mobile phone number with the scheme database, only 16% remembered receiving an SMS in the preceding month with information about the transfer.
- b) There is also a degree of variation across the months on SMS receipts across the UTs, with a large drop in CDG from 33% to 17% in the last four months of the study, and a doubling in DNH in the first two months of 2017.
- c) In addition, of those who received SMSes, 86% said it was in English, 80% said that bank name/account number was mentioned, and 59% said "food subsidy" was mentioned in the SMS.

Since mobile phone ownership across beneficiary households is fairly high, the low proportion of beneficiaries receiving SMSes points to an implementation gap in collecting and seeding mobile phone information within the programme database. Alongside, ensuring that SMSes are provided in the local language, with clear references to receiving bank account and purpose of transfer can help increase beneficiary awareness and salience of cash transfers.

***Finding 3.*** *We find some evidence of discrepancies between beneficiary responses and administrative data on card category and household size indicating awareness gaps or errors in the database, and small inclusion errors.*

- a) There are differences between the proportion of beneficiaries who identify themselves as AAY and official records. For example, in PDY, the payment file for February 2017 lists 15% of the overall beneficiary list as AAY. However, in our sample 4% of beneficiaries report themselves as AAY. In CDG on the other hand, the payment file for February 2017 lists 0.2% of the overall beneficiary list as AAY, but 3% of our sample in Round 3 identified as AAY.

- b) Beneficiaries' may also not be aware of their current card category, since they no longer have ration cards which clearly mark their categories and entitlements, (or in the case of PDY, have smart cards which still mention the old entitlement categories). Beneficiary expectations may be linked to the old categorisation of BPL, APL or AAY and may add to their grievances around insufficient entitlements. Similar issues arise in the case of family size, where there are differences between the number of people in a household that beneficiaries report buying 'rations' for and the household size listed in the most recent payment lists compiled by UT administrations.
- c) A significant proportion of beneficiaries, state owning luxury assets such as an air conditioners or 4-wheelers, which should have disqualified households from eligibility under NFSA. 2.8% of beneficiary households in CDG, 2.6% in PDY and 12% in DNH report owning an air conditioner, and 2.8% in CDG and nearly 20% in DNH report owning a car.

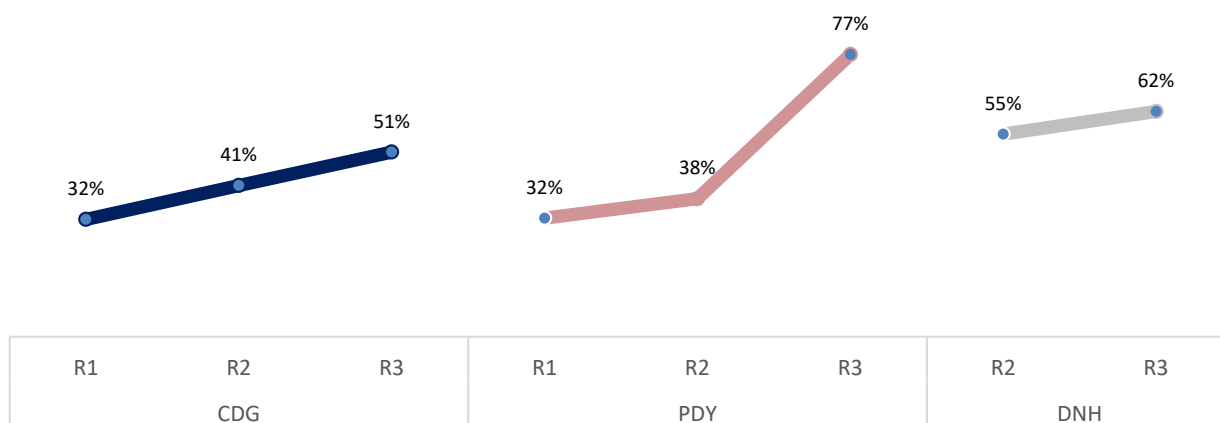
### Beneficiary Preferences and Grievances

***Finding 4.*** *Over the span of one year, beneficiary preference for DBT over PDS has steadily grown, with a majority of respondents across all three UTs now preferring cash transfers.*

- a) Between Rounds 1 and 2, while preference for DBT increased, the majority of beneficiaries in CDG and PDY still preferred receiving rations through the PDS. At the end of Round 3, as beneficiary familiarisation with the scheme has grown and with improvements in scheme coverage and payment consistency, 65% of beneficiaries across the three UTs now prefer DBT to in-kind food rations (up from 39% at the start of the scheme).
- b) Over the course of the year, PDY registered the highest change in beneficiary preference, more than doubling from 32% to 77% in favour of DBT over PDS at the end of Round 3.

- c) Beneficiaries who prefer DBT appreciate the flexibility and convenience, and choice and upgrade in quality of grain (and other food) that DBT affords them. Beneficiaries who prefer the old system cite

**Proportion of Beneficiaries in each UT who prefer DBT over PDS**



consistency in monthly quantities they receive, and lower time costs of access and lower spending from out of pocket to buy rations, as key to explaining their preferences.<sup>4</sup>

- d) Beneficiary preferences around the logistics of the transfer match key elements of programme design. 77% of beneficiaries prefer to receive the transfer in the bank account of the female head of household, and 89% prefer to receive DBT in food on a monthly basis.
- e) Beneficiary expectations exceed the entitlements by Rs. 889 per household. This is also the main grievance cited by beneficiaries.

**Finding 5.** Respondents largely rate the quality of grain available in the market higher than that available through FPS, and report using cash towards food purchases.

- a) At the start of the study, when respondent recall of the PDS was still fresh, we asked beneficiaries to rate the quality of different grains they receive through the FPS versus those they are able to buy in the market using DBT. Respondents overwhelmingly rated market grain as better quality. This is also borne out by anecdotal evidence from the field of the types of grains beneficiaries prefer (e.g. in Puducherry, beneficiaries now also buy double-boiled rice from the market versus single-boiled rice available at FPS, and in CDG and DNH beneficiaries prefer buying wheat flour to purchasing grain from the FPS and converting to flour after). These ratings match up to the single most important reason for preferring DBT to PDS: choice and quality of grains available in the market.

<sup>4</sup> For example, when beneficiaries who said they had never received any subsidy were asked "If you were to start receiving food subsidy transfer regularly in your account, what would you prefer then?", 31 out of 53 beneficiaries said DBT and the remaining 20 said PDS.

- b) Over 95% of beneficiaries, report using cash to buy staple food grains and towards dietary diversity. In Puducherry, we find that more respondents report using cash for other purposes as well (for example, education and loan repayment). Since PDY still provides grains through a state scheme, perhaps subsidy salience becomes less important than in the other two UTs.

***Finding 6.*** *A growing proportion of beneficiaries has grievances with the system, largely on account of subsidy insufficiency and differing credits.*

We asked beneficiaries to outline their grievances and concerns with DBT in food and analysed their responses. We find:

- a) At the end of Round 3, 38% of beneficiaries reported having grievances with the system (up from 25% at the end of Round 2).
- b) Upon closer inspection, we find that beneficiaries do not seem to have a clear way to report their grievances. For example, when asked “What are the ways of reporting your grievances that you are aware of?”, 57% of beneficiaries did not know any. In practice, aside from the toll-free number, beneficiaries do not have any other recourse in case of problems with their receipts. In the old system, beneficiaries were able to seek assistance from the ration dealer in case of most problems. During the course of the year, beneficiaries assumed that they were reporting grievances when they spoke to surveyors.
- c) Most beneficiaries do not report their grievances on the toll-free number. At the end of Round 1, of those that recalled ‘reporting’ their grievances, 0 called the number, and at the end of Round 3, there was not much change on this metric, with 1 beneficiary in CDG, 2 in PDY, and 0 (zero) in DNH calling the toll-free number.
- d) 24% of beneficiaries cited subsidy insufficiency as the single biggest issue they faced. This was followed by 11% reporting that they received different amounts each time, and 10% reporting that they did not receive their entitlements each month.

The tilting of beneficiary preference towards DBT is at odds with growing grievances against the system. It is likely that as beneficiaries get more familiar with the scheme and understand the attendant challenges, they feel more empowered in expressing their concerns. Insuring beneficiaries against fluctuations in market prices, compensating for the higher costs of redeeming DBT, providing automated information on DBT deposits, and ensuring timely reconciliation of transactions data with administrative data are some of the ways government departments can reduce the extent of grievances against the new scheme.

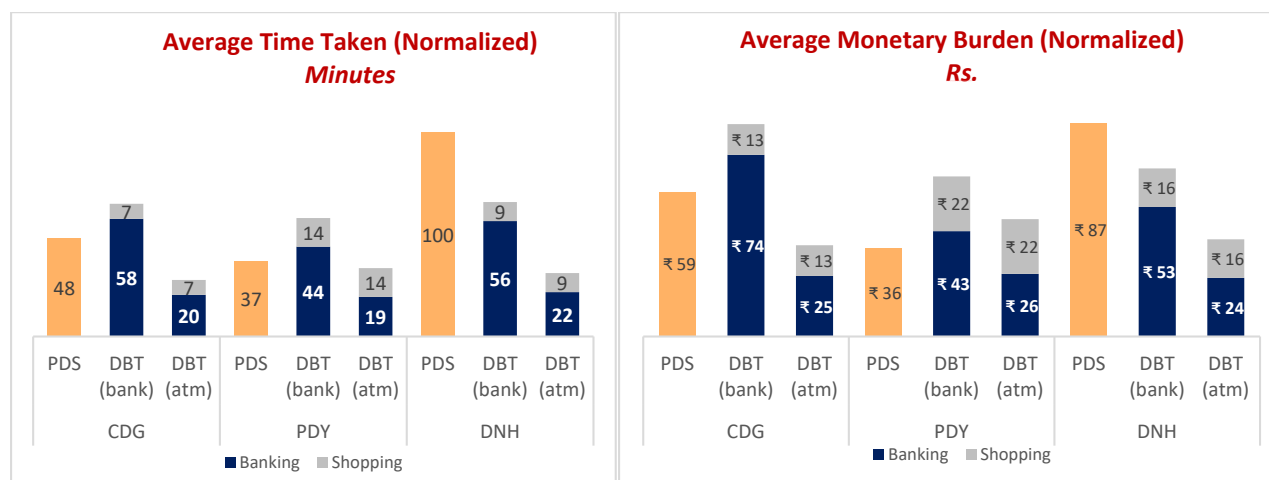
### **Subsidy Sufficiency**

***Finding 7.*** *Taking into account time spent and expenses incurred in accessing and redeeming DBT and market prices of equivalent grain, the DBT amount may be inadequate.*

*Time and expenses incurred in travel:* In order to estimate time and money costs of accessing DBT, we asked beneficiaries to estimate time taken to access PDS, typical withdrawal point (bank or ATM) for accessing DBT, time taken to travel to the subsidy bank or ATM from beneficiary’s house, time taken to withdraw

money after reaching Bank/ATM, and time taken to go to the market. We took into account relative uses of bank and ATM, multi-purpose market visits, opportunity costs of time using the minimum wages in each UT, and round-trip costs incurred during each of these visits. Based on these calculations, we find:

- Using ATMs lowers the time cost of access by 31 minutes, and eases the process of purchasing the equivalent of PDS entitlement significantly across all three UTs.
- However, 63% of beneficiaries do not have an ATM card for the bank into which they receive DBT, and are likely to spend an additional 4 minutes in redeeming DBT from a bank branch.
- Overall, beneficiaries spend more time in travelling to banking facilities and then to markets in order to redeem cash transfers than collection rations from FPS.



**Higher market prices for better quality rations:** Alongside, we compared the market prices of PDS equivalent grain, and tracked the changes in the out of pocket expenses incurred by beneficiaries in buying grain at FPS and in the market. Based on these comparisons, we find:

- With DBT, beneficiaries spend more out of pocket buying the PDS equivalent of grain in the market.
- Beneficiaries, however, now choose to buy higher quality of grain compared to FPS rations.
- Given quality differences, in CDG and PDY, we estimate that subsidy may be short by up to 20% of current entitlement amounts on account of market prices alone.
- Over the course of the year, all three UTs have increased their subsidy entitlements to reflect changes in procurement prices.

**Subsidy Insufficiency:**

- Adding the time costs and expenses incurred in travel with the additional out of pocket spending on rations, we estimate that in CDG and PDY, for PHH, DBT entitlement may be perceived as insufficient when compared to the previous system.
- However, calculations must be caveated with the consideration that beneficiaries are now able to purchase more expensive variety of grain than before, a key reason for preferring DBT over PDS.
- These findings highlight the need for greater context-relevance in setting DBT entitlements.



- d) The question of determining the optimal level of cash transfer for DBT-based reforms of the PDS is a technically difficult problem because of the large amount of spatial and time variation in market prices. We therefore strongly recommend that the next set of reform pilots use a choice-based approach where beneficiaries are given the choice between the PDS and a fiscally-equivalent transfer. Such an approach will allow policy makers to learn the true valuation of the PDS and allows for a politically and ethically prudent approach to reforms in the PDS.

## Factors Affecting Preferences

***Finding 8.*** *Beneficiary opinion of PDS and subsidy sufficiency under DBT, and implementation quality are likely key to explaining beneficiary preferences for DBT.*

Over the course of the year beneficiary preferences for DBT over PDS have registered a significant change. In order to understand what affects beneficiary preferences over time, we analysed the extent to which indicators of implementation quality, beneficiary opinions of PDS, and beneficiaries' income and asset profile relate to switches in preferences between PDS and DBT from Round 1 to Round 3.

Applying logit regressions, we are able to establish that:

- a) Based on simple stated preferences for DBT or PDS in Round 3:
  - o beneficiaries who rated their PDS well are less likely to prefer DBT, and
  - o beneficiaries who were of the opinion that subsidy amount is sufficient are more likely to prefer DBT.
- b) Based on the strength of preference for DBT<sup>5</sup> since Round 1 to now, in addition to the above:
  - o beneficiaries who received payment more number of times are more likely to prefer DBT.

## Limitations of Findings

This process monitoring study largely relied on beneficiary responses, estimates and stated preferences. Hence verifying, quantifying and Interpreting results pose a number of challenges.

### *Verifying implementation quality*

Despite one year of monitoring, it is difficult to state with certainty what proportion of beneficiaries are not receiving DBT. Beneficiary awareness of the scheme mechanics, changes in the payments process and broader issues around banking familiarity all play a role in confounding inferences around scheme implementation quality. At the end of Round 1, after discussions with the government it became clear that relying on beneficiary response on receipts was insufficient. Finding some proof for their responses would be essential to empirically establishing coverage and consistency of payments. Checking bank passbooks for DBT related entries provided one way of doing this.

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<sup>5</sup> Cumulative preference for DBT in the three study rounds (highest 3 – lowest 0)

However, as we realised at the end of Round 2, this too was insufficient. If beneficiaries are unaware of newer bank accounts in the household, or changes to accounts tagged to receive DBT, or if they don't consider the accounts tagged to receive DBT as their primary bank accounts, they may not have shown us the passbooks for those accounts. It was also difficult to ascertain whether payments were specifically for DBT in food or for other schemes, since the payments process was still nascent and using specific codes for marking DBT related transfers had not been implemented.

In order to understand both the month-to-month consistency of payments as well as amounts of transfer it was essential to superimpose response information on transactions information. However, for a significant period of time, even administrative departments in the UTs did not have a record of transactions information to reconcile with their own payments advice. In addition, given privacy related issues around Aadhar, PFMS and the Department of Food at the centre were unable to share the transactions data.

### *Interpreting beneficiary preferences and responses*

Responses on preferences for DBT over PDS are stated preferences and may be influenced by several factors such as fear of losing entitlements entirely. These preferences have also been stated once in-kind entitlements have been withdrawn completely. In order to consider expansion of the scheme based on beneficiary preferences we need to observe 'revealed preference'. We therefore strongly recommend that the next round of DBT-based reforms in the PDS be based on pilots that offer selected beneficiaries a choice of opting for DBT in lieu of PDS rations. Such pilots will allow policy makers to directly observe beneficiary preferences for DBT while de-risking the process of policy experimentation for beneficiaries.

Further, while stated uses of cash are encouraging, respondents may have been subject to social desirability bias. More importantly, in the absence of a control group, there is no credible way to estimate the impact of DBT on food consumption and nutrition. We therefore recommend that the next round of DBT-based reforms in the PDS be accompanied by a randomised evaluation to estimate impacts on food consumption and nutrition.

### *Calculating subsidy insufficiency*

Since subsidy insufficiency is cited as the biggest grievance for beneficiaries, we looked at different ways of estimating the extent of the difference between current DBT entitlements, goals of NFSA and costs beneficiaries incur in accessing and redeeming DBT. However, factoring in quality differences between market and PDS grain and quantifying costs of access have been challenging.

- i. Since beneficiaries choose to buy higher grade/more expensive grain from the market, grievance on subsidy insufficiency may be exaggerated. In addition, beneficiary choice of more expensive grain may be nutritionally inferior (for example double polished rice) and it is not possible to assess these effects from the current pilot.
- ii. It is hard to determine the extent to which beneficiaries club visits to the bank/ATMs and markets and these estimates may represent outer limits of the time costs of access. However, we have used approximations to assign weights to account for multi-purpose visits where beneficiaries buy rations during regular shopping activities or withdraw DBT along with other banking activities.

## RECOMMENDATIONS AND WAY FORWARD

Based on one year of process monitoring, we recommend two sets of measures: immediate programme implementation improvements that can address beneficiary grievances and improve programme favourability; and longer-term policy approaches on substituting in-kind entitlements with cash transfers.

### *Programme Implementation Recommendations*

1. DNH's consistency and regularity of payments right from the start of implementation reflect the additional time put into the preparation and the advantages of gradual scaling. Any further measures to expand the scope of the new scheme should allow for longer preparation time, and use standardised checklists to prevent confusion and slippages from the scheme.
2. Nodal departments within GoI should put in place a protocol for reconciling administrative and transactions data. Reconciliation of payment response files with department records are essential to detect implementation failures and rectify them quickly.
3. Standardisation of databases, and record keeping should be completed at the earliest. Examples of areas where standardisation needs to be implemented include: codes for recording DBT credits in beneficiary passbooks, and language to be used in SMS on successful transfers.
4. State level implementing departments should expand the seeding and use of mobile phones as a tool to increase interaction with beneficiaries and provide rapid grievance redressal. Providing local language SMSes with clear information on transfer status can be implemented quickly and at low cost and effort but can go a long way in increasing awareness and salience of transfers.
5. Field based process monitoring is a costly and time consuming exercise. It is essential to have a systematic, scalable system for collecting representative beneficiary feedback as an essential metric on programme implementation dashboards. Using outbound calls for information provision, labelling of transfers, grievance redressal and documenting beneficiary feedback across DBT schemes is an efficient and effective way of maintaining connection with beneficiaries.

### *Policy Implications*

While the pilots of cash transfers in lieu of food have begun on a strong note, they may not provide enough of a basis for universal expansion. Responses gathered through the process monitoring study rely on stated preferences, and we are yet to observe revealed preferences for cash transfers. The current pilot also does not enable a credible estimate of the impact of DBT on food consumption and nutrition (as well as sources of heterogeneity in these impacts). We therefore strongly recommend that the next phase of DBT-based reforms in the PDS should consider an intermediary approach: providing beneficiaries choice between social assistance in cash and kind before taking away in-kind entitlements completely. This will ensure that we de-risk beneficiaries, particularly the most vulnerable, from the challenges of the sort seen in the UT pilots. Given our findings regarding beneficiaries' growing preference for DBT with exposure, running such a choice-based system for a couple of years will allow for smooth and sustainable transition to a cash-based distribution of benefits by ensuring that problems during the transition period do not discredit the idea of DBT as a method for improving efficiency in the delivery of anti-poverty programs in India.

## APPENDICES

*Appendix A: Slide Deck with graphs and charts comparing study rounds and UTs*

*Appendix B: Instruments used in each survey round*