

Direct Cash Transfers in fertilizer: Modalities for cash delivery

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In our previous note on “Reforms in fertilizer subsidy in India: The way forward”,¹ we discussed [initiatives](#) undertaken by the Government of India (GoI) to increase transparency in the fertilizer distribution system. We had also looked at the remaining challenges that persist: (1) the lack of a dedicated fertilizer beneficiary database; (2) the absence of a cap on fertilizer entitlements; (3) the different levels of subsidy provided to the fertilizer manufacturing plants; and (4) the disproportionate use of urea.

While the GoI currently provides subsidies to fertilizer manufacturers, it [has planned Direct Cash Transfers \(DCT\)](#) of the fertilizer subsidy into the bank accounts of farmers. Before DCT can be piloted in India, the [three challenges](#) as mentioned above must be addressed. We had proposed a three-step approach to [resolve these challenges](#) before implementing a DCT, as outlined below:

Step 1 Move urea under the [Nutrient-based Subsidy \(NBS\)](#) program to enable uniformity in the calculation of subsidy and to determine the subsidized and non-subsidized market prices of urea and others fertilizers;²

Step 2 Fix the beneficiary database to target the beneficiary farmers accurately; and

Step 3 Cap the fertilizer entitlement per farmer by determining the cash equivalent amount of the fertilizer subsidy per hectare of land for each cropping activity in the *Kharif* and *Rabi* seasons.³

This note discusses two alternative models for DCT of the fertilizer subsidy and looks at the potential issues that beneficiary farmers could face under each of the proposed models. The first model entails transferring the subsidy directly into the bank accounts of the

farmers, while the second model explores transferring the subsidy into closed virtual accounts created for farmers on the [Integrated Fertilizer Management System \(IFMS\)](#) application.⁴

Background

The current Direct Benefit Transfer (DBT) model adopted for fertilizer distribution is not a [traditional DBT](#). In traditional DBT, as with India’s [fuel subsidy](#), [pension](#), and [scholarship](#) payments, a pre-defined cash amount is deposited directly into the beneficiary’s bank account either on a [conditional](#) or [unconditional](#) basis. DBT in fertilizer (DBT-F) is a modified subsidy payment system under which the government remits subsidy to fertilizer companies, and not to the beneficiary farmer, after fertilizer retailers have sold fertilizer to farmers based on successful *Aadhaar*-based authentication.⁵

Learning from both international and state-level experiences, a pan-India DCT in fertilizer could maximize the benefits accruing to farmers while reducing the fiscal burden of the subsidy. The following section explains in more detail two possible models that the GoI could initiate in the DCT in fertilizer subsidy.

Model 1: Direct transfer of the subsidy amount into farmers’ bank accounts

Under this model, an equivalent cash amount of the fertilizer subsidy would be transferred directly into farmers’ bank accounts. The digital transfer would be similar to those used in transferring fuel subsidies or pension payments using the “digital pathways” comprising the [National Payment Corporation of India \(NPCI\)](#), the [Public Financial Management System \(PFMS\)](#), and *Aadhaar*. The government could distribute the subsidy in two installments annually into the bank accounts of farmers—each at the beginning of the *Kharif* and *Rabi* seasons. Farmers can then buy fertilizer at non-subsidized prices from fertilizer retailers. The following diagram presents a workable approach for this model.

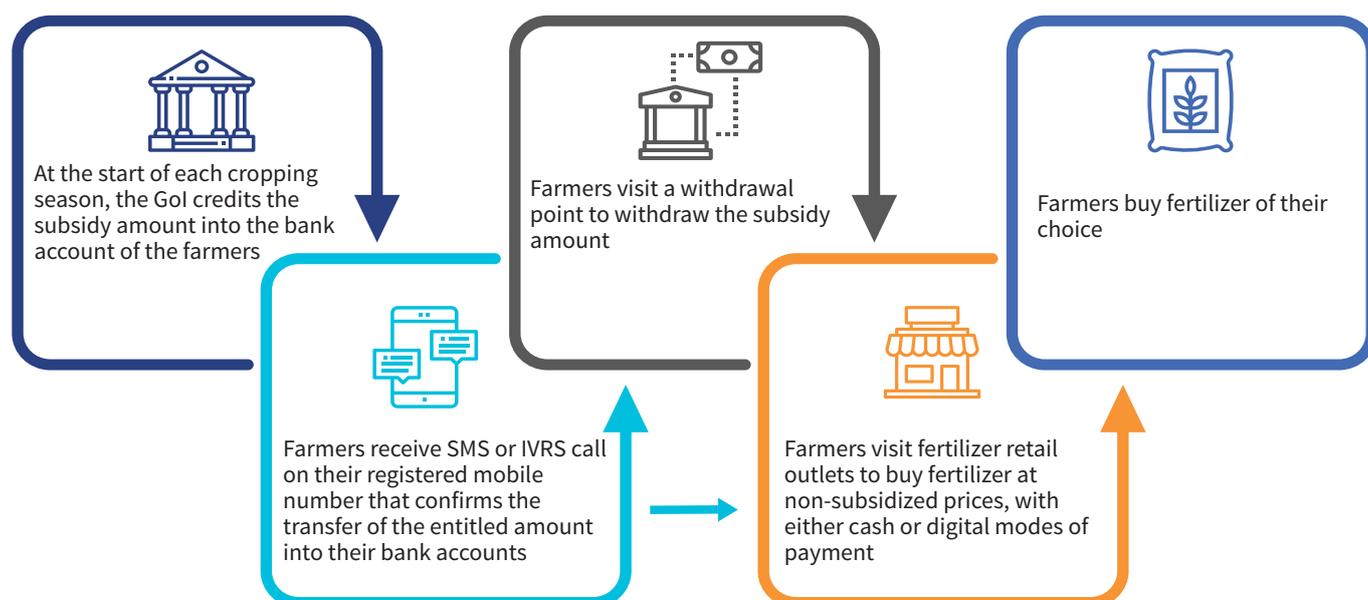
¹[Reforms in fertilizer subsidy in India: The way forward](#)

²Under NBS, the GoI announces a fixed rate of subsidy in INR per kilogram on each nutrient of subsidized P&K-based fertilizers annually—Nitrogen-N, Phosphate-P, Potash-K, and Sulfur-S. The per-kilogram subsidy rates on the nutrients N, P, K, S are converted into a per-ton subsidy.

³*Kharif* and *Rabi* are two major types of cropping seasons in India. Despite some variations, across every state of the country, the *Kharif* season generally runs from June to October, while the *Rabi* season usually starts in November and lasts up to March or April.

⁴The objective of the IFMS is to monitor the movement of fertilizer from the manufacturer to warehouse to wholesalers and from wholesalers to retailers. The proposed system helps monitor the movement of fertilizer’s consignments and its stock position at various warehouses, wholesalers, and retailers. The system also acts as a tool for government bodies to track and ensure the timely distribution of fertilizer to farmers.

⁵*Aadhaar* is India’s national identity number, which uses citizens’ biometrics (<https://uidai.gov.in/>). When a farmer authenticates using *Aadhaar*, this means the retailer asks the farmer for their *Aadhaar* number, which the retailer enters into the PoS device in the farmer’s presence. The retailer then asks the farmer to apply their fingerprint to the PoS device for biometric authentication.



However, this model poses the following challenges for farmers:

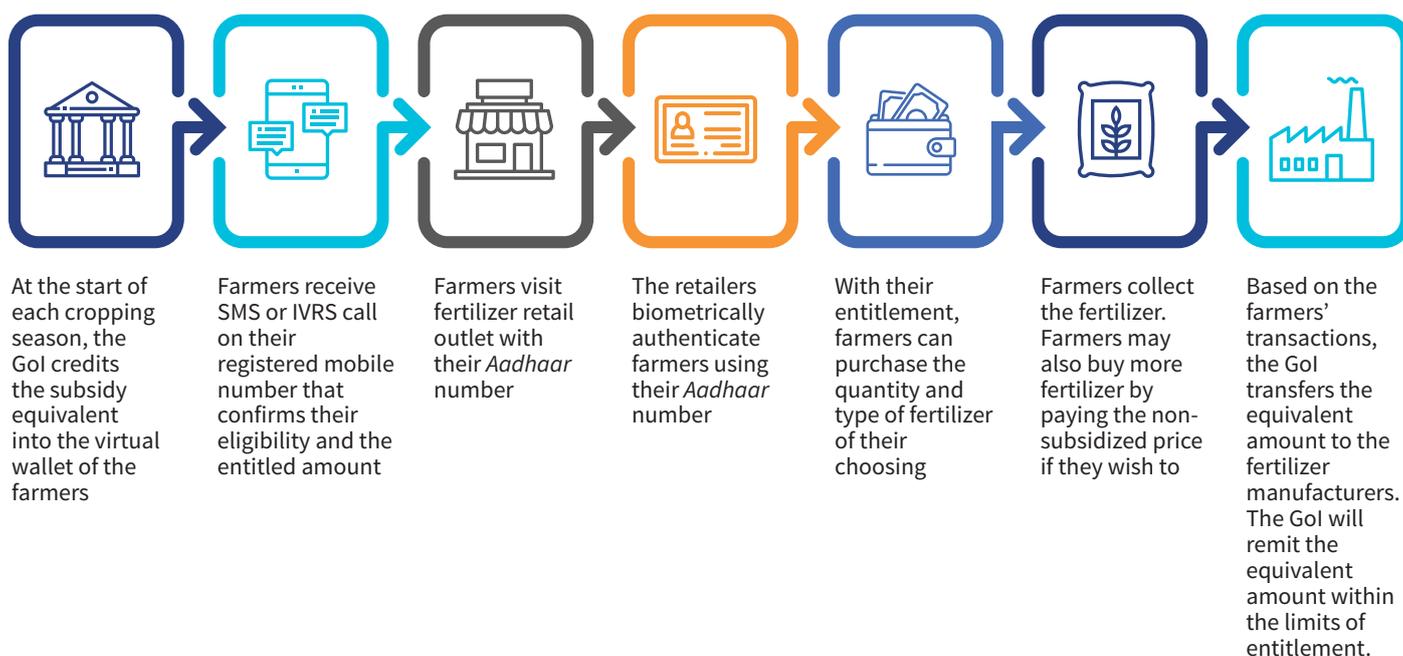
- In [MSC's recent assessment](#), 65% of farmers in the country were reluctant to receive the fertilizer subsidy in cash directly in their bank accounts. The primary reasons for this include:
 - o Farmers recalled [facing issues](#) when they had received the subsidy for Liquefied Petroleum Gas (LPG) in their bank accounts. They either never received it or the payment was delayed. As a result, farmers believed that they would encounter similar issues with DCT in fertilizer.
 - o Farmers felt that their financial burden would increase if the subsidy amount was not credited in advance, in which case they would have to buy fertilizer at non-subsidized prices, and potentially be forced to borrow money to do so.
- Our [assessment](#) shows that 93% of farmers use cash to buy fertilizer. 58% of farmers indicated that they did not prefer a cashless mode when buying fertilizer, while 80% of this subset of farmers cited the perceived ease of using cash as a primary reason.
- Under this model, the farmers would have to make multiple trips to banking points to withdraw cash and to fertilizer retailers to buy fertilizer. These trips translate to lost opportunity costs for farmers.

- Farmers could also be tempted to use the subsidy for purposes other than purchasing fertilizer. They further reported [rent-seeking by banking agents](#) and expressed [distrust of them](#).

Model 2: Transfer of the subsidy amount into a closed, virtual farmer account

Under this model, the GoI would credit the equivalent of the entitled subsidy into a farmer's closed, virtual account. The GoI could create these virtual accounts on the IFMS application and farmers could access these accounts through Point of Sale (PoS) devices at fertilizer retail outlets.⁶ The GoI would create these accounts by utilizing the farmer database mentioned in step 2, above. The following diagram presents a workable approach for this model.

⁶A point-of-sale (PoS) device is a hardware system that processes payments at retail locations through debit or credit cards or through biometric authentication. For details see: http://mfms.nic.in/dbt/dbt_epos_user_manual.pdf



Currently, the fertilizer subsidy is universal and anyone with an *Aadhaar* card can purchase subsidized fertilizer. Under model 2, the purchase of fertilizer would be limited to farmers based on their allotted entitlement. This may “nudge” farmers [to optimize their purchase and application](#) of fertilizer. Furthermore, the primary advantage of this model over the previous model is that farmers would not experience changes in the routine at the transaction points and would continue to pay the subsidized price to the retailer, at least for the entitled subsidy amount.

However, farmers could still experience *Aadhaar* authentication failures in areas of poor connectivity. The GoI should develop an exception management practice to address this, for example, a [mobile-based One Time Password \(OTP\)](#) authentication. Retailers could also experience issues in attempting to manage [farmer crowds during peak agriculture](#) seasons, when the footfall at the fertilizer retail outlets reaches [more than 200 farmers per day](#).

Conclusion

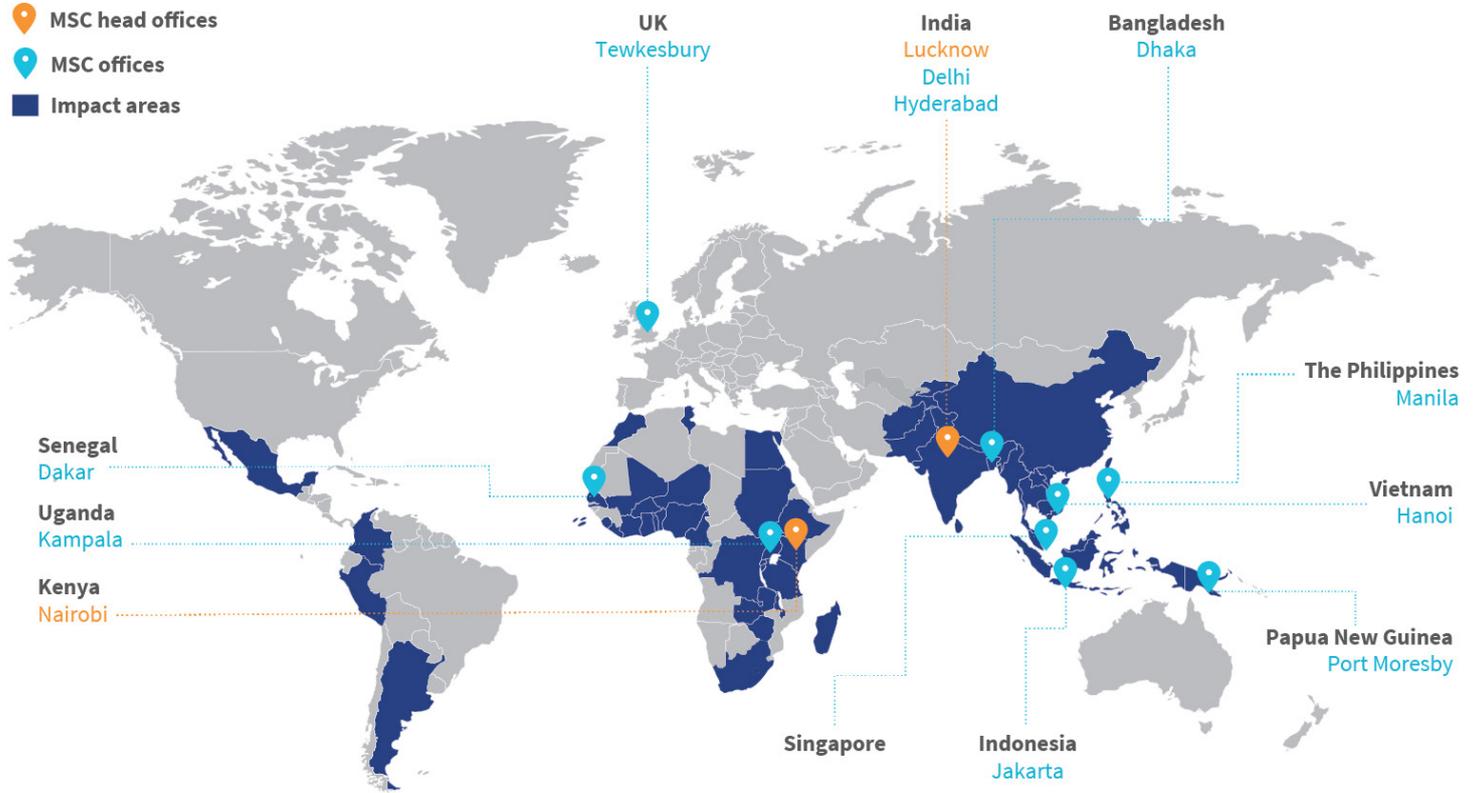
MSC believes that transferring the subsidy into a closed virtual wallet is a more practical and feasible option. This will save farmers from the hassle of making multiple visits to banking points to withdraw cash, followed by trips to fertilizer retailers to buy fertilizer. Additionally, farmers would not face issues with non-receipt of benefits due to failed deposit transactions into bank accounts, or delays in the payment of the subsidy, and would not be able to divert the cash earmarked for fertilizer for other purposes.

MSC, therefore, recommends commencing a pilot for Model 2 as the existing infrastructure is already

conducive to moving forward. Once the banking and payment infrastructure is strengthened to address the challenges discussed in Model 1 above, the GoI should commence a pilot to transfer cash directly into the bank accounts of farmers.

Only after farmers have the opportunity to experience both modalities will the GoI be able to determine which model is best for the involved stakeholders. One thing, however, is certain—the DBT-F model continues to evolve and innovate to meet the needs of farmers and optimize efficiencies for the government.

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