

International Journal of Statistics and Applied Mathematics

ISSN: 2456-1452
Maths 2023; SP-8(5): 389-391
© 2023 Stats & Maths
<https://www.mathsjournal.com>
Received: 27-07-2023
Accepted: 01-09-2023

Udhayan N
Ph.D., Scholar, Department of
Agribusiness Management,
University of Agricultural
Sciences, Dharwad, Karnataka,
India

Narayan Murigeppa Gunadal
Ph.D., Scholar, Department of
Agribusiness Management,
University of Agricultural
Sciences, Dharwad, Karnataka,
India

Ponnaganti Navyasree
Scientist, ICAR- National
Institute of Abiotic Stress
Management, Malegaon Khurd,
Baramati, Maharashtra, India

Corresponding Author:
Udhayan N
Ph.D., Scholar, Department of
Agribusiness Management,
University of Agricultural
Sciences, Dharwad, Karnataka,
India

Constraint analysis of direct benefit transfer scheme in Namakkal District

Udhayan N, Narayan Murigeppa Gunadal and Ponnaganti Navyasree

Abstract

Fertilizer usage has risen from less than one million tonnes of total nutrients in the mid-1960s to about seventeen million tonnes presently. In the 1960s, the advent of high-yielding cultivars increased fertilizer consumption. The Government of India establishes minimum support prices for major crops, regulates urea farm prices, and publishes indicative selling prices for other fertilizers. Fertilizer prices are subsidized. The government's goal is for farmers to earn a price for their crops and pay a price for fertilizers that makes fertilizer usage acceptable and profitable. This present study was primarily based on primary data which was collected from 120 farmers and 40 retailers from the four taluks of Namakkal district in Tamil Nadu i.e. Namakkal, Trichengodu, Paramathi velur, Mohanur. The results revealed that major constraints of farmers and retailers were viz., 1) Farmer doesn't bring Aadhaar card 2) Poor network 3) Server issue 4) Management of Queue 5) Blockage of capital for manufacturer. Form a "DBT working group" at the district level. Meetings for retailers and farmers should be organised to raise awareness. Retailers must select a sim card that gives improved network access. Retailers must select a sim card that gives improved network access. According to the number of merchants, the government or company should develop a local training and servicing centre for e-POS machines.

Keywords: Garrett's Ranking, DBT, Fertilizer, Subsidy

Introduction

Fertilizer usage has risen from less than one million tonnes of total nutrients in the mid-1960s to about seventeen million tonnes presently. In the 1960s, the advent of high-yielding cultivars increased fertilizer consumption. During the 1973-74 oil crisis, high grain and fertilizer prices on international markets added further impetus to initiatives aimed at strengthening the country's fertilizer supply and food security. Nitrogen and phosphate output grew from 1.8 million tonnes in 1975-76 to 14.2 million tonnes (K_2O) in 2003-04. In the lack of native natural resources, all potash fertilizers are imported; imports were 2.6 million tonnes K_2O in 2003-04, up from 0.4 million tonnes in the mid-1970s. The intensity of fertilizer usage varies substantially between areas, ranging from 40.5 kg/ha in Rajasthan to 184 kg/ha in Punjab. Urea accounts for 82 per cent of total nitrogen consumption while di-ammonium phosphate accounts for 63 per cent of total phosphate consumption. Organic manures contribute significantly to the delivery of plant nutrients and soil fertility. However, a significant amount of cow dung is utilized for uses other than fertilization, and the portion accessible for crop nourishment is decreasing. The usage of bio-fertilizers has expanded in recent years, although crop response to these chemicals has been variable. Rice, wheat, cotton, sugar cane, rapeseed, and mustard utilize almost two-thirds of the fertilizer applied. The irrigated region, which accounts for 40 per cent of total agricultural area, receives 60 per cent of the fertilizer applied. The Government of India establishes minimum support prices for major crops, regulates urea farm prices, and publishes indicative selling prices for other fertilizers. Fertilizer prices are subsidized. The government's goal is for farmers to earn a price for their crops and pay a price for fertilizers that makes fertilizer usage acceptable and profitable. Fertilizer is distributed through commercial channels, cooperatives, and specific institutions. In many places, application rates are currently low. A sufficient supply of finance for farmers and distributors is essential to assure fertilizer availability when and where it is needed (<https://krishi.icar.gov.in/jspui>).

In October 2016, the government implemented the Direct Benefit Transfer (DBT) scheme in fertilizers. Under the fertilizer DBT scheme, fertilizer businesses receive a 100% subsidy on various fertilizer grades based on actual sales made by retailers to beneficiaries. All subsidized fertilisers are sold to farmers/buyers using Point of Sale (PoS) devices installed at each retailer shop, and recipients are recognized via Aadhaar cards, Kisan credit cards, and Voter identity cards. A project monitoring unit has been established at the Department of Fertilisers to solely manage DBT implementation. To oversee the ongoing DBT operations, 24 State Coordinators have been selected throughout all states. Implementing the DBT in Fertilizer Scheme necessitated the installation of PoS devices at each merchant location as well as training for retailers on how to use the PoS devices. To far, Lead Fertilizer Supplier (LFS) has conducted 15954 training sessions across the nation. 2.60 million PoS devices have been installed throughout all states.

In the Direct Benefit Transfer (DBT) initiative, the Department of Fertilisers (DoF) has adopted Short Message Services (SMS) to purchasers for the sale of fertilisers. On each fertilizer transaction, the buyer will receive an SMS receipt on his cell phone. The Department of Fertilisers (DoF) will implement an SMS system in PoS 3.1 on September 30, 2020. The SMS comprises information such as the invoice number, store name, quantity purchased, total amount to be paid, and the government subsidy. The SMS module is used to notify farmers on a regular basis about the availability of fertilizer at the retail store where he previously purchased fertiliser. Farmer can get information about availability of fertilizer at any retail outlet by sending SMS to +917738299899 by sending retailer id no (<https://www.fert.nic.in/dbt>).

2. Objective of the study

- Identification of constraints faced by farmers and retailers in Direct Benefit Transfer scheme in fertilizer marketing system in Namakkal District.

3. Methodology

The Primary data were gathered to fulfill the study's objectives. Multi stage sampling was used to survey the retailers and farmers. Selection of district and blocks was done by convenience sampling on the basis of availability of Point of Sale machine and awareness about Direct Benefit Transfer under the guidance of company representative. From April to June 2020, This present study was primarily based on primary data which was collected from 120 farmers and 40 retailers from the four Talukas of Namakkal district in Tamil Nadu i.e. Namakkal, Trichengodu, Paramathi velur, Mohanur.

3.1 Garrett’s ranking

As per this method, respondents have been asked to assign the rank for all the factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

$$\text{Percent Position} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where,

R_{ij} = Rank given for the 1th variable by jth respondents

N_j = Number of variable ranked by jth respondents

With the help of Garrett’s table, the per cent position estimated was converted into scores. Then for each factor, the scores of each individual were added and then total value of scores and mean values of score were calculated. The factors having highest mean value was considered to be the most important factor.

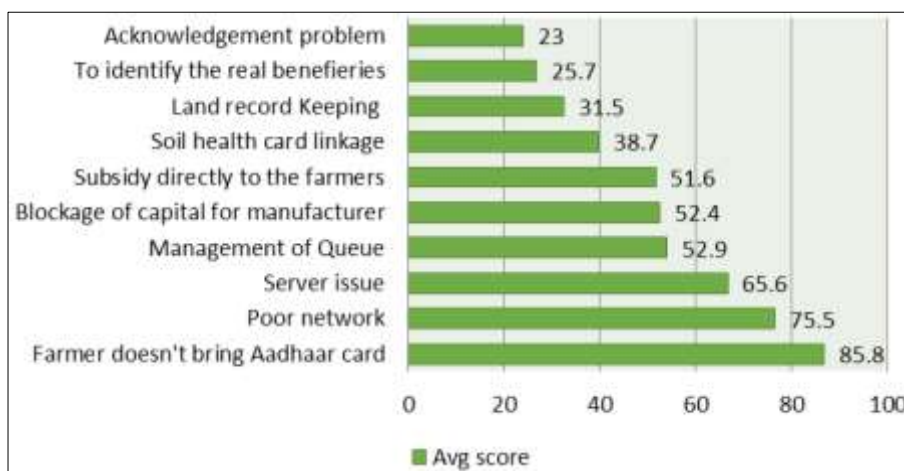
4. Results and discussion

Figure 1 and Table 1 depicts that constraints of DBT faced by farmers and retailers in Namakkal district. The results revealed that major constraints of farmers and retailers were viz., 1) Farmer doesn't bring Aadhaar card 2) Poor network 3) Server issue 4) Management of Queue 5) Blockage of capital for manufacturer. Farmers frequently do not carry their Aadhaar cards since they come immediately from the field. According to merchants, it was a significant limitation. According to farmers, bad network access was a major restriction at the time. There are still certain areas where network connectivity is quite bad since the PoS machine is attached to a Sim card, resulting in poor network difficulties with fertilizer sales. Sometimes there is a server outage, which disrupts fertilizer sales. During busy periods, retailers should employ a sufficient server connection. Retailers will have difficulty managing crowds during high fertilizer sales periods. It was a huge concern for both sides. Following the adoption of DBT, the manufacturer will receive subsidies only when the fertilizer is delivered to the true beneficiaries, i.e., farmers, therefore only the firm with the higher brand image would gain, while the company with the lower brand image will experience capital blockage problems. It has to be seen how the subsidy will be sent directly to the farmers' accounts in the future, given that farmers are impoverished and may not be able to provide such a large account during purchase. The dissemination of soil health cards is moving at a snail's pace. Farmers do not hold the actual hand because of the land leasing system. As a result, determining true beneficiaries will be challenging. In rural India, identifying true beneficiaries would be tough. Before DBT, merchants may recognize stock at any time; however, following DBT, retailers must acknowledge merchandise in the PoS machine within four days; otherwise, the stock will not be acknowledged. Fertilizer is typically purchased just twice a year, during the kharif and rabi crop seasons. As a result, there is a 6- to 8-month delay between fertilizer manufacturing and farmer purchasing. The rise in working capital requirements and, as a result, the increase in interest costs caused by the implementation of DBT has yet to be accounted for in the urea policy.

Table 1: Constraints of DBT faced by farmers and retailers in Namakkal district

Factors	Avg score	Garrett’s Rank
Farmer doesn't bring Aadhaar card	85.8	1
Poor network	75.5	2
Server issue	65.6	3
Management of Queue	52.9	4
Blockage of capital for manufacturer	52.4	5
Subsidy directly to the farmers	51.6	6
Soil health card linkage	38.7	7
Land record Keeping	31.5	8
To identify the real beneficiaries	25.7	9
Acknowledgement problem	23	10

*Calculated through Garrett’s Ranking



Source: Researcher's own computation from field data

Fig 1: Constraints of DBT faced by farmers and retailers in Namakkal district

Frequently Asked Questions (FAQs) and a user manual should be developed and provided to merchants and farmers. Organizing district-level workshops with merchants in underserved regions. Form a "DBT working group" at the district level. Meetings for retailers and farmers should be organised to raise awareness. Retailers must select a sim card that gives improved network access. According to the number of merchants, the government or company should develop a local training and servicing centre for e-POS machines.

5. Conclusion

In October 2016, the government implemented the Direct Benefit Transfer (DBT) scheme in fertilizers. Under the fertilizer DBT scheme, fertilizer businesses receive a 100 per cent subsidy on various fertilizer grades based on actual sales made by retailers to beneficiaries. The results revealed that major constraints of farmers and retailers were *viz.*, 1) Farmer doesn't bring Aadhaar card 2) Poor network 3) Server issue 4) Management of Queue 5) Blockage of capital for manufacturer. Working with the PoS machine was straightforward, but organizational concerns were causing headaches. Long queues are normal if the specialized concerns are not addressed. Farmers forget to carry their Aadhaar card every now and again, forcing them to return; shopkeepers fear deal loss. According to the merchant, the time-consuming approach would necessitate additional effort in the first stage. Retailers must select a Sim card that gives improved network access. According to the number of merchants, the government or company should develop a local training and servicing centre for e-POS machines.

6. References

1. Basyal C, Ghimire S, Panthi B, Basyal S. Constraints of paddy production in Western Terai of Nepal. *International journal of Environment, Agriculture and Biotechnology*, 2019, 4(5).
2. Kalamkar SS, Parihar TB, Makwana MC. Functioning of Direct Benefit Transfer in Fertilizer at Retail Point in Gujarat State; c2020.
3. Kumar Y, Singh T, Raliya R, Tiwari KN. Nano fertilizers for sustainable crop production, higher nutrient use efficiency and enhanced profitability. *Indian Journal of Fertilisers*. 2021;17(11):1206-1214.
4. Prajapati P, Sarkar JD, Kumar P, Sahu S. Constraints Faced by the Banana Growers during Adoption of Recommended Banana Production Technology. *Research Journal of Agricultural Sciences*. 2021;4(3):380.
5. Praveen KV, Singh A. The landscape of world research on fertilizers: A bibliometric profile. *CURRENT Science*. 2023;124(10):1140.
6. Sharma VP. Direct benefit transfer of fertilizer subsidies: problems and challenges in effective implementation. *Indian Journal of Fertilisers*. 2013;9(9):16-26.
7. Wani SP, Chander G, Bhattacharyya T, Patil MD. Soil Health Mapping and Direct Benefit: Transfer of Fertilizer Subsidy, Research Report IDC-6; c2016.