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Direct Benefit Transfer (DBT) of Fertilizer Subsidy in India–Issues and Related Aspects

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Abstract

This study attempts to review, examine and analysis of present status of direct benefit transfer (DBT) of fertilizer subsidy in India from limited secondary sources of information. Fertilizer is one of the most important input for agriculture. Subsidy on fertilizer will directly deposited into the bank account of the buyers after purchasing from point of sale (PoS) auhenticated by Jandhan-Aadhar-Mobile (JAM). It has many social and economic impacts. Earlier, fertilizer subsidy involves leakages and diversions. DBT on fertilizers came into force in 2016 on pilot basis to some States. It was expected that DBT could reduce pilferage of Government's expenditure on social aspect and help saving (1st year saving by ₹ 30000 cr.). The NITI Aayog (2018) showed majority of retailers and farmers are satisfied with DBT. However, some key issues such as connectivity and dealer's margins have important roles. The conviction of the implementing authorities, stakeholder's awareness and Infra-structural facilities are very much necessary for effective application of the scheme. Little information have been reported about the progress of DBT for economic analysis since DBT of fertilizer subsidy has been implementing throughout the country only from 2018. Many authors expect its positive impact but others express little bit concern and suggested few measures before implementation. The scheme has the sense for social welfare and, thus, concrete economic analysis will be possible on DBT on fertilizer subsidy when adequate data will be available.

Keywords: Direct benefit transfer, aadhar, point-of-sale, advantage, concern, awareness

1. Introduction

Direct Benefit Transfer (DBT) is a Govt. policy and simply involves transferring the subsidy amount and other benefits (called transfers) directly to beneficiaries' bank accounts instead of providing it through Govt. offices. The primary aim of this Direct Benefit Transfer program is to bring transparency and terminate pilferage from distribution of funds sponsored by Central Government of India. In DBT, benefit or subsidy will be directly transferred to citizens living below poverty line.The main advantage of DBT is that leakages are avoided as the amounts are directly transferred to the account of beneficiaries. Another advantage of DBT is that the Govt. can better target the ultimate beneficiaries. DBT as a concept has been borrowed from Latin America and translated according to the need and context of socio-economic environment of India (Mahapatra, 2015). Though DBT Mission was launched on 1st

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January, 2013 with the Planning Commission, but later it was placed with the Cabinet Secretary, Govt. of India from 2015. DBT on fertilizers came into force in 2016 only. Fertilizer is one of the most important input for success of Indian agriculture. But, pricing mechanism and supply chain management of fertilizers assume much more importance. Thus, any policy on fertilizer supply may have immense impact on farming communities and Indian agriculture as well (Selvam et al., 2015). Agricultural subsidy is provided in various countries in the form of different inputs or on final product (mainly food grain) or combination of both. Fertilizer subsidy in India persistently occupies a substantial position when compared with total subsidy. Fertilizer is one of the most important inputs for agricultural production which is the mainstay of Indian economy. India's total volume of subsidy stands at nearly 1.5-2% of GDP (Gross Domestic Product). Scheme on DBT was started in 2013 but DBT of fertilizer

subsidy could not be introduced due to non-preparedness of the State Govt. However, DBT of fertilizer came into force on pilot basis in 19 districts of 14 States in October, 2016 and for all other States the programme would be launched w.e.f. 1st January, 2018.

In the context, an attempt has been made in this article to study the present status of DBT on fertilizer sector in India which includes background of the policy, advantages, operating mechanism, progress and its limitations.

2. Materials and Methods

The study is purely based on the available secondary sources information. Since the scheme is very new launched only in 2016 only, availability of information is limited. Thus, it is more descriptive compared to analysis on numerical data on the subject. The related aspects of the topic were thoroughly reviewed from different sources like periodicals, journals, statistical abstract, articles, websites, newspaper, etc. and data/information were gathered as per the requirement. Data, so obtained, were analysed, interpreted and presented accordingly. Usually, tabular presentation of data has been followed. Using different time series data, compound annual growth rate (CAGR) has been estimated by the following tool to find out the trend/growth rate of selected economic criteria.

Compound Annual Growth Rate (CAGR)=(EV / BV) $^{1/N}$ – 1, where, EV=Ending value, BV = Beginning value and N=Number of years.

3. Results and Discussion

3.1. Current status of fertilizer subsidy in India

Policy towards quantum of fertilizer subsidy in India occupies an important roles in financial sector. Table 1 shows the GDP (current price), centre's total subsidy bill and fertilizer subsidy for 2007-08 to 2016-17.

India's GDP shows an increasing trend but total subsidy remains quite unchanged for last few years. The government has been spending nearly 30% of its total subsidy on food, fuel and fertiliser to ensure that the farmers get the key agriculture input at cheaper rates.Govt. keeps ₹ 70000 Cr. only for fertilizer subsidy which is 27.95% (2016-17) to total subsidy andmore than double the fuel subsidy and the biggest after food. Fertilizer subsidy accounts for 0.46% of GDP in 2016-17. Sharma and Thaker (2010) opined that a reduction in the fertilizer subsidy is likely to have adverse impact on farm production and income of small and marginal farmers. Bhatla et al. (2019) estimated that DBT will compensate the policy of reduction of subsidy on total output and avert income loss of $74 per ha. During, 2017-19.

Table 1. GDP (current price), Centre's total subsidy and fertilizer subsidy (2007-08 to 2016-17) (Unit : (₹ in Cr.)

Year	GDP (Current price)	Total subsidy	Fertil-izer subsidy	% Share of fertilizer subsidy to	
				GDP	Total subsidy
2007-08	4,582,086	70926	40338	0.88	56.87
2008-09	5,303,567	129243	99495	1.87	76.98
2009-10	6,108,903	111276	64032	1.04	57.54
2010-11	7,248,860	173420	62301	0.85	35.95
2011-12	8,736,039	217941	70012	0.80	32.12
2012-13	9,946,636	257078	65613	0.66	25.52
2013-14	11,236,635	254632	67138	0.60	26.36
2014-15	12,433,749	258257	71075	0.57	27.52
2015-16	13,675,331	257801	72437	0.53	28.09
2016-17	15,251,028	250432	70000	0.46	27.95

Source :www.statiscstime.com and www.jagranjosh.com
1US$ = ₹ 69.69

3.2. Question on effective use of subsidy

Subsidy to food grain through PDS (Public Distribution System) estimates that 20-30 % of subsidised grain disbursed to the poor is siphoned away. Commission for Agricultural Costs and Prices (CACP) has now pegged the figure much higher at 40.5%. In a report titled Revamping agriculture and PDS, CACP chairman Ashok Gulati (2014) said pilferage was the highest in Bihar (71%), West Bengal (69%), Assam (67%) and Rajasthan (67%). Recently, food minister said in Parliament that the number of ration card holders have been reduced to ₹ 16 crore from some ₹ 22 crore in 2009 by weeding out bogus cards. He agrued argued that the existing PDS system has been highly "leaky", with large amounts of grains (40 to 50%) being pilfered and diverted to open market. Also, the existing PDS delivers better in better-off states rather than in those where there is concentration of poor, raising issues of equity. Gulati and Saini (2015) asserted that containing the

pilferage would save more than Rs. 30,000 Cr. annually to the government of India under the most likely scenario, while still giving a better deal to consumers. The saved resources can be ploughed back as investments in water (irrigation), rural roads and agri-R&D that could deliver food security, directly or indirectly (through increased incomes) to people of this country in a more sustainable manner. Gulati (1990) in his earlier study also express suspicion whether the farmers were really net subsidized.

Fertilizer subsidy is quite a complex scheme. There is serious Govt control over fertilizer market. This is to avoid high prices of fertilizers and make them affordable to poor farmer. But operation of fertilizer subsidy involves leakages and diversions (Anonymous, 2018). Besides, efforts of Govt. for providing heavily-subsidized fertilizer (farm nutrients) to the farmers are also getting smuggled into neighbouring countries like Nepal and Bangladesh.

In case of subsidy to LPG (Liquefied petroleum gas), as many as 3.3 crore fake, ghost and duplicate LPG connections have been blocked, leading to saving of Rs 21,000 crore in subsidies (Annonymous, 2018).

3.3. Need for DBT on fertilizer subsidy

Fertiliser subsidy has attracted much attention of policymakers, researchers, and politicians in the recent past. There has also been a debate about the issue of real beneficiaries of these subsidies (small vs large farmers, well-developed vs less developed regions, etc) (Sharma and Thakar, 2009). The fertilizer companies in India have raise some problems regarding like redressal of reduction of custom duty, liquidity problem of fertilizer Co. (depending heavily on credit for working capital) and arrear from Govt. towards subsidy mounting to Rs. 45000 Cr. (2016-17). In India, fertilizer subsidy was introduced in 1976-77. Subsidy to farmers was given through the fertilizer industry. Under the scheme, industry first passed the benefit to the farmer and got reimbursement from the government after bills were raised. Recently, fertilizer industry was increasingly facing many difficulties in collecting subsidy from Govt. and arrear of which was also mounting causing weak financial position. Besides, they had other managerial problems. Thus, major time and energy of the industry was wasted in collection of legitimate dues from the government. This has seriously vitiated the business environment in the fertiliser sector (Chander, 2016).

As the direct benefit transfer (DBT) in fertilisers is delayed due to reluctance of states to roll it out, the Economic Survey (2016) has floated the idea of replacing this input subsidy with direct income support to farmers. It argued that there is a need for "replacing untargeted subsidies (power and fertiliser) by direct income support to address agricultural stress and to achieve doubling farmers' income. Economic Survey (2015-16) spells out the need for starting the DBT experiment in fertiliser. This would help the poor farmers, reduce leakage and also reduce the government's subsidy burden, releasing resources to plough back into agriculture in a way that can help a greater number of poor farmers.

Different countries have experimented, adopted and used various models of subsidy payment. Developed countries mostly provide income support to farmers. Even some of the emerging and developing economies are changing policies for agriculture from product support to income support to farmers (Chander, 2015).

3.4. Mechanism for implementing DBT on fertilizer

Reforms in the fertiliser sector are needed to enhance domestic availability of fertilisers via less restrictive imports ("decanalisation") and to provide benefits directly to farmers using Jandhan-Aadhar-Mobile (JAM). DBT in this system means, regulatory control is retained with the Govt. but market price control is removed to enable companies to sell fertilizers at market prices. The farmer is paid subsidy money directly in his account by the Govt. based on data of his soil health card, Aadhaar and the quantity of fertilizer purchased.

The sale of all subsidised fertilisers to farmers and buyers is being made through point-of-sale (PoS) devices installed at each retailer shop. Implementation of the DBT Scheme requires deployment of PoS devices at every retailer shop, training of retailers and wholesalers for operating PoS devices.

The Lead Fertilizer Supplier (LFS) has conducted 4,630 training sessions till date, as a part of on-going PoS deployment and as a precursor to nation-wide rollout of DBT. Approximately, 2 (two) lakh retailers were sensitised during the introductory training sessions conducted by LFS.To make the scheme feasible, it was decided that under the DBT scheme, the subsidy will be released to the fertiliser companies, instead of beneficiaries, after the sale is made by the retailers to the beneficiaries.

The Centre has initiated a pilot project to introduce Direct Benefit Transfer (DBT) in Fertilizer Sector in 16 districts of various States in India. Una in Himachal Pradesh, Kishanganj in Bihar, Hoshangabad in Madhya Pradesh, Karnal and Kurukshetra in Haryana, Kannur in Kerala, Nasik and Raigarh in Maharashtra, Tumkur in Karnataka, Rangareddy in Telangana, Krishna and West Godavari in Andhra Pradesh, Maldah and South 24 Paraganas in West Bengal, Narmada in Gujarat and Pali in Rajasthan districts are among them.

3.5. Progress of DBT on Fertilizer

Govt. of India, so far, has transferred fund of ₹ 3,72,114 Cr. to the beneficiaries account under the head of DBT. Number of scheme attached with this programme is 437 wherein 57 ministries are involved. Estimated gain of the Govt. for adopting this programme is at the tune of ₹ 8,985 Cr. (DBT, Govt. of India, 2018). Presently, facilities of DBT is extended through different programmes like : (i) PAHAL (Pratyaksh Haustantrit Labh), (ii) MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Scheme), (iii) PMAYG (Padhan Mantri Awas Yojona), (iv) PDS (Public distribution System), (v)

NSAP (National Social Assistance Programme), (vi) Scholarship, etc. The Table 2 shows the progress of DBT in terms of total fund transfer and number of beneficiaries w.e.f. 2013-14 to 2017-18.

Table 2: progress of direct benefit transfer in india

Year	Total fund transfer (₹ in Cr.)	DBT beneficiaries (No. in Cr.)
2013-14	7367.7	10.7
2014-15	38926.0	22.6
2015-16	69942.2	31.1
2016-17	74706.8	35.5
2017-18	189171.4	121.1
CGR (%)*	91.38	62.46

*CGR: Compound growth rate; Source: DBT, Government of India (2018)

During the period, total fund transfer increases from ₹ 7367.7 Cr. to ₹ 189171.4 which implies a high growth trend with CGR= 91.38%. On the other hand, number of beneficiaries increases from 10.7 Cr. to 121.1 Cr. with 62.46% of CGR. Fund transfer has been made under different schemes like PAHAL (Pratyaksh Hanstantrit Labh), MGNREGS (Mahatma Gandhi National Rural Employment Scheme), PMAYG (Pradhan Matri Aawas Yojona-Gramin), NSAP (National Social Assistance Programme), scholarship and others.

A study of NITY Aayog finds that the Aadhar authentication strike rate increased as high as 97% in three attempts; 85% of farmers received transaction receipts, and 98% were charged the same amount as receipts and the grievance redress mechanism has improved and 79% retailers are satisfied. Despite initial challenges, a majority of farmers prefer the DBT system (Sikhri and Suri, 2018). Official data show that in these 14 districts ranging from Rangareddy (Telangana) to Karnal (Haryana), 9,334 retailers are on board and have sold 1.46 lakh mt of fertiliser in this month (Surabhi, 2017).

It has been estimated that about 300000 tonnes of fertilizer was sold through PoS within six months from the pilot project launched in 11 districts. It was only 0.5% of total fertilizer consumption. Besides, About 15.55 million tonnes of fertilisers were sold during April-July of this fiscal through the point of sale (PoS) devices installed at retail shops under the direct benefit transfer (DBT) scheme,

Savings due to Direct Benefit Transfer (DBT) over the last three years have touched ₹ 50,000 Cr. as on December 31, 2016 (Table 3), as per latest government figures. This amount is equivalent to the subsidy paid out under DBT in this financial year, implying nearly a year's subsidy was saved.Estimated annual growth rates of fertilizer subsidy, agriculture and GDP show that direct relationship between them could rarely be ascertained (Table 4). Growth rates of fertilizer subsidy and agriculture are erratic, inconsistent or even sometimes

Table 3: Saving due to direct benefit transfer (DBT)

Year	Amount of saving (₹ in crores)
2014-15	15,192
2015-16	20,951
2016-17 (upto Dec,'16)	14,000
Total	50,000 (approx..)

Source: www.thehindubusinessline.com (access on 17.04.2018)

Table 4: Comparison of annual growth rate (AGR) between GDP, agriculture and fertilizer subsidy

Year	Annual Growth Rate (%)		
	Fertilizer subsidy	Agriculture	GDP
2007-08	55.43	5.8	9.8
2008-09	146.65	0.1	3.9
2009-10	-35.64	0.8	8.5
2010-11	-2.70	8.6	10.3
2011-12	11.01	5.0	6.6
2012-13	-6.28	1.5	5.5
2013-14	-2.32	5.6	6.4
2014-15	5.54	-0.2	7.5
2015-16	1.88	0.7	8.0
2016-17	-3.36	4.7	7.1

Source : www.indiastat.com

negative because of involvement of other factors, whereas, growth rates of GDP have remained little bit consistent during the period 2007-08 to 2016-17. Transaction time has improved to less than three minutes for 51% of the respondents, while it is between three to five minutes for 33% of the respondents. This is in contrast to a transaction time of 9 to 10 minutes during the first round of evaluation of the scheme in September 2016. However, in the peak season a single retailer has to serve 500-600 farmers everyday," noted Mitul Thapliyal, Partner, MicroSave Consulting (Surabhi, 2019).

However, considering the importance of fertilizer, it could be assumed that changing the system of transferring fertilizer subsidy to the farmer-producers may not have much impact on either agriculture or GDP growth in India in the long run.

3.6. On some aspects of poverty and per capita income in India

Many researchers have advocated that effective implementation DBT, *inter alia*, may lead to decline poverty in India in the long run. India has adopted many developmental programmes since its first five year plan in 1950-51 and one of the main objectives was alleviation of poverty. So far, lot of progress have been done which is evident from the following Table 5.

Empirical evidences shows declining trend of incidence of

Table 5: Status of trend in poverty and per capita income in India

Year	Poverty (%)			Per capita income (₹)
	Rural	Urban	Urban	
1993-94	50.1	31.8	31.8	5,543
2004-05	41.8	25.7	25.7	12,416
2009-10	33.8	20.9	20.9	46,492
2011-12	25.7	13.7	13.7	61,564
2016-17	-	-	16.0 (predicted)	1,03,219
2017-18	-	-	NA	1,11,784

Source : Economic survey (various issues)

poverty in India since the base year 1993-94. Besides, per capital income is also shown to increase substantially over the period CGR = 12.57%). It is, thus, expected that introduction of DBT will add more pace in poverty alleviation strategy. The evaluation will also assess the behavioural changes brought about through the scheme in farmers and retailers, the use of soil health cards, functioning of the point of sale (PoS) machines and transaction time. However, the experiment of DBT in fertiliser has been very different compared to the cash transfer schemes for food and cooking gas.

3.7. Concerns of special features

• Proponents argue that DBT not only eliminates spurious transactions but also cuts red tape and improves efficiency.

• Now, the dealer demands full payment in advance before delivering the machine because he will receive nothing from the subsidy and it will go straight to the buyer.

• The subsidy on fertilizer goes to the farmer whose name appears on the record. So there is possibility of the subsidy credited in his account of a person who is died.

• Even if this problem is tracked and tackled, what is impossible to track and tackle is the case of the sharecropper (Phansalkar, 2017).

• Perhaps the man who now works the data entries in the databases and causes transfers of benefits to occur has acquired a power he never had before.

• Finally, if the officers deciding the eligibility of farmers (which includes land records officers, village council chiefs and district government officials) are too powerful and cause misdirection of the subsidy, perhaps the man who now works the data entries in the databases and causes transfers of benefits to occur has acquired a power he never had before. It is not easy to avoid the lure of easy money and such technology systems just enlarge the pool of rent seekers. This is something that needs to be accepted before any solution can be found (Phansalkar, 2017).

Economic Survey 2017-18 estimated that costlier crude oil will make fertilizer more costly. As a result, data from 25 ePoS-eqipped States revealed that fertilizer sales reducing by 28%. Besides, the success of the scheme will depend on resolution of some key issues such as connectivity and dealer's margins (Sahu, 2018). The study NITI recommends doubling of retailer commission and issue of new retailer licenses to streamline the nation-wide launch (Anonymous, 2018).

4. Conclusion

The direct benefit transfer (DBT) can help increase welfare in the society and agricultural production. It may contribute to an initiative towards inclusiveness. Introduction of DBT could reduce pilferage of Government's expenditure and help saving. Additional infra-structural facilities and awareness of the implementing authorities and stakeholder's are very much necessary. Few information have been reported in a scattered form which also trace out some defects in operation. The real status and impact will be realized if adequate information is available after fully implementation of DBT on fertilizer.

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