

MicroSave Policy Brief #17

Designing Beneficiary-Centric ‘Direct Benefit Transfer’ Programmes: Lessons from India—Part I

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Key Points:

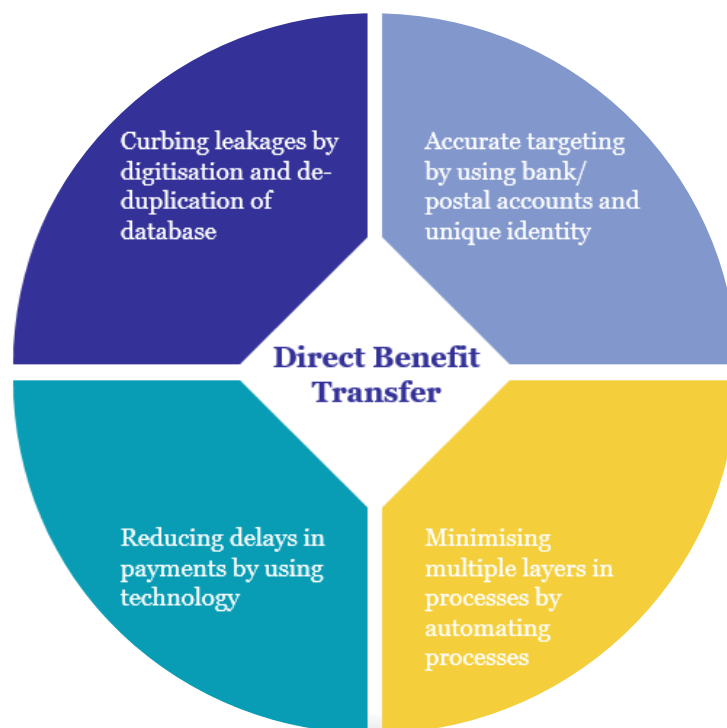
- *Direct Benefit Transfer in India has progressed and enabled the government to migrate to more effective payment delivery system.*
- *A digitised and dynamic database, beneficiary bank account seeded with unique identity, fund management system, beneficiary facing delivery channels are a few pre-requisites to ensure correct identification of beneficiaries.*
- *Benefits of India’s digital platform goes well beyond service and convenience. Government also make significant savings by curbing on leakages and removing ghost beneficiaries.*

1. Direct Benefit Transfer in India and the Lessons its Evolution Holds

On 1 January 2013, the Government of India launched its Direct Benefit Transfer (DBT) approach to paying subsidies/benefits to its citizens. This was a major reform initiative, considering that annual central subsidies alone amounted to around INR 5,200 billion (US\$ 80 billion), or 4% of the country’s Gross Domestic Product (GDP).

The DBT programme plans to transfer benefits such as scholarships and social welfare payments under [National Social Assistance Payment \(NSAP\)](#), and labour welfare payments under [Mahatma Gandhi National Rural Employment Guarantee Scheme \(MGNREGS\)](#), directly into beneficiaries’ bank or postal accounts. Before the commencement of DBT, the process involved multiple departments/agencies and resulted in challenges such as delayed payments, inaccurate targeting, multiple layers of authorisation for fund transfers, “leakages” (theft), and duplication of beneficiaries. These challenges cost the exchequer approximately 2% of the GDP every year. In light of these challenges, DBT was launched to meet multiple objectives simultaneously (see Figure 1).

Figure 1: Objectives of DBT



The Government on January 1, 2013, initiated DBT Phase-I in 43 districts for 24 Central Sector (CS) and Centrally Sponsored Schemes (CSS) such as [NSAP](#) (comprising old age, widow, disability, and family benefit pensions), the [Mahatma Gandhi National Rural Employment Guarantee Scheme \(MGNREGS\)](#), and [Direct Benefit Transfer for LPG \(DBTL\)](#). Unfortunately, with teething problems in implementation, and with the country’s 2014 general elections, action on DBT came to a standstill. In fact, the flagship DBTL was suspended entirely in March 2014.

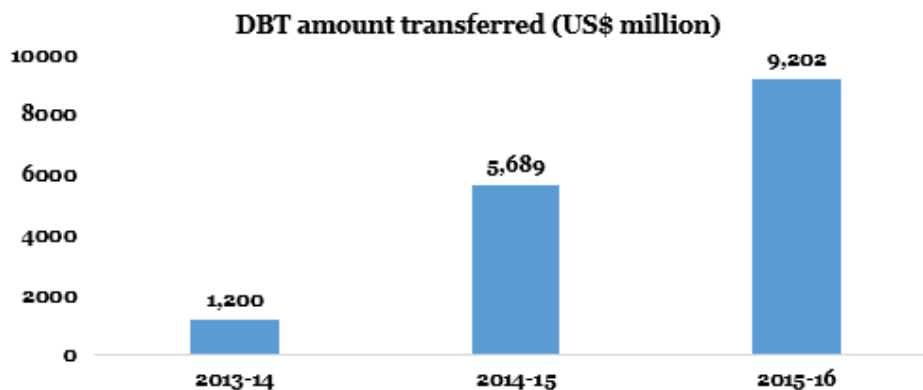
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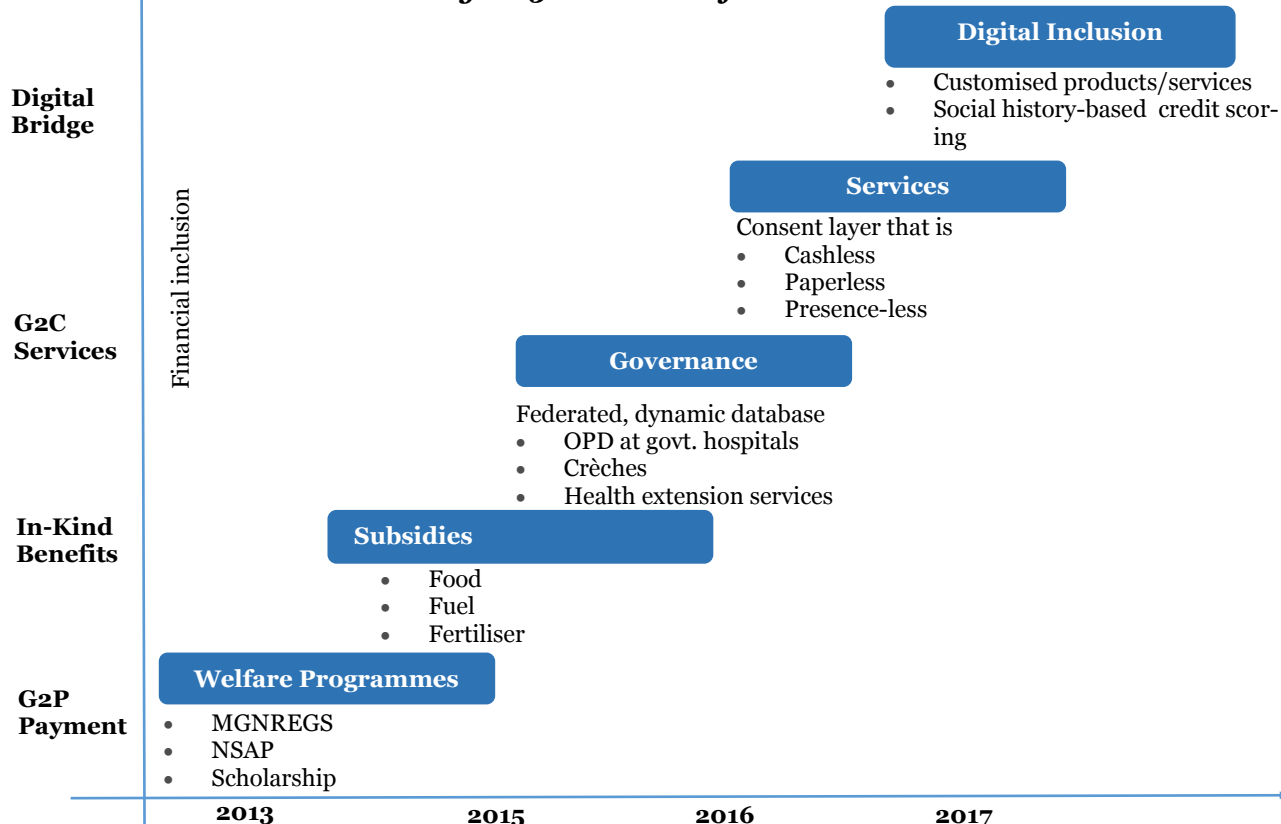
However, the new government quickly understood the long-term potential and impact of DBT, and launched many of the programmes with even greater fervour, starting with ‘Modified Direct Benefit Transfer in LPG (MDBTL)’, better known as *PAHAL*. Beyond *PAHAL*, with an office order, issued by Ministry of Finance, the government expanded DBT across the country on 12th December 2014, with seven new scholarship programmes, MDBTL, and MGNREGS in 300 districts under its ambit. Over the last two years, DBT in India has progressed and enabled the government to reduce inefficiency and, increasingly, migrate to more effective delivery systems. The DBT umbrella has been much expanded and now comprises an increasing number of programmes—implemented across a wide variety of Ministries/Departments, thereby increasing in terms of number of beneficiaries, volume of transactions, etc. (See Figure 2.)

Figure 2: Year-on-Year Increasing Worth of Benefits Transferred under DBT in India (figures in cumulative)



This graph not only highlights the growth in DBT to date, but also gives us an idea about the likely course of DBTs in the years to come as some of the large subsidy programmes are moved onto a DBT basis.

Figure 3: Evolution of DBT in India



The confluence of emerging trends including: matured biometric technology; increasing mobile phone density; cloud computing and big data; as well as novel approaches such as [India Stack](#) and the [Unified Payment Interface \(UPI\)](#) – made (and will make) the implementation of DBT feasible – even in a large country like India. We anticipate that over the next few years G2P transactions will cover all government to citizen services, and not just cash and in-kind transfers. One example is the filing of [Income Tax Returns \(ITR\)](#).

Today, citizens can complete the entire process of filing their tax returns at home without once visiting a single office. Earlier, after having filled out the returns, the taxpayer had to take a print-out of the acknowledgement provided by the Central Process Centre of the Income Tax Department, and send it to a central processing unit. *Aadhaar* has made this practice a thing of the past. Now the assessee can verify himself/ herself through *Aadhaar* and ITR is processed immediately. Furthermore, as a result, tax refunds (where applicable) are transferred much more quickly to the bank account than before.



Under the current Indian system, classification of transfers under DBT is based on the **type of benefits** and the **type of beneficiaries**.

I. Cash Transfers to Individual Beneficiary

This category includes programmes or components of programmes wherein **cash benefits**, such as scholarships, pensions, MGNREGS, wages are transferred from government(s) to individual beneficiaries. Most of the well-known programmes such as *PAHAL*, MGNREGS, NSAP, etc., where DBT has already been introduced, are of this nature.

II. In-Kind Transfers to Individual Beneficiary

This category includes programmes or components of programmes where in-kind benefits are given by the government (s) to individuals through an intermediate agency. Typically, the government (or its agent) incurs expenditure to procure and make available goods and services for targeted beneficiaries. Individual beneficiaries receive these benefits free, or at subsidised rates. The largest example of this is the [Public Distribution System \(PDS\)](#). The Food Corporation of India (FCI) is the government's agent for PDS, and is responsible for procurement, movement, storage, and distribution of food grains to Fair Price Shops (FPS).

However, the subsidised rates at which FCI issues the food grains to states do not fully cover the cost – of procurement and other activities – incurred by the corporation. This shortfall represents the consumer subsidy for the PDS, and is paid to the corporation by the Government of India. Similarly, provision of other products, like kerosene, fertilisers, books, medicines, vaccines, etc. at subsidised rates also falls in this category.

III. Benefit Transfers to Service Providers/Enablers

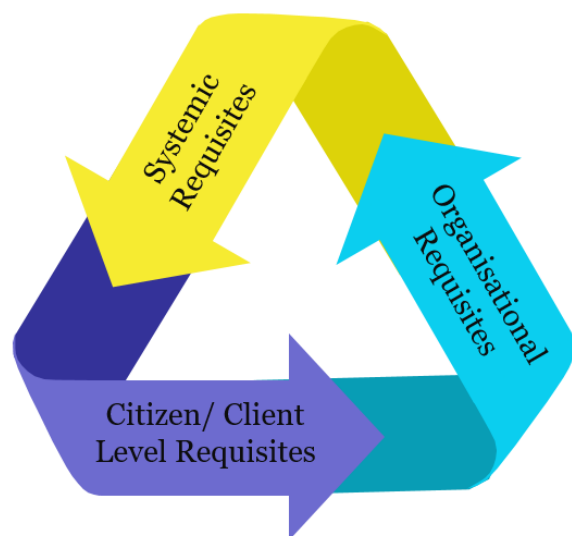
This includes transfers from government to different quasi-government/non-government functionaries. These non-government functionaries include enablers such as Accredited Social Health Activist (ASHA) workers under the National Rural Health Mission (NRHM), *Aanganwadi* workers under Integrated Child Development Services (ICDS), etc. who deliver services to intended beneficiaries.

These enablers get benefits in the form of wages, honorarium, etc. These payments are also increasingly becoming digitised – for example, wages of ASHA workers under *Janani Suraksha Yojana (JSY)* in NRHM. On the basis of lessons learned to date from the implementation of DBT programmes in India, this Note explains the pre-requisites and the steps, which if followed, can help in implementation of successful government DBT programmes. In the first section, we explain the pre-requisites behind success of DBT programmes in India.

2. India’s Digital Platform: Pre-Requisites that Put India in Good Stead

For any government to transfer benefits to its citizens effectively, it needs to ensure that it can identify beneficiaries correctly and make benefits accessible to them with minimum cost/inconvenience. For this, various check-points can be established at beneficiary, organisational, and system levels (see Figure 4), successful establishment of which could help governments to make benefit-delivery systems convenient and cost-effective.

Figure 4: Pre-Requisites for DBT



Level	Pre-Requisites
Beneficiaries/ Client	Unique ID, individual digital bank account
Organisational	Digitised dynamic, integrated database interacting with similar databases to avoid duplication
System	Payment switch, fund management system, expenditure tracking system, seamless round-the-clock connectivity, enabling laws, beneficiary-facing delivery channel (for cash out or access to in-kind goods)

The next sections answers an important question, which is “How did India go about the tasks of making the pre-requisites available?”

2.1 Aadhaar – Unique Individual and Financial Identity

In *Aadhaar*, India has the largest biometric (i.e. fingerprint and iris identification – thus unique) resident database. Using *Aadhaar* to uniquely identify the financial address (bank account) of the beneficiary (through the process of “seeding”, or linking, the biometric ID to a bank account) multiplies its impact. The unique ID of every resident allows the government to identify beneficiaries and weed out duplicate or “ghost” beneficiaries. The *Aadhaar*-based authentication ensures that only the intended beneficiary receives the benefit; the link to a bank account ensures that the money is transferred to the beneficiary’s account. In terms of this beneficiary level requisite, India has made considerable progress with over one billion *Aadhaar* enrolments and the passage of the [Aadhaar Bill](#).

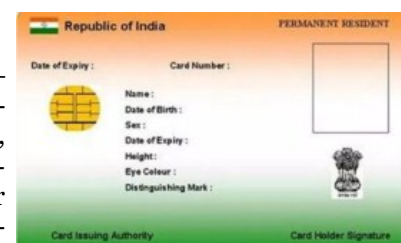
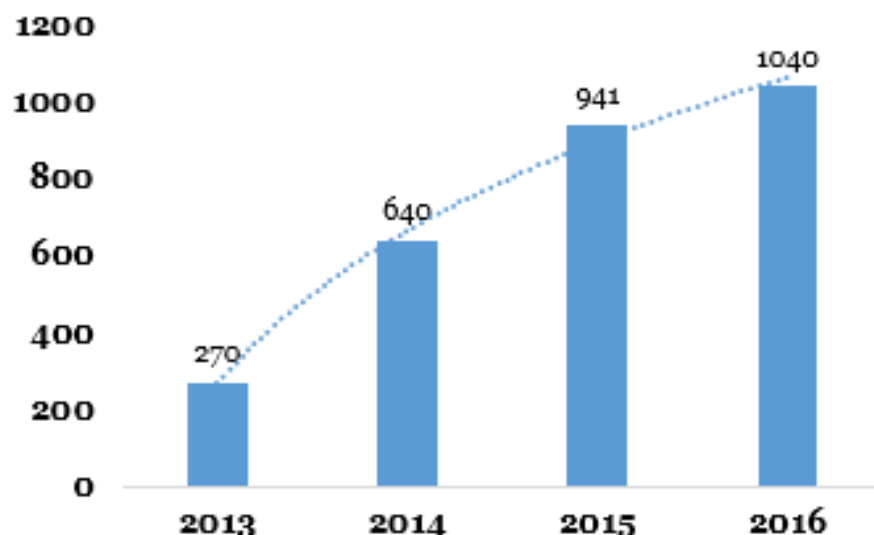


Figure 5: Progress of Aadhaar Enrollment
Aadhaar enrolments (million)



Since 2014, the government has focused on harnessing the full potential of *Aadhaar* as a tool for de-duplication, authentication and a financial address. This has provided impetus to efforts to enrol the entire population onto the *Aadhaar* platform. In addition to the 27,219 permanent enrolment centres, the government set up temporary enrolment camps in schools, hospitals and day-care centres.

[Key features of Aadhaar bill that enable DBT, are in the Chapter III of the Aadhaar bill](#), which deals with authentication. The *Aadhaar* bill enables the following:

Table 1: Post-Aadhaar Scenario

	Pre-Aadhaar Bill	Post-Aadhaar Bill
Status of Unique Identification Authority of India (UIDAI)	Functioning through executive order of the Government of India	Constitutional authority with detailed processes
Pre-requisite of Aadhaar	The Supreme Court passed an interim order prohibiting the government from depriving anyone of benefits for want of Aadhaar number.	The government can ask for the Aadhaar of any recipient of funds transferred from consolidated funds of India. In absence of Aadhaar, the government will expedite Aadhaar enrolment process for identified recipients.
Privacy of data	Nothing specific	Individuals can authorise UIDAI to share details other than the biometrics with other agencies.

2.2 SERVAM – Digitised, Dynamic and Integrated Database

Another important pre-requisite for the successful functioning of any G2P programme is a digitised database that includes the basic demographic details of beneficiaries. This database must have three characteristics – it must be:

- I. **Digitised** – to enable system-based payment,
- II. **Dynamic** – to reflect the real-time changes in the data, and (iii) **Integrated** – thus allowing one benefit under one programme to one beneficiary.

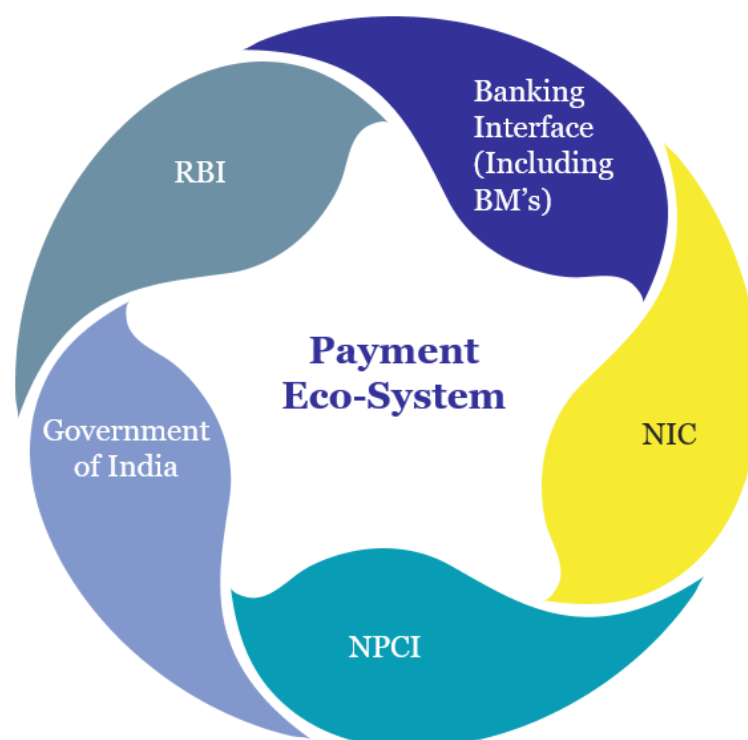
In India, the Socio Economic Caste Census (SECC) serves this purpose. This database does away with the reliance on below poverty line (BPL)-based targeting of beneficiaries. The SECC database has socio-economic details of every single family. Instead of using highly contested below poverty line classification, targeting is possible based on objective automatic selection or rejection criterion. For example, for UJJWALA, all those without an LPG connection are, by default, beneficiaries. Currently, India is building a federated database, which is consolidated into a single centralised unit, within which each state/department keeps control of their own part of the federated database. This federated database, called Servam, will be populated on the basis of the SECC and fully operational by March 2017.

2.3 Payment Eco-System

Indian regulators and policy-makers have put in place the requisite technical infrastructure and enabling environment to ensure efficient payments to beneficiaries. All the players in the ecosystem have played their role in developing the digital payments infrastructure (see Figure 7). A quick look at the ecosystem highlights the roles played by different players:

- **Government of India** – passage of the Aadhaar bill that ensured benefit delivery is based on Aadhaar seeded recipients only, thus largely eliminating leakages from the system arising from bogus/duplicate beneficiaries.
- **Reserve Bank of India (RBI)** – enabling e-KYC based account opening and the creation of the National Payment Corporation of India (NPCI), which gave further impetus to the payment infrastructure in India.
- **NPCI** – a body owned by banks, facilitating spread of Aadhaar-enabled Point of Sale (POS) devices. NPCI also manages the Aadhaar Payment Bridge (APB) to handle Aadhaar based payments.
- **National Informatics Centre (NIC)** – providing back-end, hard-core technical support to build and integrate databases.
- **Banks-** [Pradhan Mantri Jan Dhan Yojana \(PMJDY\) financial inclusion programme was successful because of the widespread presence of banking infrastructure](#) (including networks of Bank Mitrs [bank agents]) in India, thus providing easy access for the intended beneficiaries to open bank accounts.

Figure 6: Indian Payment Eco-System



3. Savings for Government

Using technology for the purpose of DBT has allowed government to realise enormous savings by increasing the efficiency and scope of their electronic payments infrastructure. In this section, we assess the savings that accrue from digitisation.

Corresponding to these two leakages, there are two kind of savings realised through Direct Benefit Transfer:

a. Savings through De-Duplication

Seeding of beneficiary database with unique identity (in the case of India, with *Aadhaar*) ensures the elimination of ghost beneficiaries and de-duplication ensures that an individual is getting only one benefit payment under any one programme. These savings could accrue in both kinds of benefit transfer, i.e., cash and in-kind benefits.

b. Savings through Authentication at the Time of Benefit Delivery

Mandatory *Aadhaar* authentication for the receipt of benefits ensures that those beneficiaries who do not physically turn up are not paid – thus creating additional savings.

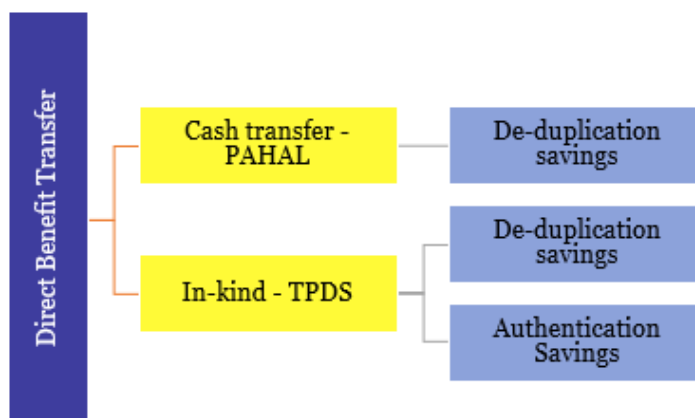
In order to deliver government benefits efficiently, a variety of models have evolved across the schemes. We assess savings from digitisation in the context of both cash and in-kind benefit transfer programmes.

I. Saving Computation for Cash Transfer Programme, e.g. PAHAL

Total of 33.40 million connections (22% of total LPG connections, 152 million, at the time of programme launch) had been weeded out through de-duplication, by April 2015. Since these 33.40 million connections could not furnish appropriate details required, we can safely assume that these connections were used to either divert domestic LPG for commercial use, or (at the very least) used by households over and above their quota of subsidised cylinders.

If the former is true, then the entire quota must have been consumed. Operationalising these numbers gives us 3.34 crore (33.40 million) multiplied by INR 160 (US\$ 2.35), the amount of LPG subsidy per cylinder, multiplied by 12, the number of subsidised cylinders per household per year = INR 6,412 crore (US\$ 942 million). This is the amount the government would have spent every year if the “ghost/duplicate” connections were still in circulation and accessing subsidies along with genuine beneficiaries.

Figure 7: Types of Savings through Digitisation



II. Saving Computation for In-Kind Transfer Programme, e.g. TPDS

The target public distribution system (TPDS) has been computerised across the country to address challenges, including leakages and diversion of food grains in the supply-chain; fake and bogus ration cards; inclusion and exclusion errors; lack of transparency; and weak grievance redressal & social audit mechanisms. [MicroSave's study indicated TPDS computerisation can result in savings at FPS due to both de-duplication and BAPU based \(Aadhaar authentication\) transactions.](#)

Figure 8: Savings in TPDS

I. De-Duplication Savings in TPDS Automation:

Savings due to reduction in the amount of food grains allocated to TPDS after efficient weeding out of ghost (fictional or dead beneficiaries) or duplicate beneficiaries. *MicroSave's* PDS savings research indicates that this component created extensive leakage before TPDS computerisation.

II. Biometric Authentication Physical Uptake (BAPU)-Based Transactions Savings:

Savings due to increase in grain leftover at Fair Price Shop (FPS) at the end of month due to BAPU-based grain disbursement. This component arises because ration card-holders were either given less rations than they were due, or FPS owners over-reported grain distribution before TPDS automation. *MicroSave's* research indicates that this component is significantly smaller than the savings from de-duplication.

MicroSave assessed total savings in five states that have implemented TPDS automation to be about INR 5,700 crore (US\$ 900 million) per annum.

What these two examples illustrate is that India is realising huge savings, while making excellent progress towards achieving efficient benefit/service delivery to social welfare recipients.

However, not all achieved was through a systematic plan, and the lessons learned along the way provide important signposts and opportunities for other governments seeking to digitise their programmes.

Having highlighted India's progress in this note, the next Policy Note in this series, "Seven Steps of DBT Programme Design", will examine how to design an efficient, yet beneficiary-centric, DBT programme.



References

- I. The National Social Assistance Programme (NSAP) which came into effect from 15th August 1995, represents a significant step towards the fulfilment of the Directive Principles in Article 41 of the Constitution. The programme introduced a National Policy for Social Assistance for the poor and aims at ensuring minimum national standard for social assistance in addition to the benefits that states are currently providing or might provide in future. NSAP at present, comprises of Indira Gandhi National Old Age Pension Scheme (IGNOAPS), Indira Gandhi National Widow Pension Scheme (IGNWPS), Indira Gandhi National Disability Pension Scheme (IGNDPS), National Family Benefit Scheme (NFBS) and Annapurna - <http://nsap.nic.in/>
- II. The MNREGA programme provides enhancement of livelihood security for the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work and for matters connected therewith or incidental thereto - <http://www.nrega.nic.in/>
- III. Direct Benefit Transfer (DBT) was started on 1 January 2013, with the aim of reforming the government's delivery system by re-engineering the existing process in welfare programmes for simpler and faster flow of information/funds and to ensure accurate targeting of the beneficiaries, de-duplication and reduction of fraud - <http://cabsec.nic.in/dbt/index.html>
- IV. DBTL is a programme that provides the LPG subsidy applicable on the domestic LPG cylinder directly into the consumer's bank account. At the time of LPG cylinder delivery, the consumer will have to pay the full price of the LPG cylinder. The DBTL programme was earlier launched on 1 June 2013 and finally covered 291 districts. It required the consumer to have an *Aadhaar* number to avail his/her LPG subsidy. The government has comprehensively reviewed the programme and, after examining the difficulties faced by the consumer, substantively modified the programme prior to launch. The modified programme was re-launched in 54 districts on 15.11.2014 in the First Phase and launched in the rest of the country on 1.1.2015 - (<http://petroleum.nic.in/dbt/index.php>)
- V. The India Stack enables development of payment-enabled applications under an Open API Policy. It includes *Aadhaar* for authentication (*Aadhaar* already covers over 940 million people and will quickly cover the population of the entire nation, providing the world's largest authentication system), e-KYC documents (safe deposit locker for issue, storage and use of documents), e-Sign (digital signature acceptable under the laws), Unified Payment Interface (for financial transactions) and privacy-protected data sharing within the stack of API - <http://www.indiastack.org/>
- VI. A Unified Payment Interface (UPI) is a single window mobile payment system launched by the [National Payments Corporation of India \(NPCI\)](#). The system is designed to provide a simple, secure and convenient "single interface" to enable sending and receiving of money using smartphones through a "single identifier", which can be a virtual address like an email ID, mobile number or *Aadhaar* number. It eliminates the need to enter bank details or other sensitive information each time a customer initiates a transaction - http://www.npci.org.in/UPI_Documents.aspx
- VII. *Aadhaar* is a 12 digit individual identification number issued by the Unique Identification Authority of India on behalf of the Government of India. This unique number will serve as a proof of identity and address, anywhere in India - <https://uidai.gov.in/>

The Public Distribution System (PDS) is an Indian food security system. Established by the Government of India under the Ministry of Consumer Affairs, Food, and Public Distribution, and managed jointly with state governments in India, it distributes subsidised food and non-food items to India's poor. The PDS, till 1997, was a general entitlement scheme for all consumers without any specific target. This programme was re-launched in India on June 1997 as Targeted Public Distribution System (TPDS) with a focus on the poor. Major commodities distributed include staple food grains, such as wheat, rice, sugar, and kerosene, through a network of fair price shops (also known as ration shops) established in several states across the country. The Food Corporation of India, a Government-owned corporation, procures and maintains the PDS - <http://pdsportal.nic.in/main.aspx>

References

- IX. The National Health Mission (NHM) encompasses its two Sub-Missions, the National Rural Health Mission (NRHM) and the newly launched National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening (in both rural and urban areas), Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable and quality health care services that are accountable and responsive to people's needs - <http://nrhm.gov.in/nhm.html>
- X. Integrated Child Development Services (ICDS) is an Indian government welfare programme which provides food, pre-school education, and primary healthcare to children under 6 years of age and their mothers. These services are provided from *Aanganwadi* centres established mainly in rural areas and staffed with frontline workers - <http://icds-wcd.nic.in/icds/>
- XI. *Janani Suraksha Yojana* (JSY) is a safe motherhood intervention under the National Rural Health Mission (NHM). It is being implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women. The programme is under implementation in all states and Union Territories (UTs), with a special focus on Low Performing States (LPS) - <http://nrhm.gov.in/nrhm-components/rmnch-a/maternal-health/janani-suraksha-yojana/background.html>
- XII. The *Aadhaar* (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Bill, 2016 was introduced by Minister of Finance, Mr Arun Jaitley, in the Lok Sabha on March 3, 2016. The Bill intends to provide for targeted delivery of subsidies and services to individuals residing in India, by assigning them unique identity *Aadhaar* numbers - <http://www.prsindia.org/billtrack/the-aadhaar-targeted-delivery-of-financial-and-other-subsidies-benefits-and-services-bill-2016-4202/>
- XIII. SECC 2011 is a study of socio-economic status of rural and urban households and allows ranking of households based on pre-defined parameters. SECC 2011 has three census components, which were conducted by three separate authorities, but under the overall coordination of Department of Rural Development in the Government of India. Census in Rural Areas has been conducted by the Department of Rural Development (DoRD). In urban areas, the census is under the administrative jurisdiction of the Ministry of Housing and Urban Poverty Alleviation (MoHUPA). The caste census is under the administrative control of Ministry of Home Affairs: Registrar General of India (RGI) and Census Commissioner of India - <http://secc.gov.in/welcome>
- XIV. The programme to provide free Liquefied Petroleum Gas (LPG) connections by Oil Marketing Companies (OMC) to the women belonging to the Below Poverty Line (BPL) households. It will cover 5 crore (50 million) BPL households over a period of three years - <http://www.petroroleum.nic.in/docs/UJJWALA.pdf>
- XV. *Servam*, a comprehensive platform to bring together the elements of *Pradhan Mantri Jan Dhan Yojana* accounts, *Aadhaar* identification database, and mobile phones. The platform will provide a single interface for beneficiaries and their providers to be able to deliver public benefits in a rational, objective and convenient manner.
- XVI. The RBI is India's central bank - <https://www.rbi.org.in/home.aspx>
- XVII. As part of the e-KYC process, the resident authorizes UIDAI (through *Aadhaar* authentication using either biometric/OTP) to provide their demographic data along with their photograph (digitally signed and encrypted) to service providers - https://uidai.gov.in/images/commndoc/ekyc_policy_note_18122012.pdf
- XVIII. National Payments Corporation of India (NPCI) is an umbrella organisation for all retail payments systems in India. It was set up with the guidance and support of the Reserve Bank of India (RBI) and Indian Banks' Association (IBA) - <http://www.npci.org.in/>
- XIX. A centralised electronic benefit transfer system to undertake direct mandates from respective sponsor or accredited bank attached to various government departments disburse entitlements using *Aadhaar* numbers - <http://www.npci.org.in/documents/Overview%20on%20Aadhaar%20Payments%20Bridge%20System.pdf> and <http://www.npci.org.in/apbs.aspx>

References

- XX. National Informatics Centre (NIC) was established in 1976, and has since emerged as a "prime builder" of e-Government /e-Governance applications, up to the grassroots level, as well as a promoter of digital opportunities for sustainable development. NIC, through its ICT Network, "NICNET", has institutional linkages with all the Ministries /Departments of the Central Government, 36 State Governments/Union Territories, and about 688 District administrations of India - <http://www.nic.in/>
- XXI. *Pradhan Mantri Jan Dhan Yojana* (PMJDY) is the national mission for financial inclusion, with the ambitious objective of providing banking facilities to all households in the country - <http://www.pmjdy.gov.in/>
- XXII. Under Biometrically Authenticated Physical Uptake (BAPU) model, beneficiaries authenticate their identity through scanning their thumbprint on a POS machine, while buying the subsidised product – say kerosene/ ration at the PDS shop.