

# 14 Digital Governance

## Government of India Initiatives in the Public Sector

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### Introduction

On February 17, 2022, while speaking in the seventh edition of the Economic Times Global Business Summit in New Delhi, the Prime Minister of India said that ‘former Prime Minister, Mr Rajeev Gandhi had said that “only 15 paise of every rupee sanctioned by the government reached the poor”, and now due to Direct Benefit Transfer (DBT), 100% delivery of the amount to the intended beneficiary’. Based on data collected from various central ministries and departments, it has been revealed that in the fiscal year 2021–2022, nearly Rs6.18 lakh crore was either transferred directly to bank accounts or provided in the form of goods to individuals all over the country. This amount is a substantial increase from the Rs5.52 lakh crore distributed in the previous financial year of 2020–2021 and Rs3.8 lakh crore in 2019–2020, according to government statistics. This profound example speaks volumes on how digitalisation (mobile, bank connectivity, Aadhar) has helped in reducing poverty and corruption, as well as increasing inclusive growth.

According to the United Nations, one of the requirements for bolstering democracy is to have trustworthy and efficient state institutions as well as public services that are open to everyone and of a high quality. It is now generally accepted that a lack of state capacity is the root cause of a significant proportion of the challenges including poverty and social disintegration, that nations are facing worldwide.

Any business that wants to solve complicated challenges at a reasonable cost needs to embrace innovation. Public administration innovation provides valuable services to citizens easily. New research shows that there has been some innovation in India’s public administration, but more work has to be done to increase citizen satisfaction. The development has been uneven among the Indian states (Ahluwalia, 2000), partly because of the fact that some states have developed their governance structures and processes more than others (Khandwalla, 2010).

Citizens’ expectations are increasing globally, which puts pressure on the government to deliver efficient and high-quality public services. Public service providers must become cost-effective, accountable, and capable of providing benchmarked services to their citizens. Innovation is one of the core elements of public management, resulting in economic and political messages signalling good governance (Gupta et al., 2019). Figure 14.1 illustrates how the government expenditure of the country varies with respect to GDP.

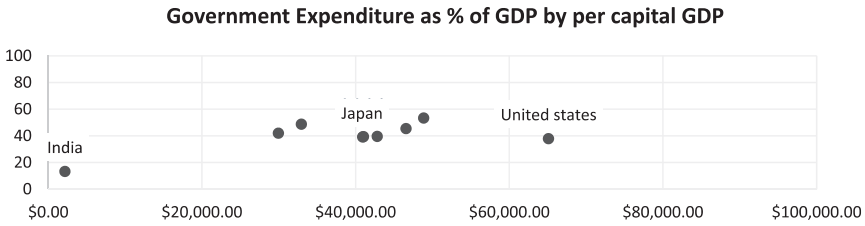


Figure 14.1 General Government Spending (% of GDP), 2021

### *Noteworthy Contribution to the Field*

There is a lack of theoretical work that specifically addresses innovation in the public sector. In addition, there is a lack of empirical research in three key areas that are critical to comprehending the innovative processes of public sector organisations:

1. The nature of public services themselves.
2. The environment in which public sector organisations must function.
3. Interactions with parties inside and outside of government.

Innovation in the public sector is the result of complex interactions between internal factors such as antecedents, resources, and actors, as well as external factors such as environmental antecedents, actors, and resources (see Table 14.1). Studying innovations in public administration entails investigating not just the innovations themselves, but also the organisational and environmental settings in which they emerge and the conditions that make them possible.

### *Indian Experience*

Innovation is the key to finding cost-effective solutions to complex problems for any organisation. India faces a lot of complexity and challenges in governance due to its diverse culture, geographies, and prevailing inequities. Our research-related contribution concerns the antecedents in the innovation process as well as the method of delivery of public service.

*As public sector service provision often revolves around providing services cost-effectively and creating societal well-being, the value in the public sector is more complicated than in the private sector. It can, therefore, be harder to measure.*

(Mulgan & Albury, 2003)

Management innovations make up the bulk of awardees at the Prime Minister's Awards for Excellence in Public Administration, with technology breakthroughs

Table 14.1 Public Sector Innovation Types Applied

| <i>Innovation Type</i>                   | <i>Focus</i>   | <i>References</i>              | <i>Examples</i>  |
|--|--|--------------------------------|--|
| Process innovation                       | Optimising both internal and external procedures to increase quality and productivity  | Walker (2014)                  |  |
| <i>Administrative process innovation</i> | Creation of novel organisational structures, managerial strategies, and operational practices  | Meeus and Edquist (2006)       | Creation of a 'one stop shop' by a municipality where citizens can access various services at a single location  |
| <i>Technological process innovation</i>  | The creation and implementation of cutting-edge technologies within an organisation to benefit its customers and the general public                      | Edquist et al. (2001)          | Digital assessment of taxes  |
| Product or service innovation            | Creation of new public services or products  | Damanpour and Schneider (2009) | Creation of youth work disability benefits   |
| Governance innovation                    | Creation of novel structures and procedures for resolving pressing social issues   | Moore and Hartley (2008)       | Governance practice that attempts to enhance the automated and self-organising capacities of policy networks   |
| Conceptual innovation                    | Reframing the nature of individual problems and the potential answers to those problems by introducing novel concepts, frames of reference, or paradigms | Bekkers et al. (2011)          | The introduction of the paradigm that, when assessing a person's work disability, insurance physicians no longer analyse what people cannot do, but instead analyse what they can still do |

*Source:* De Vries, H.A., Bekkers, V.J.J.M., L.G. Tummers, Innovation in the Public Sector: A Systematic Review and Future Research Agenda. Public Administration

coming in second (Table 14.2). To improve the economy as a whole, innovation must be fostered across all sectors, especially in the public sector.

*However, innovation policies and strategies relating to the public sector are far less developed than those targeting the business sector ... There are*

Table 14.2 Prime Minister's Awards for Excellence in Public Administration

| <i>Innovation Type</i>            | <i>Focus</i>   | <i>Case Study</i>   |
|-----------------------------------|--|---|
| Process innovation                | Improvement of quality and efficiency of internal and external processes. Example: Ease of doing business  | <ul style="list-style-type: none"> <li>● GST – one nation, one tax, one market (2018)</li> <li>● Ease of doing business in India Innovation (AS/JS&amp;Dir./DS category) (2018)</li> <li>● Swatch Bharat Mission (Gramin) (2016)</li> <li>● Village health and nutrition day in complete convergence Mode, Tripura (2010–2011)</li> <li>● Sickle cell Anaemia Control Programme, Government of Gujrat (2009–2010)</li> <li>● Sustainable Plastic Waste Management in Himachal Pradesh: From concept to policy (2009–2010)</li> </ul>  |
| Administrative process innovation | The development of novel organisational structures, the adoption of cutting-edge administrative practices, and labour-saving innovations are all examples of the reimagining of the workplace Example: A municipality sets up a 'one stop shop' where residents may get many different types of help in one convenient place | <ul style="list-style-type: none"> <li>● Swatch Bharat mission (Gramin) (2016)</li> <li>● 'Surguja Fulwari Initiative' Chhattisgarh (2013–2014)</li> <li>● Achieving 'total financial inclusion' in the west Tripura district through E ROR (2013–2014)</li> <li>● Education initiatives in Dantewada (2011–2012)</li> <li>● Sugarcane Information System, Uttar Pradesh (2011–2012)</li> <li>● Making Medicines Affordable, Chittorgarh Rajasthan (2008–2009)</li> <li>● Computerisation of paddy procurement and public distribution system, Chhattisgarh (2008–2009)</li> </ul>  |
| Technological process innovation  | The development and implementation of cutting-edge technology within an organisation to improve the quality of care provided to customers and constituents. Example: Automatic tax evaluation in the cloud   | <ul style="list-style-type: none"> <li>● Unnaya Banka-Reinvesting Education using Technology (2018)</li> <li>● Cashless village palnar (2017)</li> <li>● GST – one nation, one tax, one market (2018)</li> <li>● 'Saving the Womb'. An initiative to address and redress malpractices in the implementation of RSBY in Samastipur, Bihar (2013–2014)</li> <li>● Achieving 'total financial inclusion' in the West Tripura district through E ROR (2013–2014)</li> <li>● Sugarcane Information System, Uttar Pradesh (2011–2012)</li> <li>● Computerisation of paddy procurement and public distribution system, Chhattisgarh (2008–2009)</li> <li>● Integrated Taxpayer Data Management System (2008–2009)</li> </ul> |

(Continued)

Table 14.2 (Continued)

| Innovation Type               | Focus  | Case Study   |
|-------------------------------|--|--|
| Product or service innovation | Creation of new public services or products. Example: Creation of youth work disability benefits   | <ul style="list-style-type: none"> <li>● Swatch Bharat Mission (Gramin) (2016)</li> <li>● ‘Surguja Fulwari Initiative’ Chhattisgarh (2013–2014)</li> <li>● Education initiatives in Dantewada (2011–2012)</li> <li>● Sugarcane Information System, Uttar Pradesh (2011–2012)</li> <li>● Sickle Cell Anaemia Control Programme, Government of Gujrat (2009–2010)</li> <li>● Cervical Cancer Screening, Chennai, Tamil Nadu (2008–2009)</li> </ul>           |
| Governance innovation         | Creating novel structures and methods to solve pressing social issues. By way of example, a governance strategy that seeks to improve policy networks’ self-regulatory and self-organising abilities | <ul style="list-style-type: none"> <li>● Improved policy network self-regulation and self-organisation is an objective of this governance strategy</li> <li>● GST – one nation, one tax, one market (2018)</li> <li>● Sugarcane Information System, Uttar Pradesh (2011–2012)</li> <li>● Bridging the gap Bihar</li> <li>● Medicines (2008–2009)</li> <li>● Recognition of forest rights, Madhya Pradesh (2008-09)</li> </ul>                              |
| Conceptual innovation         | Reframing the nature of individual problems and the potential answers to those problems by introducing novel concepts, frames of reference, or paradigms   | <ul style="list-style-type: none"> <li>● Information, Education, and Communication of Swatch Bharat Mission (Gramin) Innovation (AS/JS &amp; Dir. /DS Category) (2018)</li> <li>● Soil Health Card scheme (2016)</li> <li>● Sustainable Plastic Waste Management in Himachal Pradesh: From concept to policy (2009–2010)</li> <li>● Removal of Encroachments of Structures – Maintaining Communal Harmony. Jabalpur, Madhya Pradesh (2008–2009)</li> </ul> |

*important differences between the public and the private sector in terms of incentives and motivation, resource allocation, and attitudes towards risk, which are inherent in the different roles played by the two sectors in the economy, and which have a profound impact on how innovation is carried out and how policy can support it.*

United Nations Economic Commission for Europe  
(UNECE 2017)

In conclusion, widespread implementation of information and communication technology to increase government openness and transparency is a promising innovative battle against corruption. Technological advances in the public sector may

prove to be a key catalyst for the government to be more effective, efficient, and accountable to its citizens. Our chapter focuses on opening the black box of the why and how of public sector innovation, shaping the method, environment, and policy decision-making for fostering innovation in the public sector, and strengthening study in the realms of innovation in the public sector.

## **Methodology**

We used qualitative methodology. We conducted in-depth case studies of the following five public policy innovations:

Case study 1: Integrated Taxpayer Data Management System.

Case study 2: Promoting Digital Payments.

Case study 3: Computerisation of Paddy Procurement and Public Distribution System in Chhattisgarh.

Case study 4: Direct Benefit Transfer Welfare Scheme.

Case study 5: Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005.

## **Learnings from Case Studies**

### ***Case study 1: Integrated Taxpayer Data Management System***

*Integrated Taxpayer Data Management System (ITDMS) (2008–2009)*: this was one of the first e-governance projects of central government. ITDMS was created to help the investigation division of the Income Tax Department to follow potential violators in tax payments using a data mining solution. It generates a 360-degree transaction profile of an individual by combining the data from all the possible data sources for a full-fledged solution. The system gathers data from various sources and connects them with a unique identifier to predict cases of significant tax evasion. ITDMS was also expected to promote voluntary compliance.

There were many databases like permanent account number (PAN) which had a name and address, online tax accounting system from banks (OLTAS), and gives information about payments of tax from banks, tax deducted at source (TDS) provides tax deduction particulars from employers, annual information returns (AIR) requiring third parties like banks, stock exchanges, RBI bonds, mutual funds, IPOs, credit card companies, registrars of immovable properties, assessed incomes and other external databases like high net worth individuals, telephone directory, and high-value transactions. These databases could not be integrated, resulting in unstructured and non-standardised data from various sources which led to errors in the records if they were merged, for example different spellings of the same word. There was no technology available to manage such an enormous number of datasets, resulting in underutilisation, and no actionable insights.

The government aimed to develop an integrated profile through which the data could be leveraged for tax evasion checks. A unique identifier with a PAN was created for efficient profile data generation through internal and external databases including AIR, the ITDMS operating system utilised a tool to extract, transform,

and load (ETL) similar to Microsoft SQL, along with an identity search feature known as Prime Match that accommodated variations. This resulted in the creation of a personalised family tree that correlated individuals' names and addresses using a unique identifier. The technology platform and server depth reduced the response time to milliseconds. In 2008, it was probably the most significant datamining in government worldwide. Figure 14.2 explains the solution architecture of ITDMS.

First, a prototype was developed by Delhi Investigation Unit followed by a full-fledged Solution 1 – a search engine suitable for Indian names. Solution 2 was a proof of concept (PoC) using over 4 million records leading to a final solution, i.e., identity search tool with high recall and precision. Even after developing a robust and customised system, many issues were faced, namely i) difficulty in obtaining data from different taxation bodies, ii) the need for more than a search engine enabled with analytical tools, and iii) difficulty in dealing with cross-border transactions.

Finally, the government developed the Income Tax Transaction Analysis Centre (INTRAC), a data analytics in tax administration and Compliance Management Centralised Processing Centre (CMCPC) to facilitate citizens' voluntary compliance. For legal compliance, an MoU between the Centre Board of Direct Taxes (CBDT) and Centre Board of Indirect Taxes and Customs (CBIC) was signed for the exchange of information. Further, the Directorate General of Analytics and Risk Management (DGARM) and a National Customs Targeting Centre for Cargo and Passenger data were created and integrated.

### ***Key Stakeholders***

#### *Income Tax Department*

The tax department is the most crucial stakeholder as it is responsible for rolling out the software, ICT system policy, development of execution strategy and vision, business process reengineering, system planning, digitising and migrating data, as well as capacity building of employees.

#### *Finance Ministry*

The Finance Ministry is responsible for national tax policymaking as it is the supreme revenue and taxing authority. Once the new system is deployed, its duties are expanded to provide financing assistance to all tax agency offices and to oversee the implementation in all tax agencies.

#### *Data Centre Service Provider*

The function of the data centre service provider (cloud computing) becomes important as governments worldwide are aiming for online service delivery. The data centre service provider is in charge of hosting the new application in both the test and live environments and performing routine data backups and archiving.

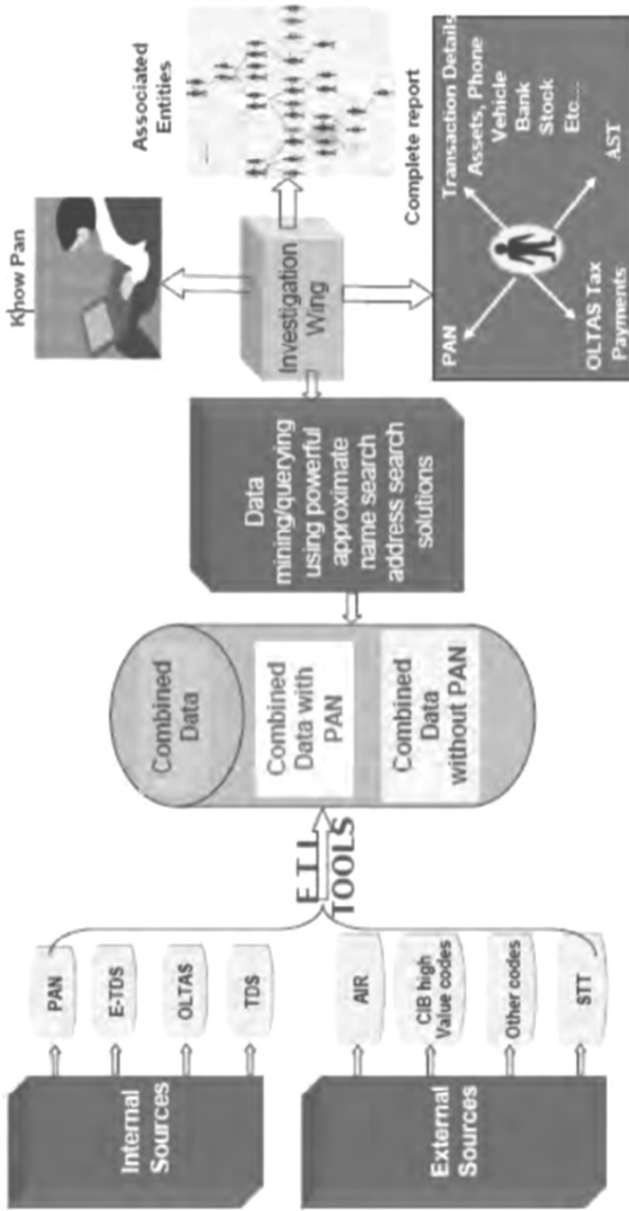


Figure 14.2 Solution Architecture – An Overview



*Consulting Agencies*

Consultants play multiple roles during the system implementation lifecycle, including support to the tax agencies in implementing the system. This includes supporting business process reengineering, defining a target operating model, and conducting an independent audit and quality assurance.

*ICT System Implementation Partners (Third-Party Vendors)*

The effective management of taxpayer data requires a significant focus on the creation, execution, and maintenance of its information and communication technology (ICT) systems (Figure 14.3). This involves converting data into a digital format, testing the application software’s user acceptance, and providing ongoing support for the ICT system’s upkeep and functionality.

*Taxpayers (General Population)*

The end users of the integrated system interface directly with the design and the software to submit their requests and queries. They are either assisted in this process by the consulting agencies or work independently with the system.

The Government of India has coordinated and managed the roles and responsibilities of stakeholders to ensure a customer-centric platform (Figure 14.3). The government has started the third step in enhancing the IT system through artificial intelligence–machine learning (AI-ML) Integration and Big Data Analytics. As technology improves, the government needs to take meaningful steps to align with technological changes. Incorporating next-generation AI-ML algorithms into the existing system coupled with rigorous and extensive data analysis would ensure that all key stakeholders can generate richer insights.

**Key Stakeholders**

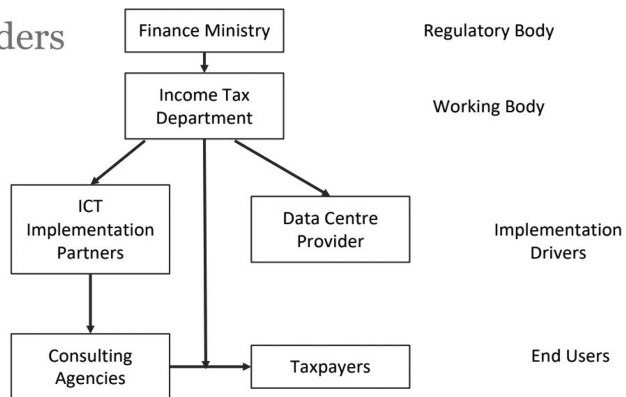


Figure 14.3 Information and Communication Technology Systems

The government can leverage the rich data available to further simplify taxpayers' lives by allowing them to consent to use these data for other uses such as credit ratings, loan approvals, etc. Such integrated systems would also incentivise more people to start paying taxes. For example, New York City (NYC) has effectively used its data management system to catch the underreporting of taxes by businesses. NYC searched the outliers (where taxes were underreported) through patterns of income and tax payments by similar businesses. It led to 12 times more efficient auditing of fraudulent companies and has reduced the time consumed to sniff a fraud by 60% (Huynh et al., 2022).

### ***Case study 2: Promoting Digital Payments***

'Faceless, paperless, and cashless' is a declared goal of Digital India. The Reserve Bank of India has taken several steps to promote digital payments in the country. Significant progress has been made in making several digital payment solutions available, and their use has grown over time. The Indian government is dedicated to the expansion of digital transactions in the economy, with the aim of improving the financial sector's quality and robustness, as well as providing greater convenience to citizens. Thanks to the concerted efforts of all stakeholders, including the government, digital payment transactions have experienced significant growth, increasing from 2.071 billion transactions in FY 2017–2018 to 8.84 billion transactions in FY 2021–2022, according to data from the Reserve Bank of India, National Payments Corporation of India, and various banks.

The Government of India set the primary goals in encouraging the use of digital payment methods through:

1. Promoting and ensuring the formation, expansion, and sustainability of a strong, secure, and inclusive national digital payment ecosystem.
2. Promotional campaigns, training, and teaching to raise awareness about the advantages of digital payments.
3. Developing and facilitating acceptable standards for digital payment services that are efficient, economical, and secure.

Factors that lead to the success of the digital payment ecosystem include increased dedicated payment systems, increased mobile users, and accessibility to the internet. Figure 14.4 explains public private partnership model for payments.

### *Jan Dhan-Aadhaar-Mobile (JAM) Trinity*

A Government of India initiative to integrate Jan Dhan accounts, mobile numbers, and Aadhaar cards of Indians has made it possible for people to check their account balances, apply for scholarships and fellowships, receive subsidies for fertiliser, LPG, disability pensions, and farm income. The National Payments Corporation of India (NPCI) efforts such as the Rupay payment system, Immediate Payment System (IMPS), Aadhaar-enabled Payment System (AePS), and Bharat

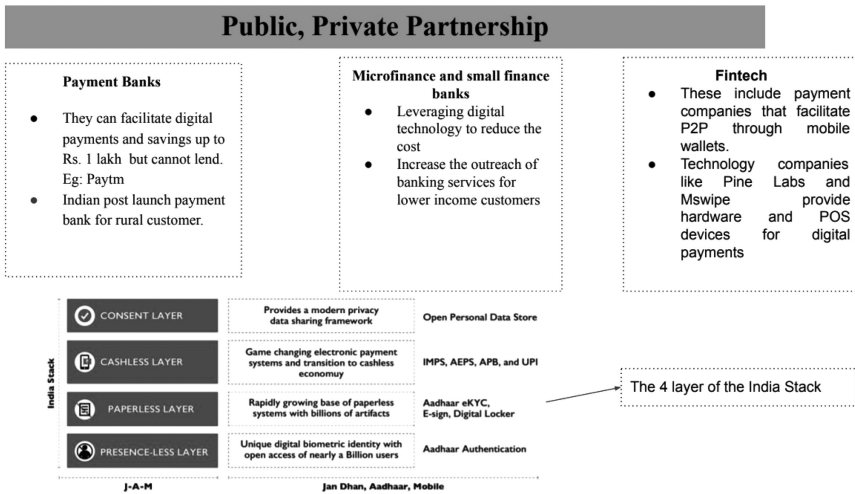


Figure 14.4 Public-Private Partnership Payment Model

Bill Payment System are helping to lead India into the digital revolution. With the Unified Payments Interface (UPI), users can instantaneously transfer money from one bank account to another by pushing (making a payment) or pulling (collecting) the money through a mobile device. According to Reserve Bank of India Governor, there has been a 50% increase in the number of daily UPI transactions, which has risen from 24 crore in February 2022 to 36 crore. Additionally, these transactions have increased in value from Rs5.36 lakh crore in February 2022 to Rs6.27 lakh crore, marking a 17% growth. Users can link all their bank accounts to a single app making it very convenient, like a super wallet. Under Digi Dhan Abhiyan, startups have been asked to expand digital payment avenues in unserved areas.

The government still faces challenges like poverty, lack of financial literacy, inadequate physical infrastructure, transaction charges, small and medium enterprises/small retailers, privacy, and cyber security perception of consumers. Government has plans to overcome these challenges through legal interventions, communication with stakeholders, and citizen partnerships. The Government of India also needs to take a leaf from global experiences like tax incentives provided for digital payments (Argentina, Columbia, Uruguay, and South Korea) which helped increase usage of digital payments. France, Portugal, Spain, Bulgaria, and Greece implemented disincentives for cash transactions. Hong Kong’s Octopus Card Payment System, and South Korea’s T-Money are single prepaid cards which are good sources of increasing digital payments.

The Government of India needs to develop physical infrastructure in rural areas as most of the digital infrastructure is restricted to urban areas. Co-branded cards, for example Rupay Cards, can be launched in collaboration with other brands such as IRCTC (Indian Railway Catering and Tourism Corporation), e-commerce sites,

etc. Incentivised digital payments by cashback and tax rebates can be offered for digital transactions. UPI and QR-based payments are promoted in governments through government offices and collection centres of the dues of electricity boards, municipal corporations, revenue (Tehsil) offices, ration shops, fertiliser shops, etc.

***Case 3: Computerisation of Paddy Procurement and Public Distribution System in Chhattisgarh***

The food grain supply chain landscape is bogged down with multiple challenges in India. The entire supply chain can be covered under the two government schemes:

1. Procurement at minimum support price (MSP). The majority of farmers are poor. They need to sell off the produce quickly due to the need for funds and lack of storage. This has led to exploitation by many intermediaries. The Chhattisgarh government implemented fair prices with MSP for its main crop, paddy. The government did 3 million tonnes of procurement at MSP: at Rs24 billion and benefited 1 million farmer families.
2. Targeted public distribution system (PDS). The Government of Chhattisgarh has implemented a programme to provide 35 kilograms of rice to BPL (Below Poverty Line) families at Rs6.25 per kilogram. Around 2.4 million low-income families have benefited: they receive 35 kilograms of rice at Rs3 per kilogram per family.

*Key Motivations for Technology Innovation*

The massive discrepancy in fund utilisation was seen at the ground level. There was rampant corruption in the supply chain. Frequent complaints about fair-price shops, leakages, and diversions were common. It was not easy to monitor the system properly due to staff shortages and complexities. Ration cards, food stamps, and other barcoded food vouchers failed to provide adequate nutrition. Public distribution systems are widely criticised for delivery leakages and diversion. According to estimates, almost 25% of the ration is stolen before it reaches the recipients (Mishra & Maheshwari, 2021).

There are four key aspects of ration diversion by the official stakeholders:

1. Diversion in the procurement itself.
2. Diversion in the movement of commodities between Chhattisgarh State Civil Supplies Corporation Limited (CGSCSC) Warehouses.
3. Diversion while transporting to Fare Price Shop (FPS) from CGSCSC warehouses.
4. Diversion at the FPS level.

AU: please confirm definition of FPS

*Use of ICT-Computerisation to Check Corruption*

Adaption of three-stage strategy in the delivery mechanism of the PDS to tackle the above-mentioned problems:

Step 1: computerising PDS operations, making data publicly available online, and updating users with critical information via short message service (SMS) contributing to greater operational transparency.

Step 2: a quick and painless way to voice opinions and concerns through a toll-free call centre. It has option for calling or online complaint filing.

Step 3: build public confidence through a Complaint Monitoring System for effective complaint redress mechanism and speedy resolution.

The implementation of the aforementioned strategy resulted in improved transparency, which helped the Central Cooperative Bank of Chhattisgarh recover loans amounting to Rs400 crore taken by farmers for paddy cultivation.

### *Computerisation of Total Food Grain Supply Chain*

The Chhattisgarh government has fully computerised the food grain supply chain from paddy purchase from farmers to its storage, grinding, and distribution to 3.7 million ration card holders through 10,416 FPS. This included 1,532 paddy procurement facilities, 50 storage centres, all concerned district offices, 99 civil supplies corporation distribution locations, and 35 Food Corporation of India (FCI) rice reception centres. Cheque generation, miller registration, agreement with millers, delivery order expiration dates, etc., are automated at paddy procurement centres along with the rest of the purchasing and issuing process. The project can be categorised into four sections, each contributing to the goal of computerising the entire food grain supply chain and monitoring.

#### *1. Paddy Procurement and Milling*

Paddy from about 1 million Chhattisgarh farmers is procured at the MSP by 1,532 procurement centres across the state. Since most of these centres are located at the village panchayat level, which are usually without internet access, a separate form-based stand-alone module was developed to facilitate the online purchase and distribution of paddy to mills, storage facilities, and food processing industries. A million farmers have benefited greatly from the ability to generate their own cheques instantly on computers. There were 1,532 local data entry operators hired to use the Primary Agricultural Cooperative Societies (PACS) Module. Data transmission from distribution centres to the central server is handled by motorcyclists who also deliver order details from the block-level server to the distribution hubs (see Figure 14.5).

#### *2. Unified Ration Card Database and Issue of PDS Commodities to FPS*

Ration cards are now printed from a dedicated central database. Only ration cards with a barcode and serial number generated by that system can be used. All FPS must report their inventory and sales per month before issuing PDS commodities. The software determines the precise quantity of PDS commodities to be delivered to the FPS based on allocation, stock, and sales data from the FPS. The central

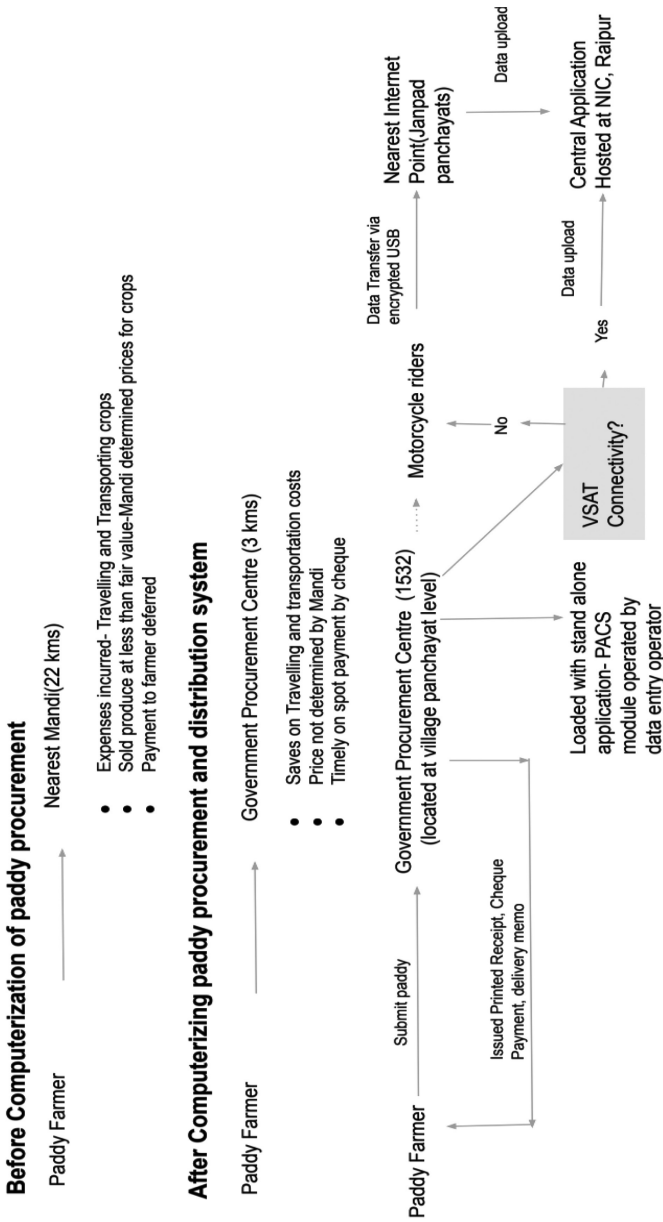


Figure 14.5 Computerisation of Paddy Procurement and Milling

server has allocations, stocks, issues, and sales data for each FPS. Every month, at least 10% of this data is physically validated by food department employees, and any FPS submitting incorrect claims is subject to disciplinary action.

### *3. Citizen Participation Website*

To direct the citizen's knowledge and engagement to the public delivery system is a crucial check on diversion and leakage, a public-facing website has been developed. There is a channel for feedback and concerns related to monitor whether or not vehicles are being diverted from PDS to FPS from the warehouse. Interested citizens can register their phone numbers on the site and choose from among a number of FPSs to participate in PDS monitoring. When the warehouse sends PDS goods to the FPS, a text message with truck number, the quantities of PDS items loaded into that truck, the time of departure, and the date of departure, is issued to the subscribed phones. The citizen can file a complaint online or over the phone if the required number of entities does not show up at the FPS within a reasonable time frame.

### *4. Call Centre and Complaint Monitoring System*

A call centre with a toll-free number of 1-800-233-3663 is operational. All complaints received by the call centre or online can be viewed in the inbox of the relevant officer. The officer must document the findings of the investigation and the subsequent actions taken if the complaints were justified. The complainant is updated on the status of their case. Fast resolution of complaints is ensured by constant monitoring at the directorate and secretariat levels.

### *5. Innovative Ideas Adapted*

Adopting data transmission via motorcyclists: PACS are commonly situated in remote locations that lack internet connectivity. However, in Chhattisgarh's administrative centres, such as the Janpad Panchayat and block headquarters, V-Sat technology provides internet access. To transfer information from the procurement centre's computers to the block headquarters, motorcycle couriers are regularly employed. Afterwards, the data is uploaded to a central server via the internet. This innovation allows for the collection of almost real-time information, regardless of internet availability.

SMS Delivery of Truck Dispatch Information to Citizens: through this website, individuals can input their phone numbers and choose one or more FPSs to aid in overseeing the PDS. Once a shipment of PDS items reaches an FPS, an SMS alert is dispatched to every mobile number registered with the FPS, informing them of the delivery. This notification comprises the truck's number, the amount of PDS items provided by the truck, as well as the time, date, and location of the dispatch. As a result of this advancement, transparency and civic participation have improved.

Rice Festival (Chaval Utsav): distributing PDS goods takes place in a haat bazaar in the village on a specific, publicised day each month in the presence of the

general public and designated government officials. On this day, BPL households receive PDS items and other benefits, like old-age pensions. This concept enhanced civic participation and transparency.

Truck photograph to the server with coordinates of truck position: in order to use a GPS-enabled mobile phone with a camera in the warehouse, a J2ME application was developed and installed on the device. The program snaps a picture of the delivering truck and uploads it to the server whenever a truck containing rice or other items arrives at the warehouse. The server-side computer matches the coordinates of the truck and warehouse to guarantee that the truck has arrived at the warehouse at the right time. This innovation helps to a limited extent in confirming claims made by reception centres without actually receiving the truck.

#### *6. Outcomes of the Project*

The statewide standardisation of procedures is primarily due to the advent of computerisation leading to statewide consistency. Micromanagement of stock with a web app increased milling quantity, decreased rice and paddy damage, and yielded significant cost savings. Automatic inconsistencies and abuses in allocating funds to FPSs were eradicated after calculating monthly allocations. PDS supplies were automatically received and issued at distribution facilities, allowing for better lift monitoring and greater transparency. Citizens are encouraged to participate in PDS monitoring through an SMS alert system and a citizen interface website.

The lessons of Chhattisgarh show how adversity can be turned into success. The government had difficulties due to poor connection at paddy procurement hubs, So the government hired motorcyclists to carry information. While entering a large amount of beneficiary information into the ration card database, the government must use decentralised data entry and ensure sufficient validation checks are in place to catch any mistakes. With a total of 2,500 person days of training delivered, the government accomplished a Herculean feat by developing trained human resources.

It is apparent that the government can do anything provided it sets well-defined goals and is motivated to improve the current system. Technology has the potential to correct the wrongdoing. Technological advancements aim to replace labour-intensive manual processes with ones that are more open and accountable to the citizen. Buy-in from higher authorities, capability building, and connectivity are necessary for any e-governance project to be successful.

#### *Case 4: Direct Benefit Transfer Welfare Scheme*

The Direct Benefit Transfer (DBT) scheme is an initiative by the Indian government to transfer subsidies and other welfare benefits directly to the bank accounts of beneficiaries. The scheme aims to reduce leakages and ensure that the benefits reach the intended recipients. India has several welfare schemes for various sections of society, such as the Public Distribution System (PDS), the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and the National Social Assistance Programme (NSAP). However, the implementation



of these schemes has been plagued by leakages, corruption, and delays. The DBT scheme was launched in 2013 to address these issues and improve the efficiency and transparency of welfare schemes. It is implemented through the Aadhaar card, which is a unique identification number issued by the government to residents of India. Beneficiaries are required to link their Aadhaar card to their bank account to receive the benefits directly. The scheme also uses the NPCI platform to transfer funds. The NPCI is a not-for-profit company that operates the UPI platform, which enables real-time interbank transactions.

### *Benefits*

The DBT scheme has several benefits including:

1. **Reduced leakages:** the scheme aims to eliminate intermediaries and ensures the benefits reach the intended beneficiaries. According to the Ministry of Finance, the DBT scheme has resulted in savings of over Rs1.7 lakh crore (US\$23 billion) since its inception.
2. **Improved transparency:** the scheme promotes transparency by providing a clear record of the transactions and the beneficiaries.
3. **Reduced corruption:** the scheme reduces the opportunities for corruption by eliminating intermediaries and ensuring that the benefits reach the intended recipients.
4. **Improved efficiency:** the scheme reduces the time taken to transfer the benefits and eliminates the need for physical documentation, resulting in improved efficiency.

The implementation of the DBT scheme has had a significant impact on various welfare schemes in India. After the implementation of the DBT scheme in the PDS, the Ministry of Consumer Affairs, Food, and Public Distribution reported significant savings. In the past seven years, DBT has emerged as the accepted way of delivering development schemes with the delivery of over 450 schemes to more than 900 million people through this mode. Since 2014, the government has disbursed a whopping Rs8.22 lakh crore, close to 60% of welfare and subsidies budget of the Union government directly to the bank accounts of beneficiaries.

As of December 2022, the DBT scheme has covered 310 schemes across 53 ministries and departments of the Indian government. According to the Ministry of Electronics, more than Rs6 trillion (6.3 lakh crore) were transferred to beneficiaries under the DBT scheme in the financial year 2021–2022.

### *Challenges*

1. **Aadhaar seeding:** the scheme requires beneficiaries to link their Aadhaar card to their bank account, which has been a challenge in some cases, especially for elderly and marginalised sections of society.
2. **Connectivity:** the scheme relies on internet connectivity, which can be a challenge in rural and remote areas.

3. Bank accounts: the scheme requires beneficiaries to have bank accounts, which can be a challenge for those who do not have access to banking services.
4. Exclusion errors: the Aadhaar-based authentication can sometimes result in exclusion errors, where eligible beneficiaries are not able to access the benefits due to technical or other issues.

In conclusion, the DBT scheme has been a significant step towards transforming India's welfare delivery system. It has helped to eliminate corruption, reduce leakages, and ensure that the benefits reach the intended beneficiaries directly. The scheme has resulted in significant savings for the government and improved the lives of millions of Indians. However, the scheme faces several challenges, and the government must address them to ensure that the benefits reach all eligible beneficiaries, especially those from marginalised and remote areas. With continued implementation and improvement, the DBT scheme has the potential to transform India's welfare delivery system and improve the lives of millions of Indians.

#### *Case 5: Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)*

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a flagship programme of the Indian government aiming to provide employment opportunities and to ensure livelihood security to rural households. This is accomplished by guaranteeing 100 days of wage employment in a given fiscal year to rural households in exchange for the adult members' willingness to perform unskilled manual labour. It is one of the most extensive public works programmes in the world. The programme hopes to achieve its dual objectives of alleviating poverty in rural regions and enhancing the physical infrastructure in villages.

As a key goal of India's development policy, the MGNREGA was created to end poverty, providing a legal guarantee for wage employment. The MGNREGA has the following objectives:

1. To provide not less than 100 days of unskilled manual work as a guaranteed employment in a financial year to every household in rural areas as per demand, resulting in creation of productive assets of prescribed quality and durability.
2. To empower women by providing them with equal employment opportunities and wages.
3. To promote sustainable development and economic growth in rural areas.
4. To strengthen Panchayati Raj Institutions.

#### *Impact of the MGNREGA*

The following are some of the key impacts:

1. **Employment generation:** the MGNREGA generated employment opportunities for rural households in the village. It provided them with a steady source of

- income, which enhanced their livelihood security. In the financial year 2021–2022, 11.37 crore households were provided employment under the scheme .
2. **Wage payment:** the timely payment of wages was one of the key features of the MGNREGA. The government disbursed a total of Rs1,00,000 as wages to the households in the village. In the financial year 2021–2022, the government disbursed a total of Rs80,2164 crores as wages under the scheme.
  3. **Asset creation:** the MGNREGA contributed to the creation of durable assets and infrastructure in the village. In the financial year 2021–2022, a total of 7.2 lakh works were completed under the scheme, including the construction of roads, water harvesting structures, and irrigation facilities.
  4. **Women empowerment:** the MGNREGA provided equal employment opportunities and wages to women, thereby empowering them economically and socially. In the financial year 2021–2022, 57% of the total person days generated under the scheme were by women.
  5. **Poverty reduction:** the MGNREGA contributed to reducing poverty in the villages by providing employment opportunities and enhancing the rural economy. It improved the standard of living of the households and reduced their dependency on agriculture. In the financial year 2021–2022, the scheme provided employment to approximately 11 crore households, thereby providing them with a steady source of income.

One success story of the impact of the MGNREGA is the village of Piplantri in the Rajsamand district of Rajasthan. In 2013, the village started implementing the MGNREGA scheme with the help of the local government and NGOs. The village created several assets, including check dams, ponds, and community buildings. The scheme generated employment opportunities for rural households and ensured the timely payment of wages. Women played a significant role in the implementation of the scheme, and their participation led to their economic empowerment and social inclusion. It helped in improving the standard of living of the households, reduced their dependency on agriculture, and enhanced their livelihood security. The scheme also contributed to the development of the local economy by providing a steady source of income to the households and creating durable assets. The success of the MGNREGA implementation in Piplantri is a significant example of how the scheme can be a vital tool in promoting sustainable development and inclusive growth in rural areas of India.

### *Challenges*

Despite its achievements, MGNREGA has faced several challenges, such as:

1. Delayed payment of wages to the registered households is one of the major challenges faced by the MGNREGA.
2. Corruption in the implementation of the MGNREGA is another significant challenge. It leads to the misappropriation of funds and benefits that should have gone to the rural households.

3. The coverage of the MGNREGA is limited to rural areas only, which leaves out the urban poor.
4. The nature of work provided under the MGNREGA is seasonal, which limits its effectiveness in providing year-round employment opportunities.

In conclusion, the MGNREGA has played a significant role in providing employment opportunities and enhancing the standard of living of rural households in India. The case study of a remote village in Bihar has highlighted the positive impact of the scheme, including the generation of employment, timely wage payment, asset creation, women empowerment, and poverty reduction. However, challenges such as delayed wage payment and corruption need to be addressed to ensure the effective implementation of the MGNREGA and achieve its objectives of promoting sustainable development, reducing poverty, and strengthening the rural economy. Despite these challenges, the MGNREGA has been a vital tool in promoting inclusive growth and improving the standard of living of rural communities.

## **Conclusion**

This chapter explores a common thread among various case studies in India's recent policy landscape, for example Direct Benefit Transfer Welfare Scheme and Mahatma Gandhi National Rural Employment Guarantee Act of 2005. These policy interventions demonstrate India's innovative and proactive approach to tackling key social and economic challenges.

The Direct Benefit Transfer Welfare Scheme, launched in 2013, seeks to ensure that government welfare benefits reach the intended beneficiaries in a timely and efficient manner through the use of technology. As of August 2021, over 5.5 crore (55 million) beneficiaries have received cash transfers through the scheme, amounting to a total of over Rs17.5 lakh crore (US\$236 billion). The scheme has also helped to weed out duplicate beneficiaries, leading to savings of over Rs1.78 lakh crore (US\$24 billion) in the past seven years.

Under MGNREGA a total of 11.37 crore households availed employment and a total of 289.24 crore person days of employment have been generated (up to December 15, 2022). Under Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) a total of 2.50 crore houses have been sanctioned and 2.11 crore houses have been completed (up to December 15, 2022). Against the total target of completion of 52.78 lakh houses in the FY 2022–2023, a total of 31.43 lakh houses have been completed. The scheme has also played a crucial role in reducing poverty and improving rural livelihoods.

The convergence of these policy interventions highlights the Indian government's commitment to social welfare and innovative solutions to address key challenges. By leveraging technology, promoting employment, improving education, and providing access to healthcare, India is taking significant steps towards a more inclusive and equitable society.

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