

From Cash to Digital Transfers in India: The Story So Far

India has ambitious goals to deliver electronic welfare payments, banking services, and digital local government services to each of its 638,000 villages. The road is fraught with challenges as about 60 percent of the country's 1.2 billion live in rural areas and many lack connectivity and infrastructure. Moreover, at the policy level, digitizing India's annual \$72 billion subsidy machine is a massive task organized across ministries, departments, and 29 state governments. Since 2006, a few state governments have been experimenting with electronic cash transfers via bank accounts, delivered through bank agents. By 2013, the federal government had selected some of the largest cash transfers to shift to an electronic system (Box 1), and the process is gaining momentum this year with a renewed effort by the newly elected national government.

This Brief addresses the key elements of digitizing cash transfers, which can also enable financial inclusion in a way that it leads to account use, not just account opening. CGAP conducted research on the state of Andhra Pradesh in 2013—one of India's first state governments to move to an electronic payment disbursement system. The research blended quantitative and qualitative methods to understand the customer, provider, and government perspectives to find out why the 16 million government-to-person (G2P) accounts are not being used except for the one transaction per month to disburse the G2P payment. The study found several barriers: lack of awareness among recipients; closed-looped technology solutions that do not enable customers to use the account at any other time, for any other purpose other than to receive a benefit from a particular agent; high costs; and lack of incentives for banks to deliver financial products.

Armed with the insights gleaned from this research, CGAP then worked with three states in India to apply some of the lessons. The following draws on our research and discusses practical design solutions that were tested in these three states.

Links to financial inclusion

Global literature on G2P suggests that although digitizing government flows has led to more efficient systems (see Box 2), there is no clear direct positive impact on financial inclusion. One reason for this lack of clarity is that policy experts who are designing electronic G2P payment channels are often working separately from those who are designing financial inclusion policies.

Another reason involves sequencing. If the digital “plumbing” is already in place—such as a branchless banking network, a system of agents, or a robust authentication system—then the government can leverage that network for disbursing payments. Pakistan is illustrative of this; EasyPaisa, a mobile financial service, uses its existing agents, to disburse funds of the government's cash subsidy scheme (Benazir Income Support Program) to some of the poorest women in the country. EasyPaisa leveraged an agent network that had been built up for its primary purpose, which was banking services.

In India, two large digital payment channels are being built in parallel. A massive government financial inclusion program, called Jan Dhan Yojana, aims

Box 1. Major cash transfers in India

The major cash transfers to the poor are

1. Benefit transfers from the National Rural Employment Guarantee Act (NREGA), a cash-for-work program.
2. National Social Security Pensions (NSAP) (includes old-age pensions and pensions for widows and the disabled).
3. Janani Surakshana Yojana, a range of maternal and girl child health-related incentives.
4. Scholarships for higher education for selected communities, as well as some school scholarships.
5. Liquid Petroleum Gas subsidy used to be provided in-kind and is now a cash transfer directly to the consumer (this subsidy extends to the middle class as well).

The value of these transfers is estimated to be Rs 70,000 crores (\$11.3 billion) per annum.

Box 2. Why digitize?

Andhra Pradesh was the first state in India to introduce electronic payments as early as 2006 via a card system (in this case, a smart card transacting with point-of-sale machines). J-PAL (an evaluation agency based at MIT) partnered with the Andhra Pradesh state government to randomize the order in which 158 subdistricts introduced electronic payments. The research showed that the percentage of funds lost through “leakage” fell from 30.7 percent in control areas to 18.5 percent in areas that shifted to digital transfer. The estimated total reduction in NREGS leakage across the treatment districts was \$38.7 million per annum, which is nine times the cost of implementing the digital payment scheme.

In addition, the World Bank Development Report 2012 estimated that by digitizing subsidy flows, the government could save 1 percent of its gross domestic product annually, equivalent to about \$20 billion. Digitizing has enormous financial gains for the government.

to provide a bank account, life insurance, and an overdraft facility to every Indian. And an equally, if not more, massive initiative to digitize government flows to people, called Direct Benefit Transfers, is also underway. In addition to these initiatives, there is a separate mandate to reform person-to-government (P2G) flows, such as paying utility bills and taxes, providing access to government programs, and moving these programs to a digital channel, called the E-Governance plan. It is crucial that these three areas are built, in synergy and not in silos, to enable a viable digital channel that can provide G2P, P2G, and financial services to the rural customer. To achieve this, three key elements need to come together: an enabling infrastructure, a business case for banks and agents, and a delivery mechanism that is highly attuned to the customer experience.

Enabling infrastructure

India has already invested in key pieces of infrastructure that can enable digital payments. Unique identification (UID) numbers—a 12-digit number, also referred to as Aadhaar—is an electronic ID that allows account opening and account use by linking the user to the core banking server. Through the Aadhaar-enabled payment system, every payment made by the Ministry of Rural Development, for

example, can be tracked until it is deposited in the cash recipient’s account by linking her bank account to the UID number. See Box 3 for more on UID.

Other pieces on back-end systems include the Central Plan Scheme and Monitoring System (CPSMS), which tracks disbursement of government funds from the federal to the state levels, and the National Payment Corporation of India (NPCI), a national payment company that organizes a range of switches and infrastructure to support the financial sector.

In terms of front-end technology used to disburse payments, India has experimented with various devices: point-of-sale machines (smart card, as well as biometric), mobile phones, mobile phone with Aadhaar-enabled dongles, and standard personal computers. CGAP found that the success of technological devices depends varyingly on the presence of connectivity. More importantly, all of them are agent-assisted models, so the end user depends on the agent to connect with the

Box 3. Role of UID in digital cash transfers

In January 2013, a pilot was launched in the East Godavari district of Andhra Pradesh, involving 27,000 beneficiaries that used Aadhaar authentication instead of local biometric servers used by the banking correspondent companies. East Godavari district carried out the Aadhaar enrollment process efficiently by establishing permanent Aadhaar enrollment centers and carrying out extensive information campaigns for recipients. Best Finger Detection authentication helps to reduce the time taken for repeated attempts at authentication.

CGAP found that if there are no connectivity issues, all transaction data in the Aadhaar-enabled system should be available through the NPCI switch, which can enable the bank and the state to monitor payments in real time. The Aadhaar enrollment process reduced leakages because it helps to eliminate duplicate and ghost recipients. The enrollment cost is lower, and once Aadhaar has reached universal scale, there is a potential shift in the business case for providers as they will save on the cost of smart cards and will not have to invest in locally held biometric databases.

An Aadhaar-enabled payments platform could enable an interoperable agent network across the country that has the potential to carry out government payments as well as offer other financial services to the poor.

device. In terms of price, the mobile device is cheaper, but so far it offers a closed-loop system, hence the customer can access the account only at a particular agent¹ who visits only 3–4 days a month to disburse G2P payments.

One of the key elements of offering digital G2P is connectivity, either through broadband or GPRS. Although the government is committed to broadband access in every village, this will take time. Until then, it should be assumed that authentication failures will happen, even if only occasionally. Therefore, a systematic manual process needs to be established in parallel with the digital one, with effective monitoring and supervision at the village level.

The G2P provider market and business case

Banks

The terms and conditions for financial service providers to operate as G2P providers are currently unclear and vary from state to state. It is no surprise then that banks have been reluctant to deliver G2P payments. In addition to lack of clarity at the policy level, the business case remains weak. A major issue is the cost of delivery for providers. CGAP research showed that the state government of Andhra Pradesh paid banks Rs 2 for every Rs 100 disbursed, when it costs the bank between Rs 2.6 and Rs 2.9. Out of the Rs 2 that banks get, Rs 1.75 gets passed on to the banking correspondent company that looks after agent aggregation, technology, and cash management.

Department of Post

The Department of Post is a major driver of payments and has digitized its payments in several districts using the Aadhaar Payments Bridge and monitoring delivery in real time. Regulations that ordinarily govern postal services have also been modified by some state governments to enable electronic payments. Initially, when the postal channel started processing payments, the regulations necessitated opening a separate postal

account for each G2P scheme to the same recipient. In December 2012, this policy was modified by a government order that allows for making payments for different schemes in the same account. The postal channel's disadvantage is that it is not integrated with the banking channel and the larger financial system. It is a self-contained channel that provides basic banking services (savings and payments) to the clients within its network. CGAP research also indicated some positive aspects of the postal network: a ubiquitous presence, even in difficult-to-access areas; a reliable cash management system, even in conflict and forested regions; and liquid branch post masters that manage cash for a range of products.

Nonbanks

Some nonbanks, such as mobile network operator (MNO) Airtel, have launched pilots to deliver G2P payments. One such pilot in the state of Orissa, for example, uses m-pin (a personal identification number [PIN] that the agent or user enters into the mobile phone) instead of Aadhaar authentication to disburse NREGA payments. However, issues around the business case—such as costs of becoming Aadhaar compliant—deter some MNOs. Other nonbanks, such as Oxigen,² have disbursed payments acting as banking correspondents³ for banks in pilot districts. Among banking correspondent companies, FINO is the largest disburser of payments; it has partnered with a range of banks, but it offers a closed-loop system and is not yet fully Aadhaar-compliant.

CGAP conducted a Customer Service Point Survey in 2012 and 2013 that showed that the current agent network in India is not viable. On average, agents earn Rs 2,700 per month from financial services. The number of daily transactions on average is nine versus, for example, 62 for an agent in Kenya. While G2P payments contribute to the transaction volume and earnings of agents, only 23 percent of agents offer financial services. The reason the other 77 percent of agents do not offer G2P services stems from the fact that the two channels, G2P and financial inclusion, are

1 There are two kinds of bank agents in India: fixed and roving. A roving agent provides service to several communities and carries his or her equipment and cash.

2 Oxigen manages over 100,000 retailers that offer a range of services, including issuing SIM cards and mobile money. All of its agents are interoperable.

3 A banking correspondent company is a network aggregator that essentially manages agents, cash transportation, and equipment on behalf of a bank.

run and incentivized independent of each other. State governments often build entire separate networks to disburse only G2P.

Customer experience

For customers the real value of a digital channel may emerge if several services are bundled at the village level. If a woman in rural Bihar can go to an agent, receive her pension, check her bank balance, deposit small amounts, apply for a health insurance claim, and pay for her electricity bill, then she is more likely to use that agent. Bundling services is valuable for the agent, too, as it increases revenue and diversifies the agent's businesses.

If services are bundled appropriately, available to a client on most days, and information is available on where she might report loss of money, or who to call if the agent is not showing up, then the client will have more confidence in the system.

It is crucial for agents and clients to have easy access to grievance redress mechanisms. This could be in the form of a helpline number they can call or text. And it could be supplemented with real-time monitoring of payments and quickly identifying hotspots where payments are delayed so that those issues are systematically resolved. CGAP has supported the World Bank and states of Telangana and Andhra Pradesh to launch 2,000 one-stop shops that would incorporate the features mentioned above and provide G2P, P2G, and financial services at the village level.

Conclusion

At the state government level, there is room for a central department or agency that can oversee payments and build the pipeline that all various departments can use, and at the ground-level, bundling a range of services.

It will be an arduous journey in the next five years to build a robust digital infrastructure that can reach every remote village in India as well as a system that is transparent, eliminates leakage and corruption,

and provides a range of services. It is important that the key elements—enabling infrastructure, provider business case, and customer centricity—become the backbone of the ecosystem. It is also crucial that the policy makers designing financial inclusion, G2P, and electronic governance have a regular dialogue at the federal and state levels, and leverage resources, to make the channel more viable. Despite the hurdles ahead, it's a journey that several stakeholders in India are committed to achieving and one worth striving for.

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