Are Technology-enabled Cash Transfers Really 'Direct'?

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In an era increasingly dominated by the digital, technology-enabled solutions have come to be viewed as a one-stop solution to the age-old administrative woes of corruption and inefficiency. Evidence from a detailed case study of payments under the Mahatma Gandhi National Rural Employment Guarantee Act in a region of Telangana shows that technological solutions in the domain of government-to-citizen cash transfers are far from perfect. The mechanisms of techno-utopianism suffer from many of the same flaws as the ones they replaced and, in some cases, they have introduced new flaws.

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In a democracy, citizens expect payments that the government makes to them to be transacted in ways that protect them from vulnerabilities. In India, payment programmes run by the government include pensions, scholarships, maternity benefits, and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which is India's largest workfare programme. While the cash disbursed through these schemes is critical to the lives of millions, the transfer process is vulnerable to a host of problems—corruption and extensive delays being chief among them. The last decade has witnessed a fundamental shift marked by the introduction of technology-mediated transfers. Propelled by this, the Indian government has recently experimented with several digital methods to reduce the last-mile problem in the payment process.

Proponents of digitisation argue that the key benefit of technology is that it enables governments to transfer cash directly to citizens, eliminating intermediaries. Typically, three reasons are offered in favour of removing intermediaries in government-to-citizen payments:

(i) It would reduce corruption since intermediaries are often susceptible to bribery and fraud.

(ii) Digital transfers would be instantaneous, and would also eliminate delays in payments reaching beneficiaries.

(iii) Use of technology would ensure that the process is fully transparent.

In this article, we examine various claims related to technology-enabled cash transfers: that they will be direct, immediate, transparent, and devoid of corruption.

A study of these claims is important because digital transfers are being introduced rapidly across India and are already affecting the lives of millions of India's poorest and most vulnerable people. To date, there has been little academic or public debate examining whether technology actually removes intermediaries in digital payments, even as faith in technology grows unabated in the policymaking domain. In 2012, for example, the Government of India's Direct Benefit Transfer Scheme was introduced amid claims that the new system would be a game changer that would fundamentally alter the delivery of welfare in India.[1] The policy was widely reported globally, including in the *New York Times*, which stated:

> India eliminated a raft of bureaucratic middlemen by depositing government pension and scholarship payments directly into the bank accounts [of beneficiaries] … in a bid to prevent corrupt state and local officials from diverting much of the money to their own pockets … Some officials and economists see the start of direct payments as revolutionary. (Harris 2013)

This excitement has further increased under the current administration, which introduced the Jan Dhan Yojana in 2014 and made technology-enabled cash transfers its central strategy for financial inclusion. Media outlets such as NDTV presented the announcement with the headline, "Now the poor can swipe a card too" and equated the availability of debit cards with ending "financial untouchability" (Das 2014).

The notion that technology-enabled cash transfers would be revolutionary exemplifies the spirit of techno-utopianism that has a long history in information technology initiatives for socio-economic development.[2] In India, many technology-centric projects have emerged in recent years that have promised to revolutionise education, eliminate corruption, and achieve other socially valuable goals, and yet have failed to achieve what they started out to do even though they were all launched with similar notes of confidence (Toyama 2015).

There is an even longer history—dating back to the early period of the information age—to the claim that technology will cause radical changes in organisational structures across societies by removing the need for intermediaries. However, an equally extensive body of literature proves many of these arguments wrong (Brown and Duguid 2002).[3] Within this context, therefore, it is worth noting that there is no systematic research presently that has adequately examined whether technology can help governments eliminate intermediaries in cash payments and whether this would help reduce corruption. This article aims to fill this knowledge gap in the domain of digitally enabled government-to-citizen cash transfers.

Method and Context

The methods used in this research represent a combination of active participant observation, data analysis, and interventionist activism. The authors of this article are engaged in a technology-enabled project designed to make welfare programmes (especially the MGNREGA) transparent to the rural poor. This project was started in 2012 and was conducted in Andhra Pradesh (AP), Bihar, Chhattisgarh, Jharkhand, and Telangana.[4]

In this article, we present our first case study, based on one *mandal* in Telangana, where we started working in 2012 at the invitation of a local activist. At the time of this study, the mandal was a part of undivided AP.[5] The mandal was considered to be among the worst-administered in undivided AP.[6] It was drought-prone, and therefore many resorted to employment under the MGNREGA when it was introduced in 2005. However, due to corruption and endemic delays in payments, the number of people seeking work through the MGNREGA in the mandal dropped fourfold from its peak by the time we started working in 2012. Payments were the main concern for our stakeholders in this context, and our help was sought in addressing this issue.

As a team, we were interested in exploring whether these problems could be mitigated by making payment-related information transparent to beneficiaries, local activists, and others in the ecosystem. We visited the mandal several times in 2012 to conduct interviews with the MGNREGA workers to see what types of public records would empower them. Following several visits, one of the authors lived in the mandal for eight months.

We also recruited two workers who lived in the mandal, and continue to work there. They visited all the 24 panchayats in the mandal regularly, and were supported by others living in different parts of India and abroad with the downloading and analysing of online data.[7] They periodically joined the team for mandal or for state-level activities.

The team staying locally supported the MGNREGA workers with the gathering of information, by writing grievance letters, and by arranging meetings with officials. This helped build strong relationships across the mandal. Based on these interactions, we estimate that we have a strong network in at least two-thirds of the villages in the mandal.

Our interest in the digital payment process started when a worker approached us to ask if we could find out what had happened to the payments due to her for work she did under the MGNREGA more than six months ago. Upon examining the accounts online, we found that a digital transfer was initiated by the government several months earlier, but had not reached her. Her payment was stalled by a new intermediary that was introduced with digital transfers. We soon discovered hundreds of similar cases. This discovery revealed a ground reality that was contrary to the public rhetoric of frictionless, disintermediated payments, ultimately leading to this case study on the new intermediaries in the digital transfer system.

We started examining the role of intermediaries through data from the official MGNREGA website, and then through supplementary data from the administration. The data contained information on the date of transfer from the government, the amount transferred and the date of receipt by the worker. Upon cross-verifying this information with workers, we discovered many cases where intermediaries had declared that the payment was made, but the worker had not received it.

This initial investigation led to a social audit by the Society for Social Audits, Accountability and Transparency, a quasi-governmental body which we supported by providing new formats and procedures for analysing the role of the new intermediaries. The official audit revealed many more cases of false payments.

Using information from the audit and the data analysis, we conducted a series of interviews with officials at the state, district, mandal, and panchayat levels. We also interviewed the new intermediaries—bank staff, payment agencies, and banking correspondents. We worked closely with local activists and MGNREGA workers in order to understand people's experience of digital payments.

Negative Case Study

Being based in the area and actively supporting people in redressing their grievances helped us develop close relationships, which in turn helped us understand the formal, notional, as well as informal practices that had grown around digital transfers. We found a sharp difference between the ground

reality of digital payment and the policy rhetoric on the effectiveness of technology-mediated transfers. The purpose of this article is to bring attention to this contradiction, and we do so using a method called negative case study.

Case studies, in general, provide the reader a detailed account of a phenomenon to help build a theoretical understanding of the problem. A negative case study, such as the one presented here, provides a contrast to an existing dominant narrative, thereby forcing us to consider new conceptual possibilities. In this case, we offer a narrative that negates the idea that direct transfers will necessarily eliminate intermediaries, be instantaneous, and be devoid of corruption.

Undivided AP offered an excellent selection of cases since it had the most sophisticated technology platform in India for the MGNREGA and for digital transfers (Veeraraghavan 2015). The technology platform was created with the explicit purpose of curbing corruption and ensuring timely payment of wages to beneficiaries. In fact, the measures to make the programme transparent were so extensive that there is no parallel to such an initiative internationally. The state is also known as a digital pioneer and has a history of implementing e-governance initiatives. The fact that undivided AP had the most sophisticated technology platform and also the most advanced non-technology mechanisms offered us a chance to assess the efficacy of digital transfers in the best-case scenario, wherein we had every reason to expect the technology to deliver.[8]

We would like to emphasise that the point of our work is not to evaluate digital transfers. Also, we do not claim that tech-enabled transfers are necessarily ineffective. The limited purpose of this study is to offer a caution against unqualified assertions that the use of technology will necessarily make government-to-citizen payments effective. In the process, we hope to bring attention to the need for building effective organisational processes and accountability systems while creating new payment mechanisms.

Claim 1: Direct Transfers without Intermediaries

As mentioned earlier, proponents of digital transfers have argued that removal of intermediaries is one of the fundamental advantages of digitising cash transfers. Contrary to the claim, we found a whole new class of intermediaries in the payment process.

Digital transfers were initiated by the government through a Fund Transfer Order (FTO) sent to a nodal bank, which handled all the payments for a number of districts.[9] The nodal bank then transferred the approved amount to local branches, often belonging to a different bank.

Given that very few villages in India have bank branches, undivided AP created an additional layer of payment intermediaries. Private contractors, known as payment agencies, were tasked with taking cash from the local banks to people in the villages. The contractors in this region had a three-tier structure starting at the district-level, going down to the panchayat. The payment process, from the nodal bank to the beneficiary, included at least three different agencies, some with their own sub-structures, thereby fundamentally contradicting the assumption that digital transfers are "direct."

Claim 2: Instantaneous Payments

The second claim commonly made by the proponents of digital payments is that transfers happen at the touch of a button and are instantaneous. Recognising that payments are rarely instantaneous, undivided AP's contract with the nodal banks stipulated that the money should be disbursed within four days to the beneficiaries. Despite the contract, we found that there were long and unjustified delays between nodal banks receiving the money and transferring it to beneficiaries. In fact, the delays caused by the intermediaries exceeded the delays caused by the administration in processing payments.

The payment agencies were mandated to use point-of-sale (POS) machines to record every disbursement with an exact timestamp. We compared the date of disbursement and the date on which the corresponding FTO was generated in order to estimate the number of days it took for payment agencies to disburse. By a conservative estimate, the intermediaries took 15.5 days on an average to process payments.[10] This was an optimistic reading of the situation since this calculation took into account only the payments that had been disbursed officially. On examining the data, we found that nearly 13% of payments were not disbursed at all, with an average delay of 43.6 days.[11]

One could argue that these payments were not disbursed to workers since the workers were not available in the village to collect it. While this is definitely a possibility, it is unlikely considering MGNREGA workers are typically desperately poor, and they rarely wait to collect payments. We encountered innumerable complaints from people who had contacted the payment agencies several times to get their payments and were told that the payments had not arrived.

In one case, a contractor distributed more than ₹10 lakh in pending payments two days after we started enquiring about the delayed payments. Activists in other parts of undivided AP told us of similar experiences, where long-pending payments were delivered immediately after questions were raised about them, lending support to the idea that payments were deliberately delayed.[12] To say the least, payments were far from instantaneous even in the state with the best digital payments infrastructure in India.

Claim 3: Corruption-free System

The most significant claim made by proponents of digital transfers is that these are devoid of corruption since they do not involve intermediaries. We have shown earlier how the very basis of the claim—that there are no intermediaries—is wrong. While digital transfers did not eliminate intermediaries, they created an important change in the nature of the intermediaries.

The government hoped to deliver full entitlements to beneficiaries by channelling payments through banks that are not known to engage in bribes or other forms of retail corruption (Table 1, p 61). Unfortunately, many beneficiaries reported that payment agencies took bribes in undivided AP. In addition,

activists we worked with were concerned about the possibility of payments being deliberately delayed by agencies in order to earn interest on it. While there is no conclusive proof of this form of corruption, this behaviour of the intermediaries offers strong grounds for the concern.

Many of our discussants also mentioned that local agents demanded bribes. Apart from bribes, we also encountered several cases of swindling accompanied by false accounts, which had striking similarities to issues faced by the old mechanism of payment through bureaucratic intermediaries. This was surprising considering that there were many safeguards against false payments such as the use of POS machines that authenticated beneficiaries using smart cards or biometric verification. These machines were supposed to make it impossible to withdraw money without the beneficiary being present.

By following up on this issue, we learned of a few tricks commonly used to bypass technical safeguards. In some cases, payment agencies waited for payments for multiple workweeks to accumulate and then announced to beneficiaries that a payment was ready to be collected. When workers came to collect payments, they issued only part of the payment to the workers and pocketed the difference without the knowledge of the worker. Intermediaries also inserted toothpicks into the printer of the POS machine and declared that the printer was out of order. Beneficiaries then had the choice of waiting for weeks to get a payment with a printed receipt or collecting their due without the receipt, which would have helped them detect underpayment.

Table 1: Average Delay Based on Different Criteria

Bank Name	First Day of Disbursement (Average Delay in Days)	Actual Date of Payment (Average Delay in Days)
Andhra Pradesh Grameena Vikas Bank	6.8	10.4
ICICI Bank	9.7	18.4
Post office	5.9	12
State Bank of India	8.4	NA*

* The official data had a very long list of undisbursed payments. We found some cases of payments that were made to the workers that were not reflected online. Given the inconsistencies in reporting by SBI, we omitted our estimates for this agency.

In one of the villages, the contractor developed a nexus with a local strongman who advised people that there would be a long delay in payment and offered to pay workers their wage immediately with a commission. Delays were engineered in this village so that the workers, who were desperately poor, would opt for the discounted payment.

These examples illustrate how forms of corruption that were prevalent in cash transfers through the lower bureaucracy could migrate into the digital transfer mechanism. We were unable to ascertain the degree of prevalence of such forms of corruption, but one cannot assume that digital transfers will necessarily be free of corruption.

Claim 4: Technology and Transparency

Let us take the claim that digital transfers can be tracked all the way to the beneficiaries, thus improving monitoring and transparency. There is little doubt that if transactions are digitised at every stage, there will be a rich data set for monitoring by the administration and by citizens. However, this connection between technology and transparency has to be understood with two important qualifications. One, the mere use of technology does not lead to transparency. Two, there are systemic reasons as to why digital transfers could become less transparent than the previous regime of cash transfers through the bureaucracy.

Transparency Is Not a Given

To begin with, the fact that data has been captured does not mean that it will be made available to citizens. Information can be withheld by design or inadvertently. For example, we started our project by examining the official MGNREGA website to obtain information that would be useful to programme beneficiaries. We asked questions such as: (i) How much money should each family receive? (ii) Have they been paid that amount? (iii) And if not, at what administrative level is the payment stuck? These are crucial pieces of information, all of which were available in the database.

We discovered that the MGNREGA website was rich in information. The data was presented in over 220 different reports containing different categories of information. For example, when a worker participated in the MGNREGA work, attendance was recorded and aggregated in several reports.[13] Similarly, information on payments was available in other reports, but without a notation on what the payment was for. Thus, we had a list of workers and a list of payments, and no means of connecting them.

In most reports, information on transfers was available only at aggregate levels. While it was easy to find how much money was sent to a bank, there was no information on who was being paid, thus making the process entirely non-transparent from the point of view of the workers.

There were also calculations that created misleading impressions. For example, when we started our research, the actual date of disbursement of wages to individual workers was not made available online in undivided AP's MGNREGA portal. What was given on the website instead was the first date on which a payment was made to anyone (among many recipients) through that FTO. This report may have been created in such a way as to avoid transfers being marked as delayed if some workers were not available in the village at the time of payment. This presented an opportunity for payment agencies to game the system. For example, the intermediary could pay one person out of hundreds and create the impression that payments were being made immediately to everyone.

Yet another transparency issue surfaced in the mandal being studied. We were provided information on the actual date of payment to each worker which revealed that the average delay in the disbursal of cash differed substantially. The average delay calculated on the basis of first day of disbursement was 8.34 days. However, the average delay was 15.5 days when calculated using the actual date of disbursement to each worker. A conservative estimate of average delays in cases where cash was yet to be disbursed was 43.6 days.

Transparency was also inadvertently reduced because reports were typically created for officials and were presented in

ways that were meaningful to them. From their perspective, it was important to measure the performance of different administrative units. Thus, the website had reliable reports of payments broken down by district and payment agency. Such reports meant little to workers who were interested in what happened to their payments. On undivided AP's MGNREGA website it was impossible to find beneficiary-level information on the payment process, even though the data was available at the backend.

Finally, we should point out that the high-level bureaucrats in charge of MGNREGA in undivided AP were committed to making the programme transparent. The omissions were remedied quickly when it was brought to their notice. A reluctant administration could find ways of omitting, filtering, and presenting information in ways that would be of little practical value to citizens, thus giving the veneer of transparency, but depriving citizens the opportunity to use the information to secure change.

Opaque Intermediaries

Along with the design challenges mentioned above, a systematic form of non-transparency has arisen in digital transfers through the involvement of private contractors. Payments that are processed by the bureaucracy are covered by India's strong Right to Information (RTI) law.[14] Private contractors, however, are not covered by the law, and thus the transfer of the payment process from the bureaucracy to private players has weakened transparency.

Typically, contracts with payment agencies require them to provide a prescribed set of accounts to the government, which can technically be accessed by citizens. This form of transparency, which covers a limited range of accounts by contract or law, is called targeted transparency (Fung et al 2007). Targeted transparency reveals only selected records as mandated by law, while RTI reveals all information barring a few exceptions provided for by law. RTI, therefore, provides for a much more extensive transparency regime.

While targeted transparency is valuable, new forms of corruption, inefficiencies, and other problems may arise after contracts are signed. Verifying these may require new kinds of records that the private contractor is not legally bound to share. For example, we sought accounts from the contractors and some refused to provide us with this information. A few mentioned that they do not maintain any records and justified it by arguing that it was not mandated. They also questioned, justly, if they were required to share any details about transactions with citizens.

Alasdair Roberts (2006) documents extensively in his book *Blacked Out* how privatisation of public services is causing a major reversal in transparency globally. In some cases, contract documents have been protected from public scrutiny, even though the contracts are clearly public records held by the government.[15] Getting internal documents created in the process of implementing the contract would be more challenging, despite in the presence of strong right to information laws.

The complexities of demanding the extension of the right to information to private actors are particularly acute in the finance domain. Within the banking sector, there is a just demand for the privacy of account details and transaction information of individuals to be ensured. This is not the case with government-to-citizen product transfers through specialised mechanisms such as ration shops.[16] For example, even though many ration shops are operated by private dealers, the accounting they do is specifically intended for the public distribution system (PDS) and we never came across a ration dealer who claimed that he did not have to maintain or share records since he is a private dealer.[17] Digital transfers, on the contrary, happen through established institutions such as banks that have a large number of other transactions. Unlike private ration dealers, banks have strong reasons to protect the privacy of transactions that they facilitate. They are unlikely to build specialised accounting and transparency mechanisms for government programmes and thus transparency will suffer in digital cash transfer programmes in ways that will not happen with the transfer of products. There is, thus, a problem in the claim that direct transfers can be monitored end-to-end.

Policy Implications

The key appeal of digital transfers was based on the idea that it would remove intermediaries, and in the process of removing human agency, it would limit associated problems such as corruption, errors, and delays. If there is one lesson that can be drawn from this study, it is that there is no such thing as direct, disintermediated transfers. This understanding has important policy implications.

For one, those who subscribe to the idea that technology can disintermediate implicitly undermine the need for building sound accountability frameworks, organisational structures, and regulation. After all, what is the need for creating a system of governance when there is no one to be governed?

This false notion that digital transfers are disintermediated explains how a massive network of new payment intermediaries has evolved in India with limited governance. It has also led to the false assumption that digital transfers could be introduced anywhere successfully irrespective of the administrative and social context.

For example, in our discussions with policymakers in other states, a study of the new payment architecture in undivided AP by Muralidharan et al (2014) was often cited in support of introducing digital payments. Their article argued that the new architecture led to more timely payments and a reduction in corruption compared to the old architecture of payments through bureaucratic intermediaries.

It is quite possible that, as Muralidharan et al (2014) suggest, the new architecture was an improvement over the previous one. This raises the question of how we should read their conclusions in the light of our findings. There are two responses to this: First, even if there was an improvement compared to the old system, it should not detract us from acknowledging the problems in the current system. Second, our assessment can—and should—be read with theirs: the new payment architecture has promise, but its effectiveness should not be taken for granted everywhere.[18]

Moreover, their study was generalised to undivided AP, while we focused on one of its poorly administered mandals and found the process to be problematic. The fact that digital transfers could face such problems even in a state that was generally well-governed should make us ask how we should extend the lessons from Muralidharan et al (2014) beyond undivided AP, especially to states with a poorer record of governance and digital infrastructure.

During 2012–17, we observed greater digitisation of records, biometric authentication, digital transfers of cash, and other processes in various states of India, often inspired by the experience of undivided AP and the study mentioned above. In addition to not solving the problems of governance, the introduction of technologies without creating sufficient organisational arrangements has created many new problems in the payment process that citizens did not face earlier. As in our study mandal, we saw the introduction of new intermediaries, significant delays in payments, instances of corruption, and transparency challenges in every region we have worked in so far.

While some problems were purely administrative, several were introduced because of technology use. These include delays due to data entry errors, errors in authentication in POS devices, and the sheer complexity of the new mechanism that very few people understood.

The authors of this article are not scholars of the banking system and are not in a position to offer insights on financial regulation. However, based on our perspective of working with the MGNREGA workers we offer the following recommendations, which should form one portion of creating a new regime of governance covering digital payments.

Targeted Transparency and Accountability

Recognising that the new intermediaries are private players, we need to create a strong regime of targeted transparency. This requires a well-thought-out standard of accounting and immediate transfer of these accounts to the public domain. Currently, data collected from citizens, including biometric records, are not owned by the state, even though these were collected for state-mandated programmes. In many states, there are no legal means to find out what happened to a payment once it is transferred by the government. This is deeply problematic in the context of corruption and needs to be remedied with a better regime of transparency.

In addition, there is a need for regulations to prevent intermediaries from demanding extralegal fees and denying payments. Across all the states we work in, we routinely see cases of workers being denied withdrawals from their own accounts on different pretexts. There are also many cases involving extralegal fees and underpayments since there is no protection for account holders. In Jharkhand and Chhattisgarh, for example, we documented cases of money being transferred from legitimate account holders to others without the consent or knowledge of the account holders. We risk compromising the financial integrity of some of our most vulnerable citizens if we do not take into account their context and create additional measures of protection; if we ignore the challenges and provide even fewer protections than what is offered to more affluent users of digital transfers.

Worker-centred Transparency

We demonstrated earlier that many of the reports available on the official MGNREGA website were meaningless from the perspective of workers and their allies. As a team, we have significant technical competence and have invested more than 16 collective years in trying to understand these online records. Despite our capabilities and investment of time, we still cannot answer fundamental questions such as who was paid how much and what happened to that money.

Digital transfers do offer unprecedented possibilities for transparency, but these will not materialise without a conscious effort at creating transparency from the perspective of the workers. Given the poor digital capabilities of most MGNREGA workers and welfare recipients, we also need to create paper trails of payments and transactions that are available to the workers. In many states, MGNREGA workers do not receive bank passbooks and have no means of receiving updates on their own accounts. Remedying this is critical.

Conclusions

The point of our work is not to argue against digital transfers, but rather to caution that it is a human creation that comes with all the human challenges that we encountered in non-digital payments. Apart from the Muralidharan et al (2014) article, a study by Drèze et al (2014) indicated that the level of corruption in MGNREGA payments has reduced over time, and

some of this could be attributed to the new payment architecture. While acknowledging this possibility, we call for a careful review of the evolving payment mechanisms and their regulation to ensure that the beneficiaries of welfare programmes are able to realise their full payments in a timely manner.

We believe that now is the opportune time to introduce such regulations since the payment architecture is new and yet to be introduced in many parts of India. Regulating at this stage could help avoid potential resistance at later stages by entrenched organisations, and it could also help avoid the capture of the system by vested interests that are more interested in resource extraction than earning well-deserved profits through the delivery of services. For this to happen, we have to start by discarding the false assumption that digital transfers are direct and disintermediated, and require no governance. We hope that this article contributes towards that end, thus serving as a game changer in the debate on digital transfers.

NOTES

1 The most articulate praise for this system can be found in a press statement made by Jairam Ramesh and P Chidambaram, two senior ministers of the United Progressive Alliance government in a well-publicised press conference on 27 November 2012.

2 Pitkin (2001) provides an overview of the critique of techno-utopianism in development. Analogously, Evgeny Morozov has made poignant arguments against the idea that technology could be used to radically improve the nature of democratic rule (Morozov 2013).

3 A forceful advocate of this position in the recent past has been Clay Shirky who argued that information and communications technology will remove the need for civil society organisations to mediate in coordinating protests (Shirky 2008).

4 We also worked in Maharashtra, where payments have not been a focus, and in West Bengal, where we did not have an active field presence. At the time of the case study, Telangana was a part of undivided AP.

5 Mandal is the term used to refer to a sub-district unit and in Telangana and AP in India. Mandals are administratively similar to blocks in the rest of India. AP was divided in 2014, creating the states of AP and Telangana.

6 Based on our interviews with senior bureaucrats who have an overview of the state.

7 India has a three-tier system of governance and panchayats are the lowest tier of government. They typically comprise of one or a few villages.

8 Apart from creating a detailed website, undivided AP instituted India's most thorough system of social audits (Veeraraghavan 2013, 2015). Each panchayat is visited twice in a year by social auditors for an information-sharing exercise, and there are a total of 12,000 auditors in the state to ensure that every village is covered. There is no other example of a transparency initiative with such extensive investment. While the IT platform and basic administrative processes were uniform across undivided AP, there were significant differences in the sociopolitical context and efficacy of the local administration within the state.

9 FTOs contained a list of beneficiaries, their location, account numbers, branch in which account was held, and other information critical to enabling digital transfers.

10 The delays in wage payments were calculated for pay orders that were generated between 22 March 2012 and 9 July 2013. We crawled all the data for the period from www.nrega.ap.gov.in and also got data from the backend of the website from the Government of Andhra Pradesh (GoAP). The differences between the two data sets were: (i) The website presented aggregate information at the level of a pay order, whereas the data from the government was disaggregated and was available for each payment to each individual. (ii) The delay was calculated in the website as the difference between the date the FTO was sent to the bank and the date of first disbursement of the first payment in that FTO. The data from GoAP contained the actual date of disbursement for each payment. We eliminated transactions for which no date of disbursement was available. In doing so, we did not take into account the data for State Bank of India since we had reason to believe that there were many cases in which payments had been disbursed, but were not reflected in the database due to delays in reporting.

11 This estimate excludes cash received by the banks within four days of obtaining the data.

12 This article reports our experience during 2012–13. In subsequent work in the region, we found that with constant monitoring and pressure, delays in payments went down substantially. We have had similar experiences in other parts of undivided AP and in other states of India.

13 The number of reports on www.nrega.ap.gov. in was calculated on 28 July 2014.

14 The Center for Law and Democracy has rated India's RTI Act, 2005 as one of the strongest access to information laws in the world. For details, see http://www.law-democracy.org/live/global-rti-rating/. In addition, there are provisions in laws governing welfare programmes in India that further strengthen the provisions of the RTI Act by stating that no limitations in the RTI law can be used as grounds to deny information regarding the welfare programme (Drèze et al 2006). See also PDS (Control) Order, 2001, at http://dfpd.nic.in/pds-control-order-1.htm.

15 This has also happened in the case of some contracts for toll roads, water management, and reform of social services that are not protected from disclosure unlike defence contracts that may be protected by access to information laws themselves.

16 Ration shops are agencies that distribute subsidised foodgrains through India's PDS.

17 There are indeed many practical concerns preventing the sharing of records with the public. That cannot be denied. But at the same time, no ration dealer that we know of questioned the requirement to maintain mandated records or whether there are legal grounds for the public to demand this information.

18 Their study used randomised control trials, which are useful in estimating the impact of interventions within the study area. The result of such studies cannot be assumed to hold elsewhere. From that perspective, there is no methodological problem in reading the divergent positions in the two studies together. On our part, we do not claim that our study is representative. We merely claim that an alternate reality too is possible in certain regions.

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