Length of the Last Mile

Delays and Hurdles in NREGA Wage Payments

LibTech India | November 2020

Foreword by **Jean Drèze**

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" *I am not your data, nor am I your vote bank,*
I am not your project, or any exotic museum object,
I am not the soul waiting to be harvested,
Nor am I the lab where your theories are tested,
I am not your cannon fodder, or the invisible worker,
or your entertainment at India habitat center,
I am not your field, your crowd, your history,
your help, your guilt, medallions of your victory *"*

Abhay Xaxa

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Abstract

LibTech India has been working in numerous states on various aspects of the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) for almost a decade. This report is built on our collective experience regarding NREGA wage payments. Through a 3 state survey, we focus on the last mile challenges faced by workers in accessing their wages after the wages have been credited to the workers' bank or postal accounts. Delays in wage payments are usually higher in the second half of each financial year due to rationing of funds for NREGA. To focus on the last mile challenges when funds crunch is not the main concern, we conducted this survey in the first half of the financial year 2018-19. The survey was conducted in one block each of Andhra Pradesh (AP) and Rajasthan (RJ) and 2 blocks of Jharkhand (JH). We interviewed 1947 workers and asked about their experience concerning four payment disbursement agencies -- Banks, Customer Service Points (CSPs)/Business Correspondents (BCs), Post Offices, and ATMs. Post offices were prevalent only in Andhra Pradesh. We examine and discuss the following aspects: workers' awareness about some banking norms, access to information, hardships in accessing wages, transparency & accountability of disbursement agencies, issues concerning payments that get rejected and the workers' experience of using grievance redressal systems. Although the sampling was purposive, experience suggests that our results and statistical estimates are likely to be consistent across the respective states. We create average hardship scores of individuals for each payment disbursement agency. We use confirmatory factor analysis and multiple factor analysis scores to check for robustness of average hardship scores. The respondents from the AP block reported less hardship, on average, compared to the blocks in RJ and JH. Workers from the JH blocks report the highest hardship. Countrywide, roughly one in twenty wage payment transactions get rejected due to technical errors such as incorrect account number or incorrect linking of Aadhaar with bank accounts. We pay close attention to rejected payments and assess the difficulty faced by workers once their wages get rejected. We make several recommendations, categorised by issues, to strengthen NREGA workers' rights. This report is an attempt to document the perspective of the workers in accessing their own wages. We hope that through the report, policy makers, practitioners, academics, and other civil society members can collectively understand the challenges workers face at the last mile to access their wages. For such a collective understanding to work effectively, it is critical to involve the workers in designing service delivery approaches. This is likely to enhance participatory democracy and improve transparency and accountability of the government.

Foreword

It was a telling experience, in the last few years, to meet so many workers, pensioners and others in rural Jharkhand who had the greatest possible difficulties in accessing their meagre payments from the banking system. Some were waiting for payments that, unbeknown to them, had been rejected for arcane technical reasons. Others were bewildered by the requirements of "Qwicy", as e-KYC is known in rural Jharkhand. Others still had been cheated by unscrupulous business correspondents or other intermediaries. And many had to wait for weeks or months for payments that are due to them within days as a matter of legal right.

These hurdles have been particularly devastating for the National Rural Employment Guarantee Act (NREGA), the focus of this report. Wage payment issues have plagued NREGA ever since the transition from cash-in-hand to bank and post-office payments in 2009. For one thing, payment is often delayed well beyond the 15-day period within which they are supposed to be paid under the Act. It is not that delays were unknown before 2009, but they were relatively short, and also, workers had ways to demand action since the delays — if any — were generally caused by local authorities. This changed after the transition to bank payments: delays became much longer (initially at least), and the payment system became more and more centralised, depriving workers of any means of control over it.

This is not to say that the transition to bank payments was wrong. Direct payment to workers' bank accounts is a useful safeguard against corruption. But the transition from cash-in-hand to bank payments caused serious problems. Ideally, the transition problems should have attenuated over time, giving way to a reasonably reliable and timely payment system. Unfortunately, the modalities of bank payments kept changing, creating periodic waves of new transition problems for many years. In some states, cash-in-hand was successively replaced with post-office payments followed by bank payments, payment through a specific bank, Direct Benefit Transfer (DBT) and Aadhaar Payment Bridge System (APBS) payments — I am skipping some intermediate steps. Each time the payment system was re-jigged, workers had to run from pillar to post to adjust to the new modalities (for instance, by opening a new account, or linking it with Aadhaar) and face another round of hurdles. Ten years after bank payments were introduced, the central government is still unequal to the task of ensuring reliable wage payments within 15 days.

The imposition of Aadhaar on NREGA was a turning point in this sobering story. When the NREGA wage payment system moved to Aadhaar-based payments such as DBT and APBS, a new generation of payment problems emerged. One of them was the problem of "rejected payment": as mentioned in the report, nearly Rs 5,000 crore of NREGA wage payments were rejected during the last five years. Other Aadhaar-related problems include diverted payments (money being sent to a wrong account) and blocked payments (money being inaccessible to the worker, e. g. for lack of compliance with e-KYC). Predictably enough, payment problems were especially common in the poorer, less well-governed states, where they had a tremendous discouragement effect on rural workers. In Jharkhand, whenever we enquire about their interest in NREGA work, rural workers often say something like "Bhugtan sahi naheen hota hai to kya fayda?" (without proper payment, what is the point?).

To be fair, some serious work has been done in the last few years to resolve the payment issues, and significant progress has been made towards timely and reliable payment. Nevertheless, major problems persist. For instance, payment rejection rates are still hovering around 4-5%, much as before. Funds also continue to dry up around the end of the financial year, holding up wage payments for weeks or even months at a time. Further, NREGA workers still face many problems in extracting money from their bank accounts.

The survey presented in this report is full of valuable insights into these "last-mile" problems. It is startling, for instance, to learn that 40 per cent of Customer Service Point (CSP) users in the sample have experienced biometric authentication problems (at least one failure in the last five transactions). Similarly, an astonishing 25 per cent of the respondents reported instances of being informed (by sms or otherwise) of a wage credit of which they found no trace when they checked their account at the bank. To access their wages, almost half of NREGA workers have to make multiple visits to the bank or payment agency. This is all the more alarming as "a majority of the workers have to travel to the block to collect their wages", contrary to the common assumption that doorstep payment has become the norm in rural India. Even at the block level, people are often deprived of simple services such as updating of bank passbooks. Last but not least, the report sharply brings out that NREGA workers are as bereft as ever of effective grievance redressal facilities. Instead, they experience a harrowing "normalisation of hardships".

In short, we are still very far from financial inclusion in the full sense of the term – accessible, convenient and effective banking services for everyone. The report is a useful antidote to some of the techno-utopian delusions that have flourished on this in recent years. A good example is the Indian government's Economic Survey 2015, which promises "wiping every tear from every eye" with the so-called JAM trinity and even concludes that "nirvana today seems within reach". Five years after this rosy prediction, poor people are still struggling to navigate the banking system.

The authors, of course, are not opposed to the use of advanced technology in NREGA or other social programmes. But they advocate technological innovations that further the rights of rural workers rather than corporate interests – liberation technology. This is a powerful idea, with a wide range of possible applications.

The report, thus, is not just about fixing glitches in the NREGA payment system but also about putting the issue in a new perspective. It will be of much interest to anyone concerned with the future of employment guarantee and the rights of rural workers. The concluding recommendations offer rich pointers for research, policy and action. Hats off to the LibTech India team for this very enlightening study.

Jean Drèze
21 July 2020

About LibTech India

In 2012-13, during our work in Ghattu Mandal of Mahabubnagar district of undivided Andhra Pradesh, a worker told us that she had worked in NREGA many months ago and had not received her payment. We looked at the official data to discover that the state had released the payment, but the intermediary had not paid her. We looked for other such cases in programme data and found hundreds of such cases. We found that payment intermediaries took 17 days on average for disbursed payments instead of 4 days as mandated and 13 percent of payments were hoarded for more than 45 days. Human interactions helped us see data in a new way, while data helped us understand the problem in a new light. Such conversations prompted us to study the NREGA wage payments process in depth.

Since then, LibTech India has been engaging with workers, civil society organisations, and the government on public services delivery at large and the NREGA in particular. Inspired by the Right to Information (RTI) movement, LibTech is comprised of engineers, activists, and social scientists and has been interested in improving transparency and accountability of public service delivery in India. Effective transparency is a difficult task, especially in this age of ever-increasing information. In our partnerships with different groups, we leverage digital technologies to improve how citizens obtain information about public programmes.

LibTech was started by Vivek S. when he was at Stanford University. Subsequently, the team partnered with Collaborative Research and Dissemination (CORD) to expand the nature and scope of work in many states in India. Vivek continues to be the main anchor all of LibTech's efforts. We work closely with various civil society organisations in the states of Andhra Pradesh, Telangana, Jharkhand, Bihar, Rajasthan among others. Working in the grassroots helps us understand the bottlenecks and issues faced by civilians in accessing their rights and entitlements. Very often the problems faced by individuals are of a systemic nature and so it becomes important to identify the scale of such issues. To understand the scale of the issues faced, we crawl (electronically read and process data from a website) public data and use such dynamic transaction level data to identify implementation bottlenecks. Further, the resolution of such issues may require a variety of actions from every stakeholder - civilians, civil society groups and the government alike. For such actions to have a meaningful impact, just disseminating bits of information (soochna) might not be enough. What is required is actionable

information (jaankari). Thus our efforts have been to work with people, identify the scale of issues, identify the relevant jaankari based on a combination of field work and public data crawling/analysis and take it back to the people, to the partner civil society group and to the government. It requires an understanding of concrete problems that people face in each context, a strategy on which issues could be reasonably tackled in a given context, and an assessment of what role information can play in a role in this social process.

Our focus over the years has been on NREGA, although we have worked on an array of social security programmes such as the National Food Security Act (NFSA), old age pensions, maternity entitlements, among others. This report is the culmination of some of our work over the years on the last mile challenges that people face when they receive cash transfers from the government, particularly NREGA wages. It presents the findings of the "People's Experience of Government to Citizen Payments" survey carried out in three Indian states of Andhra Pradesh (AP), Jharkhand (JH) and Rajasthan (RJ) between September to November 2018.

Team members

LibTech India Convener
Vivek Srinivasan

The LibTech India Team
Alla Kowsalya, Anuradha De, Anushka Kale, Ashok Danavath, B. D. S. Kishore, Chakradhar Buddha, Kuruva Venkateswarlu, Laavanya Tamang, Lakshmanarao Korra, J. M. Konda Babu, Ranadheer Malla, Mayank Rungta, Palle Ajay, Pangi Krishna Rao, Rajat Kumar, Rajendran Narayanan, Rajesh Golani, Sabhil Nath Paikra, Sakina Dhorajiwala, Suguna Bheemarasetti, V. Rameshbahu, Vanthala Bhaskar Rao, Venkat Krishna Kagga

Survey Design
Anuradha De, Chakradhar Buddha, Rajendran Narayanan, Sakina Dhorajiwala

Technology and Data Access
Mayank Rungta, Rajesh Golani and Ranadheer Malla

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We are immensely grateful to the hundreds of workers across the states for being patient and giving us their valuable time during the survey. The workers provided critical political and philosophical insights that so often do not make it to the dominant discourse on policy making and implementation. Their cooperation with the field surveyors remains invaluable to the project and the team.

The NREGA frontline functionaries, i.e., the Gram Rozgar Sahayak (Field Assistant in Andhra Pradesh) and the Computer Operators in each block serve as the primary interface between the workers and the government. Interviews with the frontline functionaries of Basia, Butchayyapeta, Jawaja and Manika were highly illuminating. We are grateful for their time and patience during the interviews, often late after working hours.

We are indebted to the team of surveyors across the states who have painstakingly executed the work. They upheld the ethics of informed consent and respected workers' time and interests. Some surveyors in Jharkhand had to leave before the survey was completed. At such a critical juncture, the following people from the Manika Sahayata Kendra lent unconditional support and ensured the completion of the survey: Dilip Rajak, Nanhku Singh, Pachati Singh, Rajeshwar Singh, and Rajendra. Many thanks to them for promptly stepping in to help.

We would also like to express our gratitude to the networks of civil society organisations who helped immensely during the process of the survey: Mazdoor Kisaan Shakti Sangathan (MKSS), School for Democracy (SFD), The Social Work & Research Centre (SWRC) - Jawaja, Rajasthan Asangathit Mazdoor Union - Jawaja, Professional Assistance for Development Action (PRADAN) - Jharkhand, Multi Arts Association (MAA) - Jharkhand and NREGA Sahayta Kendra - Manika & Basia, Jharkhand. We thank Gurjeet Singh of the Social Audit Unit of Jharkhand for providing valuable support.

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Data Summary

We present a data summary of the challenges workers face while trying to access their wages from payment disbursement agencies. The data consists of responses, statistical estimates & predictions of 1947 NREGA workers from the states of Andhra Pradhesh (AP), Jharkhand (JH) and Rajasthan (RJ). The disbursement agencies include banks, CSPs/BCs, ATMs & Post Offices (only in AP). We have divided the findings into 7 sections:

- Awareness, Access to Information & Location of Payment Disbursement agency
- Transparency & Accountability
- Aadhaar & Biometric Related
- Time & Cost to Access
- Rejected Payments
- Grievance Redressal
- Recommendation

Awareness, Access to Information & Location of Payment Disbursement Agency

- Around 65 percent of the respondents in AP, 50 percent in JH and about 97 percent in RJ were unaware of the number of bank transactions they can do in a month.
- In JH and RJ blocks, roughly 1 in 2 people were unaware of the minimum bank account balance required to keep the account active.
- 75 percent of all respondents did not know if bank branches other than the parent bank branch could be used for financial transactions.
- Only 11 percent of workers receive SMS services to be informed about wage credit. 36 percent have to visit a bank just to find out if their wages have been credited.
- 25 percent of respondents reported that despite being informed about wage credit (through any means), they went to the bank and found out that their wages were not yet credited.
- Higher awareness amongst workers does not directly translate into lowering hardship experiences
- There is better penetration of payment disbursement agencies in AP compared to JH and RJ. Roughly two-thirds of the respondents in AP had access to disbursement agencies in their own village and panchayat. For 69 percent in JH and 49 percent in RJ the nearest payment disbursement agency was far away at the block.

Women in Jharkhand waiting with their children outside a particular Gramin bank. While the main gate of the bank was closed and they were requesting to get their passbooks updated through the small window.

Transparency & Accountability

- While all the bank and post office users were issued a physical passbook, about 56 percent of all those who opened accounts at CSPs/BCs were not issued passbooks.

- 57 percent of the respondents reported that their passbooks do not always get updated. This was most severe in RJ where about 69 percent reported that their passbooks never get updated on withdrawals.

- More than two-thirds of the time, workers were denied the facility to update passbooks due to overcrowding at banks or because bank officials asked workers to come back later.

- 100 percent of the post-office users reported that their passbook always gets updated on withdrawals.

- While a significant proportion in AP got receipts for withdrawals at CSP/BC, over 80 percent in JH and RJ did not get receipts at CSP/BC.

- Issues of network connectivity, faulty printers and overcrowding were the key reasons for denial of receipts.

- One in three respondents had to pay commissions to the CSP/BC to withdraw wages. This was highest in JH where 45 percent of the users reported to have been charged for withdrawing wages.

Aadhaar and Biometric Related

- An estimated 40 percent of CSP/BC users faced biometric authentication failure at least once in their last 5 transactions.
- An estimated 7 percent reported that EACH of their last 5 transactions failed due to biometric authentication issues at CSP/BCs.
- Roughly one in three respondents in RJ experienced difficulty in linking their Aadhaar to the bank account. It was about one in 5 in Jharkhand and about one in 14 in AP.

Time and Cost

- An estimated 42 percent in JH and 38 percent of people in RJ took more than 4 hours to access wages from banks. In comparison, this was just 2 percent in AP.
- Approximately one in four respondents in JH and RJ spent 3 hours accessing wages from CSP/BC. As opposed to that only 1 person in AP reported taking that long.
- An esimated 18 percent of bank users were denied wages and asked to visit CSP/BC instead.
- The average cost incurred to visit post offices to withdraw wages is the lowest at Rs. 6. In comparison, it costs Rs. 31 to visit a bank, Rs. 11 for a CSP/BC & Rs. 67 for an ATM.
- Nearly 50 percent of ATM users reported that they had to visit the ATM again because the machine did not dispense any cash
- About 45 percent of the bank users had to make multiple visits for their last withdrawal while an esimated 40 percent of the CSP/BC users had to make multiple visits due to transaction failures.

Rejected Payments

- Rejected payments are those transactions that are stuck due to technical errors of the payment system, bank account problems or data entry errors. Of the 249 people in our sample with rejections 111 were from JH and 138 from RJ. At the time of the survey, AP had negligible rejected payments. Workers don't get these wages unless the rejected payments are rectified.
- According to official figures, as of July 2020, in the last five years, about Rs. 4,800 crore worth of payments were rejected and about Rs. 1,274 crore worth is still pending to be paid to workers.

- 63 percent of people in JH were not aware that their payment was rejected as opposed to 25 percent in RJ.
- 77 percent of the respondents were *unaware* of the reason for their payments being rejected. Unless the reasons are known, the rectification is not possible. Consequently, all future NREGA wage payments to these individuals will continue to be rejected.
- 70 percent of people with rejected payments have experienced very high or high hardships at their respective payment agency. This indicates that people with rejected payments have to face a two fold problem. They not only face the brunt of the payment rejection but also experienced greater hardship at their payment agency.

Grievance Redressal

- Normalisation of hardship implies that even severe violations of the Act are not construed as legitimate grievances by workers. In the rare case, even when they did recognise that the issue constituted a grievance, they seldom registered it officially.
- Overall about 546 (of 1947) respondents communicated their complaints - of which about 94 percent did so verbally. The remaining 6 percent filed them in writing and only 1 respondent among them filed the complaint online.
- Filing a complaint verbally has no official bearing and therefore it is equivalent to not filing it at all.
- About 30 percent of the respondents in RJ and 24 percent in JH reported that they had grievances but had not registered them.
- 79 percent of the complaints were about pending wages and partial wages received.
- 64 percent of the complaints (albeit verbally communicated) were communicated/ given to the Panchayat officials.
- 59 percent respondents who filed complaints across the states did not have them satisfactorily resolved or resolved at all. Among those who said that their complaints were not resolved at all, they were either told to wait for a few days or didn't know the status of their complaints.

A typical day in a rural bank branch in Jharkhand. With just 3-4 staff members, rural banks are extremely short staffed. Hundreds gather and wait to access basic banking services.

Recommendations

- In light of the COVID-19 crisis, increase the number of days of individual entitlements, provide work on demand at the work site.
- Ensure timely payment of wages and payment of delay compensation for the full extent of delay, i.e., till the wages are credited to the workers' accounts. Wage slips must be provided to every worker regularly at designated areas in the panchayat.
- There is an urgent need to increase bank branches in rural India and decentralise the wage payments mechanisms.
- Information system design must be worker centric. Worker participation in designing and rolling out information systems is critical. For instance, all information from work demand to payments must be made available in each panchayat in formats arrived at through consultation with workers.
- Ensure a Know Your Rights (KYR) framework (details in the Annexure) is prominently displayed and implemented at every payment disbursement agency. Passbook update facilities should be made available at every payment disbursement agency including CSPs and BCs.
- Create strong accountability structures for EVERY intermediary in the disbursement of wage payments including agencies such as UIDAI, NPCI, PFMS, Banks, and CSPs/BCs. Each of these agencies should be brought within the ambit of social audits.
- Ensure timely coordination with various payment intermediaries to proactively resolve issues of rejected payments.
- Any payment related interventions should be worker centric and must be piloted with wide consultation with workers before rolling out.

Introduction

Sheela Devi, a young woman from Latehar district of Jharkhand worked as a labourer on construction sites and as a labourer in the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) programme as well. She and her husband are both daily wage labourers who depend only on their wages for their livelihood. Sheela had worked for 24 days in the financial year 2017-18 in the construction of a farm pond under NREGA. She was entitled to Rs 4,032 as wages for this work. However, Sheela hadn't received the wages until May 2018, when we met her for the first time. In this period Sheela had gone to the bank several times inquiring about her payment and the repeated response she got from the local State Bank of India branch was that her wages were not deposited from the administration. The bank is located in the block about 10 kilometres from Sheela's village. Depending on the day of the week, Sheela either had to walk all the way for about an hour or walk some distance and then take an auto ride to the bank. The response from the bank remained the same in multiple visits.

Sheela then contacted the NREGA Help Centre (Sahayata Kendra) in the block which is run by local non-government volunteers who help workers understand and exercise their rights. From the help centre the volunteers were able to track Sheela's work payment on the NREGA online Management Information System (MIS). Her payment status on the MIS was recorded as 'credited.' They asked Sheela to go and check in the bank and preferably update her passbook for the sake of evidence. Not only was the response from the bank unchanged in the subsequent visit, but the bank officials also refused to update her passbook since there was no transaction in her account. It is common for banks to refuse updating passbooks, especially when there are no new transactions in the bank account.

Along with the LibTech team, the Help Centre gathered many cases where workers had payment problems and alerted the local administration at the block. The taxonomy of payments issues was mind-boggling even for a technically savvy urban crowd. In some cases the local administration was culpable as it had not entered the work details on the MIS. In other cases, the MIS reflected that the payment was 'credited' but reality, like in Sheela's case, was otherwise. The local administration was unable to accurately verify the accounts to which many of these payments were actually credited. There were several other egregious cases where the payment status on the MIS indicated that

the payment was 'rejected.' This is the equivalent of a 'bounced cheque.' The difference is that here the recipient of this amount has no way to find out whom to contact and how to rectify this problem. The local administration expressed helplessness. The helplessness was largely due to the lack of capacity and authority in dealing with a highly centralised payment architecture.

For Sheela, the deadlock needed resolution. The only available method was escalation. We invited representatives from the state government to visit the block and investigate. Sheela presented her case to the officials. The state officials instantly assumed that she was lying and that she was acting to dupe the system. Visibly miffed by the officials' reaction to her situation, she responded in a stern voice, that she wouldn't go through the trouble of repeatedly visiting the block to get wages for work that she had not earned. Our team followed up Sheela's case with the rural development department and found that Sheela's wages were deposited into the account of another (completely unrelated) person in the district headquarters in Latehar. That too in a completely different bank; Punjab National Bank. The response on the part of the department was that Sheela should go and recover the money from the person in Latehar which is at least 30 kilometers away from her village. The ordeal ensured that Sheela Devi discontinued NREGA work.

Sheela's persistence is commendable. She stood her ground with the officials from the bank, the local and state administration. She made visits, submitted numerous photocopies of documents to prove that she had indeed done the work but had not received any wages. Sheela's case poses deeper questions not just about the routine hardships that people like her have to go through but also about the blind reliance on technology fixes as the panacea for political and administrative issues.

Sheela's testimony was pitted against the technological testimony of a column in a database that said her wages were "Credited." The fact that there was more faith in an opaque technological process compared to the repeated words of a struggling individual poses important questions about the foundations of technical systems in welfare delivery. The burden of proof lay on an atomised individual seeking her right against a complex power structure. For example, if the same incident were to happen to an older and less aware/vociferous woman, who lived 30 kilometres from the nearest bank branch, her experience would be very different. In this report, we attempt to capture some of these challenges faced by workers in accessing their NREGA wages.

NREGA in Times of COVID-19

This report is being released at a juncture that is globally unprecedented and certainly so in the history of modern India. In response to the pandemic, the Government of India (GoI) announced a nation-wide lockdown on 24th March, 2020. As we write this, in the first week of July 2020, several states continue to be under some degree of lockdown. As (Ray and Subramanian 2020) indicate, the government's abrupt declaration is a 'symptom of panic under pressure' resulting in a massive humanitarian crisis. The 500 million unorganised labour force has faced the maximum brunt with non-payment of wages, loss of employment, and hunger. According to the reports by the Stranded Workers Action Network (SWAN), (Stranded Workers Action Network, 2020a) (Stranded Workers Action Network, 2020b) around 50 percent of those who reached out to them had less than one day of rations left and around 64 percent had less than Rs 100 when they reached out. Similarly, a phone survey of over 5,000 households across several states, (Kesar et al. 2020) shows that around two-thirds of the workforce in their sample lost employment during lockdown.

" The unemployment rates in 2019 were the worst since 1972. "

For a country with an abysmal track record of reliable public health and insufficient social protection measures, the government's relief measures have been woefully inadequate. On March 26th, the Finance Minister announced a relief package of Rs 1.7 trillion under the Pradhan Mantri Gareeb Kalyan Yojana (PMGKY). Among other things, it stated that "Under PM Garib Kalyan Yojana, MNREGA wages would be increased by Rs 20 with effect from 1 April, 2020. Wage increase under MNREGA will provide an additional Rs 2,000 benefit annually to a worker." However, this claim is grossly misleading. On March 23rd 2020, the Ministry of Rural Development (Ministry of Rural Development 2020) had issued a notification on wage rate increase. This notification is a routine exercise done every year as an adjustment against inflation. In fact, as correctly argued by (Drèze 2020), the prescribed increase as per this notification for 2020-21 is Rs 226. This is well above the increased NREGA wage of Rs 202 announced by the Finance Minister. A second, enhanced batch of relief measures over five tranches were announced by the Finance Minister on May 12th. Detailed analysis of the two batches of announcements under PMGKY by Ray and Subramanian (2020) indicate that a large

part of the packages correspond to loans and liquidity infusions. The effective fiscal stimulus is less than 2% of the GDP. This implies that the announcements fall well short of cushioning the blow for the poor. As they state 'this sort of strategy appears to be somewhat unthinking, to put it mildly. Alternatively, it is a strategy conceived with only some economic agents — principally business enterprises and tax assessees — in mind.'

> *" As per leaked findings of the 2017-18 CES reports, the overall monthly per capita consumption expenditure fell by around 9 percent between 2012 and 2018; a first in four decades (Jha 2019). "*

The rural distress was severe well before the lockdown. Unemployment increased three times for rural men and doubled for rural women between 2012 and 2018 as per the Periodic Labour Force Survey (PLFS). The unemployment rates in 2019 were the worst since 1972. The Consumption Expenditure Survey (CES) of 2017-18 was not released by the government citing 'data quality issues.' As per leaked findings of the 2017-18 CES reports, the overall monthly per capita consumption expenditure fell by around 9 percent between 2012 and 2018; a first in four decades (Jha 2019). As per the National Statistics Office reports from 2011 on consumer food price inflation, considering a family of four, even for the richest 5 percent of the rural population, the expenditure on cereals and pulses is less than Rs 2.50 per day per person (Seshadri 2019). To put this in perspective, the cost of one egg is Rs 5 and one litre of milk is Rs 30. An analysis of the CES of 2011-12 and the leaked findings of 2017-18 shows that the entire cross section of rural India became significantly poorer between 2012 and 2019 (Subramanian 2019). These statistics imply the continued slack in rural demand and scarily low consumption levels in rural India were well underway before the onset of COVID-19.

On the other hand, as per the Oxfam Inequality Report (Oxfam India 2018) the wealth of the richest one percent in India increased by Rs 20.91 lakh crore. This amount is equivalent to the total budget of the Central Government in 2017-18, while the annual budget of NREGA in 2020-21 is just Rs 60,000 crores with an additional Rs. 40,000 recently added as a relief measure during the COVID-19 lockdown. Even with this added budget, the allocation of Rs 1 lakh crore, as a percent of the GDP is just around 0.48 percent. This is much less than the recommendation of 1.7 percent of the GDP by World Bank economists (Murgai and Ravallion 2005) for the programme to run robustly in normal times.

At a time when India is going through a severe economic tailspin, NREGA is an important way to enhance social protection and thereby reduce the risks of the most vulnerable. With the extended periods of lockdown the loss of employment is likely to have pushed many more people to the margins. It is in these grim settings that there is an urgent need to boost rural demand through employment generation by strengthening the NREGA.

The Act has been plagued for the past few years with low budget allocations, massive delays in payments, and low wage rates. Any research on its implementation, challenges and efficacy would be incomplete without understanding the last mile delivery. As more and more programmes are shifting to direct benefit transfers, with similar financial infrastructures, we hope that this research is useful to understand some common themes.

In this report particularly, the focus and emphasis is on the challenges and positives of last mile delivery, i.e., what happens after the wages are credited to the workers' bank account. Thus, we conducted the survey in three states with 1947 NREGA workers and field functionaries like the block computer operators, bank officials and other NREGA field staff. We begin this report with the Background and Context of NREGA and financial inclusion. In Section 2, we discuss the funds flow process and the main issues with the last mile delivery of NREGA payments. In Section 3, we present the main questions of the last mile survey. In Section 4 we present the survey methodology and present the limitations of the survey in Section 5. We present the main findings of our 3 state survey in Section 6. Apart from basic demographic details about the individuals, we tried to understand the payment agency they used to access their wages - Banks, Post Offices, Customer Service Points (CSPs) or Business Correspondents (BCs) and Automated Teller Machines (ATMs). We tried to understand the awareness they had about their rights with respect to the disbursement agency of choice. For the disbursement agency they used most commonly, we tried to understand their experiences with respect to time taken, cost incurred, transparency, preference of disbursement agency among others. We also focus on the issue of rejected payments in NREGA and aspects of grievance redressal. We discuss some recommendations in Section 7. The Appendices contain all the mathematical and statistical underpinnings of some quantitative exercises done in Section 6. In the Annexure, we provide a minimal 'Know Your Rights' (KYR) framework that should be put up in every disbursement agency. This is one way to ensure the workers are aware of their banking rights.

1 NREGA: Background and Context

In the last two decades several rights-based legislations like the Right to Education (RTE), the National Food Security Act (NFSA) among others have been introduced to fructify our constitutional rights. The 'Right to Life' enshrined under Article 21 of the Constitution of India includes in its ambit the 'Right to Work'. As the Supreme Court of India has held in multiple cases, the ambit of 'Right to Life' is not limited to mere survival but also includes the 'right to live with human dignity'[1] along with 'right to livelihood'.[2] In this regard, the National Rural Employment Guarantee Act (NREGA) is a landmark legislation and a key aspect to enable the realisation of 'Right to Life' through 'Right to Work'. The Act as notified on 7th September, 2005, mandates 100 days of guaranteed work to every rural household whose adult members are willing to do unskilled manual work.

NREGA's provisions amount to justiciable rights – the right to work on demand, the right to unemployment allowance if work is not provided within 15 days, the right to payment of wages within 15 days, right to a delay compensation if payments are delayed beyond 15 days, the right to minimum wages, mandatory social audits, essential worksite facilities, among others. In addition to the worker-centric rights, the Act envisages relief from ecological and agrarian distress. The relief objective is intended to be achieved through the creation of long-term sustainable assets for water and soil conservation, drought proofing, renovation of water bodies, rural connectivity, amongst others.

The universality of NREGA has allowed it to be widely accessible across the rural population. Employment-Unemployment Survey data of National Sample Survey Office (NSSO) indicates an eightfold increase in participation in public works between the periods 2004-05 and 2009–10. In 2018-19, close to 80 million (8 crores) people worked under NREGA. Overall, 1 out of 3 rural households had worked in the programme. NREGA has particular significance for economic mobility amongst historically and socially marginalised groups - Scheduled Castes (SC), Scheduled Tribes (ST) and women. Every year, around 40 percent of households employed under NREGA belong to SC and ST groups which constitute 30 percent of the rural population. The scheme has allowed for 'lower' caste agricultural labourers to access wages higher than those arbitrarily set by the 'upper' caste landlords otherwise. NREGA also provided an opportunity for many women to enter the paid workforce. In the last five years, more than half of all the NREGA work was done by women. With labour wages deposited directly in their bank accounts, women's financial autonomy and economic mobility had increased.

From a governance standpoint, the Act enshrined strong principles of transparency, accountability, and democratic participation. The planning and decision of NREGA works were to be taken at the Gram Sabhas and implemented through the Gram Panchayats. The objective was to redistribute the power structures so that the poor and the vulnerable get a stake in the decision making process. The experience of such decentralised decision making however has been mixed.

Through the Management Information System (MIS), there has been a proactive disclosure of information online about various aspects of NREGA. It is a transaction-based, real-time system that is made available in the public domain. Most of the processes in NREGA have been digitised, right from registration of work demand, through work allotment, to finally getting wages for the completed works. The MIS displays this information through online reports at various levels of disaggregation. The sheer scale of information available on implementation is no mean achievement. Individual worker details from around 2.5 lakh gram panchayats are available in the NREGA MIS.

While it is impressive that all NREGA data is available in the public domain for scrutiny, its accessibility to workers remains a serious challenge. Mandatory proactive disclosure of information is a legal mandate under NREGA. However, critical information for workers on work and wages remains confined to digital screens that impede last mile information dissemination. While computerisation of all transactions may be useful, implementation should not depend entirely on digitisation. The use of a real time system has made it easier for officials to pass on the baton of accountability. One should be mindful that an information system doesn't directly translate into granting legal rights. There are several ways in which the MIS has been used to scuttle workers' rights (Dhorajiwala and Narayanan 2016; Aggarwal 2017; Nandy 2018). For instance, unless work demand is registered on the MIS, it is not possible for a worker to seek work under NREGA. A host of information about work done, payments under process and payments credited is available on the MIS. However, the design and structure of the MIS is administration-facing and not worker centric. The MIS should be transparent for the workers, and not just for the officials. Further, the MIS also centralises control and conceals the liabilities of the government. Centralisation has often caused several cases of diverted payments (one person's payments going to somebody else's accounts) (Narayanan, Dhorajiwala and Paikra 2017; Narayanan and Dhorajiwala 2019b), rejected payments, and suspended payments to name a few. In this context, Dhorajiwala (2018), Drèze (2018) and Nandy (2019) give examples of the manner in which workers' accessibility has been compromised. Aadhaar based payments have been a tool for

centralisation. By arguing that the violations of 'Right to Life' due to imposition of Aadhaar has gained scarce attention, Khera (2017) presents a detailed account of the nature of exclusions arising in four different welfare programmes including NREGA. The paper also demonstrates the misleading claims on 'savings' that the government has routinely alluded to with respect to the Aadhaar project.

NREGA has also paved the way for financial inclusion in the country. NREGA payments switched from cash payments to bank payments as early as 2008 (Vanaik & Siddhartha, 2008). This was done primarily to separate the paying and the implementing agencies. It has been successful to some extent in reducing corruption, enabling financial inclusion of the vulnerable, particularly women. However, as mentioned earlier, the direct transfer of wages to bank accounts, without accountability norms of the various parties involved in the cash transfer, is fraught with a host of problems for the workers.

1.1 Financial Inclusion

In the context of NREGA, it is important to understand the focus on financial inclusion in the country. NREGA and efforts for financial inclusion have grown separately in the country but have had an impact on each other to a great extent in rural India. Financial inclusion has been a central preoccupation for many governments and policy makers in India for decades, and gained momentum through NREGA. The effort and zeal that has gone into this project is a remarkable achievement. Financial inclusion has to be understood as an affirmative action against financial exclusion as there is a strong correlation between financial exclusion and poverty. An early articulation of financial exclusion was made by Leyshon and Thrift (1995) where they defined it as 'those processes that prevent poor and disadvantaged social groups from gaining access to a financial system. It has important implications for uneven development because it amplifies geographical differences in levels of income and economic development.'

Using bank branch data from the Reserve Bank of India (RBI), poverty headcount data from the National Sample Survey, agriculture wage data, among other sources, Burgess and Pande (2005) demonstrate that branch expansion into rural unbanked locations significantly reduced poverty. With technological advances, the costs of running rural banks will also be significantly lower now. Moreover, when the outcome is a significant reduction in poverty due to more bank branches, any additional infrastructure costs should be imperative from a policy perspective. There is also evidence indicating high correlation between bank branches and increase in GDP of India (Iqbal and Sami 2017). These necessarily point to a need to increasing rural bank penetration.

In 2013, the committee on 'Comprehensive Financial Services for Small Businesses and Low Income Households' under the chairpersonship of Nachiket Mor submitted a detailed report to the RBI. The terms of reference included 'To frame a clear and detailed vision for financial inclusion and financial deepening in India' and 'To lay down a set of design principles that will guide the development of institutional frameworks and regulation for achieving financial inclusion and financial deepening.' Some of the key recommendations outlined to be achieved by 1st January, 2016 were: (a) every Indian should have a secure electronic bank account, (b) the number and distribution of electronic payment access points would be such that every single resident would be within a fifteen minute walking distance from such a point anywhere in the country. Each such point would allow residents to deposit and withdraw cash to and from their bank accounts and transfer balances from one bank account to another, in a secure environment, (c) sufficient access to affordable formal credit, and (d) Right to Suitability.

The Mor Committee report also makes an astute, noteworthy comment: 'While there is no question that there is a continuing need to explore new ideas; learn from the experiences of other nations; and benefit from new technologies; perhaps it is not the best regulatory strategy to centrally pick one approach no matter how convincing it may seem and to push the entire system in that particular direction to the exclusion of all others. A better approach may instead be to articulate a clear vision; establish a set of design principles; and then to permit all strategies, new and old, to flourish or to die out based on their inherent strengths and weaknesses.'

1.2   NREGA Wage Payments Over the Years

In the earliest phase of NREGA, wage payments were made in cash through the Gram Panchayat (GP) administration. The amounts would be received in the account of the GP and disbursed in cash to workers in a public place for the works for which the GP was the implementing agency. In the subsequent system a pay order with the names and amounts of workers who had to be paid was created and the bank manager transferred the money into the accounts of the workers. In 2008, state governments were specifically instructed to open accounts for workers in banks and post offices to ensure that the implementing agency is different from the payment agency (Ministry of Rural Development 2008). Alternatively, payments were made from the Gram Panchayat in the form of account payee cheques to workers. Exceptions for cash payments were to be made only for places where the networks of banks or post offices were weak. In that case, payments were to be made in the presence of a Payment Committee. The guidelines have important markers to ensure that bank accounts for women are opened and operated by them, so as to increase facilitation for women's financial autonomy. They also have many progressive instructions for states to ensure that nobody is excluded from the programme due to payment related issues. Strict norms for transparency, such as, payments to labourers in public, reading aloud of wage slips while making entries in the job cards are also included. Additionally, the guidelines stress that, 'As far as possible, the design of Bank Passbooks should be such as to facilitate the monitoring of NREGA payments, e.g. through matching of passbooks with Job Cards and/or Muster Rolls.' Consequently, workers themselves expressed preference for wage payments in bank accounts (Adhikari and Bhatia 2010). However, they also caution that unless banks are brought within the ambit of strict transparency and accountability norms of the Act, NREGA workers will be at risk of being exploited.

> *Paper records, wall paintings and wage slips had completely disappeared from the vocabulary of NREGA officials and workers.*

Following the opening of new bank accounts, the NREGA MIS was purported to be a new chapter in transparency of payments to workers. Drèze and Sen (2013) write 'NREGA has been a lively laboratory for anti-corruption efforts.' All the details such as household level information, work demand, work done, and payments due are entered on the

NREGASoft, a software developed by the National Informatics Centre (NIC). In this backdrop in 2012, the Ministry of Rural Development (MoRD) introduced the electronic fund management system (e-fms). E-fms would enable wage payments directly to the workers' bank accounts. In this system, the state government transferred money to people whose banks had an internet-enabled network banking capability, popularly called 'core banking facility.' Eventually, most banks have developed such a core banking capability.

It was reiterated in the NREGA guidelines of 2013 (Ministry of Rural Development 2013), that the implementing agency should be separated from the payment agency. A much greater emphasis was paid on reducing delays in wage payments. Another important aspect of the guidelines was the stress on transparency and communication with workers. Distribution of wage slips, door to door contact programmes, wall paintings, and sms to workers were suggested as a means to ensure that workers are informed. Many of these provisions were progressive and worker centric. Figure 1.2(a) from the NREGA operational guidelines (Ministry of Rural Development 2013) emphasises informing workers about crediting of wages through SMS.

Figure 1.2(a):

SMS Alerts for Important events

SMS Alerts for important events

The MIS should include mobile numbers on which SMS alerts of important events (in case the beneficiary has agreed to list his number) would be automatically sent. This is to ensure that the workers are proactively informed of various details of the implementation cycle. For instance, as and when wages are credited to individual accounts of workers, an SMS alert would be generated by NREGASoft and sent to the mobile number that has been furnished.

Over the years, the emphasis on transparency of information for workers has been reduced. Instead, the availability of information on the online MIS has become the only channel of information for the field functionaries and workers alike. Based on our continued engagement in Jharkhand and Rajasthan, the field functionaries have said that if the worker had any questions about work or wage payments, they would ask the computer operator in the block or inquire at the bank. Paper records, wall paintings and wage slips had completely disappeared from the vocabulary of NREGA officials and workers. In the years leading up to 2018, postal payments were slowly tapered off across the country except for a few regions. The decline of post offices as payment agencies was partially based on the reasoning that post offices did not have core banking capabilities and so experienced many delays and corruption.

The NREGA payment systems have undergone further centralisation since 2016, when the MoRD introduced the National electronic - fund management system (Ne-fms). The Ne-fms enabled direct transfer of payments to workers from the central government through a notional account of the Ministry of Finance. Ne-fms was rolled out in two phases and was applicable to the entire country by October, 2016. The main objective of introducing Ne-fms was to streamline funds flow and reduce delays in payments to workers. The Ne-fms payments were undertaken through account based payments (ACH/NACH)[3] and Aadhaar based payments or the Aadhaar Payments Bridge System (APBS). In account based payments, the bank account number, the IFSC and the name of the account holder are used to identify and make the transfer. In Aadhaar based payments, the 12 digit Aadhaar number is used as the financial address. While the process of shifting towards Aadhaar based payments started in 2013, a major push came from the government from 2014-15. This was a part of the National Democratic Alliance (NDA) government's flagship Jan dhan, Aadhaar, Mobile (JAM) trinity. In NREGA, Aadhaar plays a role at three levels:

1. Seeding the Aadhaar numbers of the workers with the NREGA job card.

2. Making the payment through the Aadhaar Payment Bridge System (APBS), wherein the Aadhaar is the financial address of the individual.

3. Withdrawing money from Customer Service Points (CSPs)/ banking kiosks or through Business Correspondents (BCs) through Aadhaar based biometric authentication. This requires the individual to seed their bank account with their Aadhaar number. This is known as Aadhaar enabled Payment System (AePS).

The local government bodies at blocks were instructed to collect the Aadhaar, bank account and job card details of workers and ensure that most workers were shifted on to the APBS platform. In colloquial terms, the combination of the APBS and AePS has come to be known as Direct Benefit Transfer (DBT). It is instructive to note that the earlier systems such as e-fms and Ne-fms could also be referred to as DBTs, however for field functionaries, DBT has become solely synonymous with Aadhaar based payments. All the field functionaries we spoke with have told us that they had to meet strict targets for Aadhaar seeding. Bank managers, Gram Rozgar Sahayaks (GRSs), computer operators all confirmed that the seeding was done with fixed targets and that they were pressurised if the targets weren't met. The supposed rationale for shifting payments on to APBS was to ensure that the money was transferred to the correct individual and the delays in payments are reduced (see also Dhorajiwala and Wagner 2019; Dhorajiwala, Drèze and Wagner 2019).

Figure 1.2(b) -
Ne-FMS Wage Process Flow

GP/block functionary generates e-pay order (FTO) → MNREGA Server → PFMS Server → **PFMS** fund release module **MoRD** release order → **MorD officials** makes and sends release order to Accredited Banks	

NPCI routes OR as per the directions of Dept. of Expenditure time to time the files to the Beneficiary bank for credit into workers account ← **Sponsor Bank** debits the account to transfer the funds to workers by Sending file to NPCI ← **Accredited Bank** Credits the Bank a/c of States in a State Sponsor Bank

Beneficiary banks processes, credits and share the responses using NPCI route OR as per the directions of Dept. of Expenditure time to time to Sponsor bank along with IIN, a/c No and name of a/c holder → **Sponsor Bank** send response files to PFMS for all transactions (OFFUS/ONUS) → PFMS shares response files with NREGASoft → **NIC-RD** reflects the responses on NREGASoft

As outlined, the NREGA wage payment process and other payment related measures have gone through several changes over the years. Some of the steps taken have been in the right direction. Corruption in bank payments reduced to some degree and the scope of transparency and proactive disclosure increased through disbursal of wage slips and reports on the MIS. The Global Findex Survey (World Bank 2017) estimates that 80 percent of Indian adults now have a bank account. Personal bank accounts for women and other vulnerable sections of society have led to an increase in their access to financial institutions. The evolution in payment methods also simplified the payment structure for the administration.

However, many of the changes brought about have also given rise to hardships and confusion among workers. While an estimated 77 percent of women have bank accounts, almost half of those are inactive (Kohli 2018). And delays in wage payments to workers continues to haunt the programme. In the course of our work we have identified multiple stages when delays occur (Narayanan, Dhorajiwala and Golani 2019). Under the current system of payments, a successful payment could get delayed broadly at the following three stages:

- **Stage 1:** At the state level, in getting the muster details uploaded and the Funds Transfer Order (FTO) generated.
- **Stage 2:** At the central level, when the funds have to be released as per the FTOs and transferred directly to the workers' bank accounts.
- **Stage 3:** When there are delays while accessing wages earned after they are credited in the respective accounts.

Stage 3 delays are not as easily quantifiable as stages 1 and 2. The third stage is more precarious for workers than the first two because of its direct impact on workers. Not only do the procedural delays hamper workers' access to their wages but the complexities involved often give rise to newer forms of hardships. Even if wages have been deposited on time, workers may face problems while accessing them at the disbursement agency. Some of the hardships experienced during the third stage delay may include waiting in lines for several hours, losing wages due to high waiting time, travelling in extreme weather conditions, having to give up spending time with children or bearing opportunity cost while making multiple trips to the payment disbursal agency. Over the years, delays in wage payments stood out as the most common grievance for workers across many regions. Indeed Narayanan et al. (2017) demonstrate that workers get discouraged to take up NREGA work due to delays in wage payments. On a comparative note during our survey on last mile challenges, we have found a positive deviation in AP. In AP, there were greater measures of transparency such as - work done was updated in the workers' job cards and wage slips were pasted on them. We later found that such updates happened right before social audits are conducted. In Butchayyapeta (our surveyed block) a social audit had concluded just before our survey.

2 Length to the Last Mile

Delays in payment of wages have been the most central concern for NREGA workers. As outlined in the previous section, from the workers' perspective, the entire delay of payment of wages can be split into three stages. To understand the delays in the first 2 stages, we conducted a detailed analysis of over 9 million NREGA wage transactions for the Financial Year (FY) 2016-17 in 3446 randomly sampled panchayats across 10 states (Narayanan, Dhorajiwala and Golani 2019). Stage 2 delays alone were more than 50 days. We followed up with a similar analysis for the first two quarters of the FY 2017-18 and found that only 32 percent of the payments were made on time (Narayanan, Dhorajiwala and Golani 2018). However, Stage 3 delays can only be found through surveys as information pertaining to delays in this stage is not captured in any existing data source.

For delays in stages 1 and 2, workers are entitled to a delay compensation -- a penalty -- payable by the central government in case the workers don't receive their wages within 15 days of completion of work. As per the Act, the delay compensation (0.05 percent per day of the wages earned) should be calculated based on delays in stage 1 plus delays in stage 2. However, the MIS calculates only stage 1 delays and the delay compensation is also calculated only corresponding to stage 1. When delay compensation is calculated only for stage 1, we refer to it as partial delay compensation. The actual delay compensation is the penalty amount for delays in stage 1 plus the penalty amount for delays in stage 2. Consequently, when the states generate pay orders on time, and the delay is solely due to the time taken by the Centre (stage 2) then no delay compensation is being calculated in the MIS. In 47 per cent of the transactions analysed, only partial delay compensation was calculated and no delay compensation was calculated for 32 per cent of all the transactions analysed.

In response to a newspaper article (Narayanan, Dhorajiwala and Golani 2017) based on the study of payment delays, the Department of Expenditure, Ministry of Finance, issued a memorandum on August 21, 2017 titled 'Note on Delay in Payments in MGNREGA.' It was categorically stated in the memorandum that 'the current rules do not compute or compensate the delay in payments after the generation of FTOs [Fund Transfer Orders]. It is true that between 10 and 15 lakh pay orders are issued on an average day and delays are due to infrastructural bottlenecks, (un)availability of funds and a lack of administrative compliance.'

The matters concerning violations of NREGA, such as payment delays and under-calculation of delay compensation thereof were heard by the Supreme Court of India in the Swaraj Abhiyan vs Union of India in a writ petition (civil) number 857 of 2015. The findings of that study highlighting the extent of underestimation of payout delays were submitted to the Supreme Court (SC). The SC took cognizance of the findings, and the final orders [4] dated May 18, 2018, state that 'We also cannot countenance the view advanced by the Central Government that it has no responsibility after the second signature is placed on the FTO. The wages due to the worker in terms of Stage II above must be transferred immediately and the payment made to the worker forthwith failing which the prescribed compensation would have to be paid. The Central Government cannot shy away from its responsibility or taking advantage of a person who has been placed in the unfortunate situation of having to seek employment under the Act and then not being paid wages for the unskilled manual labour within the statutorily prescribed time. The State Governments and Union Territory Administrations may be at fault, but that does not absolve the Central Government of its duty.'

Despite being reprimanded by the SC, the ministry has not reported the true extent of delays and continues to renege its responsibility to compensate workers for the entire duration of the delay. Table 2a shows the number of days taken to complete stage 1 and stage 2 of the payment process in Jharkhand and Rajasthan from the earlier study.[5] For more details see Narayanan, Dhorajiwala and Golani (2019).

Table 2(a): *Stage 1 and Stage 2 Payment Delays in Jharkhand and Rajasthan*	Delay (in days)	Stage of payment	Jharkhand	Rajasthan
	When FTO is delayed	Stage 1	46	33
		Stage 2	13	57
	When FTO generated within 15 days	Stage 1	--	9
		Stage 2	--	12

The issue of delays in wage payments cannot be seen only as a technical cash transfer problem. One possible direct reason for inordinate delays in stage 2 is inadequate funding for the programme. While the nominal budget for the programme has increased, adjusting for inflation, the budget has actually decreased over the years. In real terms, the budget allocation for 2019-20 is lower than that of 2010-11. Over the last six years, on average, we have found that about 17 percent of each year's allocation are pending payments from previous years. This implies that funds dry up by the end of the first half of each financial year, leading to high arrears carried forward to the next year. Further, the inflation-adjusted budget allocation has been abysmally low leading to the programme being implemented in half its capacity. Figure 2(b) shows the inflation-adjusted budget over the years.

Figure 2(b):

Nominal Revised Allocation vs. Inflated-Adjusted Allocation over Financial Years from 2010 to 2020
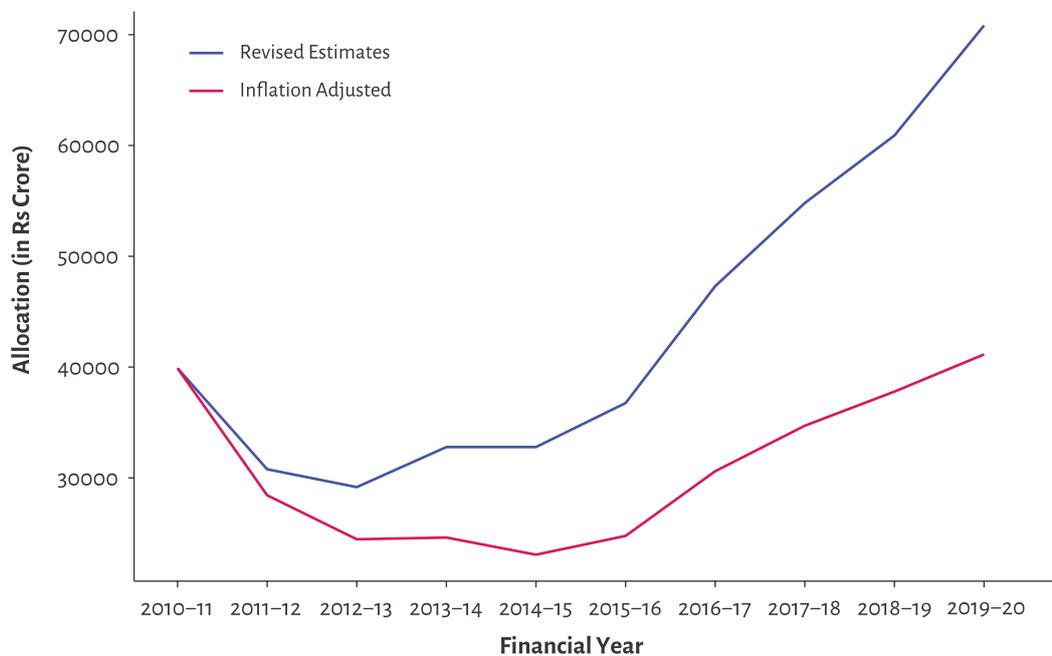
Narayanan and Pothula (2018) discuss other forms of funds truncation making NREGA a supply driven programme thereby further exacerbating the delays in wage payments.

2.1 Delays in wages payments in our sample

In the survey we intentionally chose to sample for payments in three equal categories: people with rejected payments, people whose wages were credited within 30 days of completion of work and people for whom it took more than 30 days for the wages to be credited. The individuals whose payments were rejected, didn't have access to their wages at the time of the survey. When we refer to a delay in the report, we allude to the delay in crediting to the worker's account i.e., stage 1 plus stage 2. The figure 2.1(a) shows the distribution of delayed transactions for our sample. Less than 50 percent of payments in our sample were credited in the accounts of workers within the stipulated 15 days.

As mentioned earlier, usually, NREGA budgets get exhausted around October. This in turn results in delays in payment of wages of workers who work during the third and fourth quarter of each financial year. There is usually a supplementary allocation in the beginning of the fourth quarter of each financial year. As funds deplete, the central government releases funds in smaller tranches. However, the supplementary allocations are usually inadequate. As such the delays in wages payments continue. In our sample, we found that as the year progresses, the number of days for the government to credit increases with a peak around September and another peak during the last quarter. Figure 2.1(a) is calculated on the basis of the dates when the work was done. Thus, individuals who work around September experience the highest amount of delays. And those who work in the beginning of the financial year receive wages faster because of availability of funds.

Figure 2.1(a):

Average delay of payment across year 2017-18 shown as number of days taken for wages to get credited in a given month
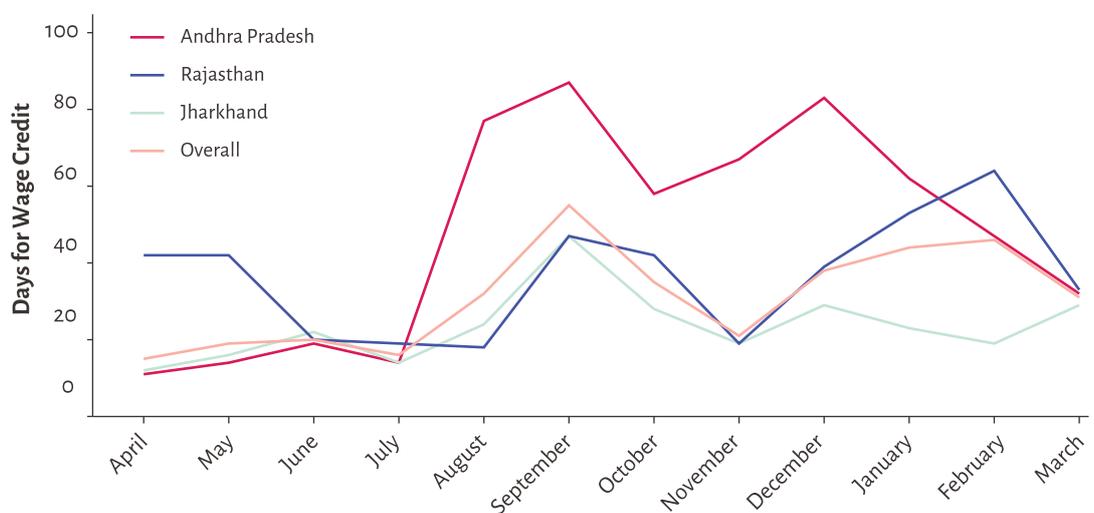
3 Research Questions for the Survey

There is a direct bearing of low budgetary allocation to stage 1 and stage 2 delays. Through our continuous engagement in various states over the years, we noticed that workers often had no information on when their wages got credited. Even in cases where some workers knew that their wages got credited, they often had to make multiple visits or spend long hours withdrawing money. We conducted this 3 state survey to try and systematically tease out some of these hardships. This helps understand the challenges workers faced in the last mile i.e., the journey of the money from the bank account to the hand via the disbursement agency. In addition to that, the survey also tries to understand whether certain preconditions exist to enable an aware and informed worker to improve her experience. Some overarching research questions with regard to this are listed below.

Shankar Singh of MKSS discussing the importance of timely payment of wages for NREGA workers during the survey training in Rajasthan

- What proportion of the payment transferred by the government actually reaches the intended people?
- How long does it take for the money to reach the intended beneficiaries once it is wire transferred by the government? In particular, we would like to quantify the delays at each step of the payment process, and understand the process from the perspective of the agents involved in it.
- What kinds of financial documentation do recipients have? Is it updated such that an account holder could review her account at will?
- Are basic rights of account holders fulfilled in interactions with payment agencies?
- What kind of documentation do financial intermediaries maintain at the last mile? What information is available in the public domain, and what challenges does it create for transparency?
- Are there differences in performance between payment agencies. If yes, what factors explain this difference, and what are some practices that could be adopted more widely?
- Are there information security challenges in the transfer process that create vulnerabilities to embezzlement?

4 Methodology

We interviewed a total of 1947 NREGA workers in one block each of Andhra Pradesh and Rajasthan and 2 blocks in Jharkhand. Along with the individual questionnaire for workers, we conducted semi structured interviews with over 25 field functionaries. The panchayat level field functionary responsible for the implementation of NREGA is known as a Field Assistant (FA) in Andhra Pradesh and as a Gram Rozgar Sahayak (GRS)/ LDC in Rajasthan and Jharkhand. We spoke with some FAs, some GRSs and some LDCs. In addition, we spoke with the programme officers and computer operators at the block, and bank managers at local bank branches.

The worker questionnaire was structured to assess a few broad parameters; awareness of basic banking rights, experience in withdrawing money from the various wage disbursement agencies such as banks, banking correspondents and post office, and access to grievance redressal procedures. Additionally, we conducted an audit of payments (transaction verification) with the workers based on banking transactions that

we crawled from online reports. This included transactions of workers between 15 August 2017 to 14 August 2018 grouped by work name/scheme name to assess the following: whether the worker has worked on that particular scheme, how many days of work she has worked and how much money she has received. This also helped us understand the difference between the official data and the ground reality.

The survey was conducted in Butchayyapeta block in Andhra Pradesh, Jawaja block in Rajasthan and two blocks - Basia and Manika - in Jharkhand. All our discussions and results are presented by referring to the state names instead of the names of blocks. The blocks were chosen by convenience sampling based on the presence of credible civil society organisations. Within each block, we randomly selected 14 panchayats and within each panchayat we targeted to survey 42 randomly selected households. Owing to fewer panchayats in each block in Jharkhand, we had to randomly sample 7 panchayats in each of the two blocks in Jharkhand. We also had some reserve households to survey in each panchayat. As such, while we targeted to survey 1764 households, we ended up surveying 1947 households; 667 households in Andhra Pradesh, 622 in Jharkhand and 658 in Rajasthan.

For each panchayat, 14 households were selected based on three categories: people with rejected payments, people whose wages were credited within 30 days of completion of work and people for whom it took more than 30 days for the wages to be credited. If there were more than 14 people with rejected payments, then we randomly selected 14 such people and if there were fewer than 14 people with rejected payments then we included all of them in our sample and the rest were selected equally from the other two categories. There were no people with rejected payments in Andhra Pradesh so our sample consisted of an equal number of people whose wages were credited within 30 days and those for whom it took longer than 30 days for the wages to be credited.

The rationale behind including all the rejected payments was because the challenges faced by those with rejected payments are unique. Nationally, about one in 20 transactions get rejected. In the last five years, about Rs. 4,800 crore worth of payments were rejected and about Rs. 1,274 crore worth is still pending to be paid to workers. Rejections occur due to technical errors and the workers usually don't know that their payments were rejected. Very often, even the government field functionaries aren't aware of how to rectify rejected payments. Resolving rejections and obtaining wages is extremely tedious for NREGA workers. On many occasions, people with rejected payments drop out of the NREGA workforce altogether.

Since our objective was to assess the challenges faced by workers in the last mile, the survey had to be conducted in the first half of the financial year when the funds crunch is lower. The severity of issues faced by workers increases substantially in the second half of each financial year. Conducting a last mile survey in the second half of the financial year would paint a more severe picture. By doing the survey in the first half of the financial year, what we present are realities when the programme implementation is purportedly at its best. The survey was therefore conducted between September 2018 and November 2018.

For missing and unclear values in the responses, we have used a novel imputation strategy called Multiple Imputations Using Chained Equations (MICE). This imputation strategy ensured that the data distribution of the imputed and the unimputed variables are practically unaltered. Two to three variables had a high percentage of missing values (~15-18 percent). To check the robustness of the calculated hardship scores using imputed values, we removed the variables with highest missing values and recalculated the hardship scores. The margin of error by removing the imputed values was negligible. For sample size considerations, for the sake of clarity and consistency, the reported statistics for the hardship variables are computed using imputed values. Since imputation is involved for some variables, we clarify that what we report are statistical estimates based on the survey and hence subject to some degree of variation. In particular, this method predicts the most probable value for the missing variable by learning from the features of the respondent and other respondents with similar features. As such, the predicted estimates appear statistically reasonable owing to the well tested robustness of the adopted methodology. The details of this approach and the graphs showing the similarity in the distributions of imputed and unimputed data are presented in the Appendix A.1.

Table 4(a) compares the some indicators from official data for the state and the chosen blocks to broadly understand the representativeness of our survey sample.

Table 4(a):

Comparison between state-level and sample proportion of person days of some NREGA parameters for various social groups for FY 2017-18

Andhra Pradesh	Andhra Pradesh	Butchayyapeta
SC Person Days (PD) as % total PD	21.98	6.44
ST PD as % total PD	10.47	0.22
Women PD as out of Total (%)		
Average days of employment per HH	53.75	64.23
Average wage rate per day per person	146.77	124.33
Average cost per day per person (in Rs)		
% payments generated within 3 days	95.82	99.99

Rajasthan	Rajasthan	Jawaja
SC PD as % total PD	21.08	5.38
ST PD as % total PD	21.49	0.22
Women PD as out of Total (%)	65.34	88.82
Average days of employment per HH	53.11	44.24
Average wage rate per day per person	136.84	107.73
Average cost per day per person (in Rs)	181.76	132.36
% payments generated within 15 days	92.15	94.91

Jharkhand	Jharkhand	Basia block	Manika block
SC PD as % total PD	11.05	4.51	16.81
ST PD as % total PD	28.68	58.64	34.59
Women PD as out of Total (%)	37.33	41.55	42.14
Average days of employment per HH	41.03	33.48	44.42
Average wage rate per day per person	167.98	167.85	168.01
Average cost per day per person (in Rs)	256.07	209.24	278.5
% payments generated within 15 days (stage 1)	95.12	96.89	86.4

4.1 Hardship Scores

Based on the experience of people with the wage disbursement agencies, we identified some questions pertaining to reported and perceived hardships. Using these variables, we created a hardship score for each respondent. The hardship scores are on a scale between 0 and 1 where 0 means no hardship and 1 indicates hardship. Since each question used to calculate this score was of a different variable type and had different units of measurement, bringing them on a uniform scale was critical. Questions for this included time taken to access money, cost incurred, difficulty in updating passbooks etc.

There are a total of 8 such questions pertaining to reported hardships for bank payments. For each question we created a cut-off. For example, consider an individual who is a bank user. If the person had to make multiple trips to the bank to access wages for her last withdrawal then we assign a value of 1 indicating that she experienced hardship on this question. Suppose further that this individual reported that she experienced a hardship in 5 out of 8 questions then the reported hardship score for this person is 5 divided by 8 or 0.625. We calculated such hardship scores for each respondent for each disbursement agency. Collating these gives us the distribution of hardship scores that can be spliced by disbursement agency and state.

This approach helped us compare the performance of states across different disbursement agencies and also helped us compare the performance of different disbursement agencies within each state. For example, we found that within Andhra Pradesh, the reported hardships across respondents were lowest for postal payments. Similarly, comparing the reported hardships for banks, we found that Andhra Pradesh had the lowest average reported hardship, followed by Rajasthan. The highest average reported hardship for bank payments was in Jharkhand. These were in synchrony with our experiences of working in each of these states. We further divided the scores into quartiles and came up with four categories of hardships - Low, Medium, High and Very High. In general, the overall hardship levels in the surveyed block in Andhra Pradesh was much lower compared to the surveyed blocks in Rajasthan and Jharkhand.

The Rajasthan Survey team interviewing a NREGA worker about access to her wages.

Three critical methodological questions with this approach need to be mentioned. First, we lose some power by converting some questions such as time and cost into a binary variable. To address this, we also report the distribution of time and cost in their original measured units but a value on a 0-1 scale helps us in combining this with other questions. The second concern would be that the cut-off for what constitutes a hardship for some questions could be considered arbitrary. To this end, we performed robustness checks by considering several cut-offs for hardship on a sliding scale. While the scores themselves changed as a result, the pattern of reported hardships didn't change. It is reassuring that the measure of comparative hardship was invariant to the cut-off. Third, simple average, rightly so, might not adequately capture all the dimensions of variation. To this end, we created two other scores for hardships using two different techniques: Confirmatory Factor Analysis (CFA) and Multiple Factor Analysis (MFA).

Factor scores using both these methods were calculated for each individual based on the same set of questions. We ranked the individuals in ascending order of their simple average hardship scores and also ranked them using the factor scores. Suppose individuals with low simple average hardship scores also exhibit low factor scores and individuals with high simple average hardship scores exhibit high factor scores then the average hardship scores will have high correlation with factor scores.

In particular, we look at rank correlation of these scores which is a more stringent measure of association. We statistically show that their rank correlations are very high implying that using a simple average hardship score is as effective as using any of the factor analysis techniques. The methodological details, robustness checks and the corresponding results from the two different factor analysis techniques are presented in the Appendices.

For the sake of clarity of presentation, we have used a simple average reported hardship score in Section 6. That said, such reported hardship scores should not be considered sacrosanct. They should, instead, be understood more as yardsticks and much like indices such as the Gini coefficient, our score should be seen more as a measure of comparison rather than something absolute.

5 Limitations of the Survey

First, the random sample of panchayats we surveyed are in one block in each state. Owing to fewer panchayats per block in Jharkhand, we surveyed in two blocks in Jharkhand. Therefore, it would not be prudent to draw conclusions about the functioning of the programme in the entire state. However, we have been collectively working on last mile challenges for nearly two decades so the findings and observations from the surveyed block are similar to experiences of people across other blocks in the respective states. Second, in this survey we do not accurately investigate infrastructural issues such as problems due to network connectivity and electricity in accessing wages through Customer Service Points (CSPs) and Banking Correspondents (BCs). These are extremely important and have a direct bearing on the experiences of workers in withdrawing wages. From our experience, biometric authentication failures, lack of network connectivity and electricity have been huge bottlenecks. While we do try and capture issues pertaining to biometric authentication failures, we have not captured the other infrastructural issues. In a different ten survey on the workings of Common Service Centres in Jharkhand (Sabhikhi, Lahoti and Narayanan 2019) that one of us was engaged in, we highlighted the issues faced by people in accessing banking services due to lack of internet and electricity.

Third, we attempted to tease out how NREGA workers interact with the grievance redress mechanisms. What stood out, perhaps due to a routineness of hardships is the general understanding of what constitutes a grievance. This is significantly different

from the perception of grievances expressed by the middle and affluent sections of the society. Even when they experienced severe hardship, workers hesitated to categorise it as a grievance (shikayat) fearing repercussions from the local officials. In few of the villages we also noticed that middlemen had influence over the workers. In a couple of cases after we began the interview, workers refused to continue the survey because they were worried that they would lose work in the future if they spoke with us.

As with any quantitative survey there is the limitation of not being able to capture some nuanced positive or negative experience. For instance, it was difficult to capture some hardships since many of them seemed to have normalised these problems. It was not unusual for people to wait long hours at the bank to withdraw their money and repeated delays beyond 15 days for wage payments weren't considered as reasons to file grievances. This, even though not being paid within 15 days of completion of work is a violation of the Act. In another case, in Barkadih panchayat in Manika block in Jharkhand, the only bridge connecting the panchayat to the block was broken. Consequently, people, including the surveyors had to carry their bikes and cross the river. These issues present huge infrastructural bottlenecks for workers to go to the bank and withdraw their wages. The survey fails to capture such core hurdles.

Surveyors crossing a river in Jharkhand to go to Barkadih panchayat, Manika block, Jharkhand as the bridge was broken.

Despite the limitations outlined above, we hope that the survey results will throw light on some of the experiences that people have at the last mile to access their money. The last mile delivery is not considered when calculating the delays and evaluating the effectiveness of any government programmes, particularly NREGA.

6 Findings

The survey findings are divided into the following sections. Section 6.1 describes the demographic and household characteristics of the respondents. Section 6.2 discusses the various payment disbursement agencies. In Section 6.3 we highlight the range of challenges pertaining to accessing wages and in Section 6.4 we combine various categories of challenges and present perspectives on overall hardships across payment agencies and the states. In Section 6.5 we discuss the specific issues of workers whose payments have been rejected. In 6.6 we discuss the challenges in grievance redressal. In Section 6.7 we have reported the Preference of Payment Disbursement Agencies. Finally Section 6.8 shows the findings of the field verification of NREGA transactions for the workers in our sample.

6.1 Demographic and household details

A total of 1947 NREGA workers were surveyed across four blocks in the three states.

Figure 6.1(a):

Sample population across States/ blocks
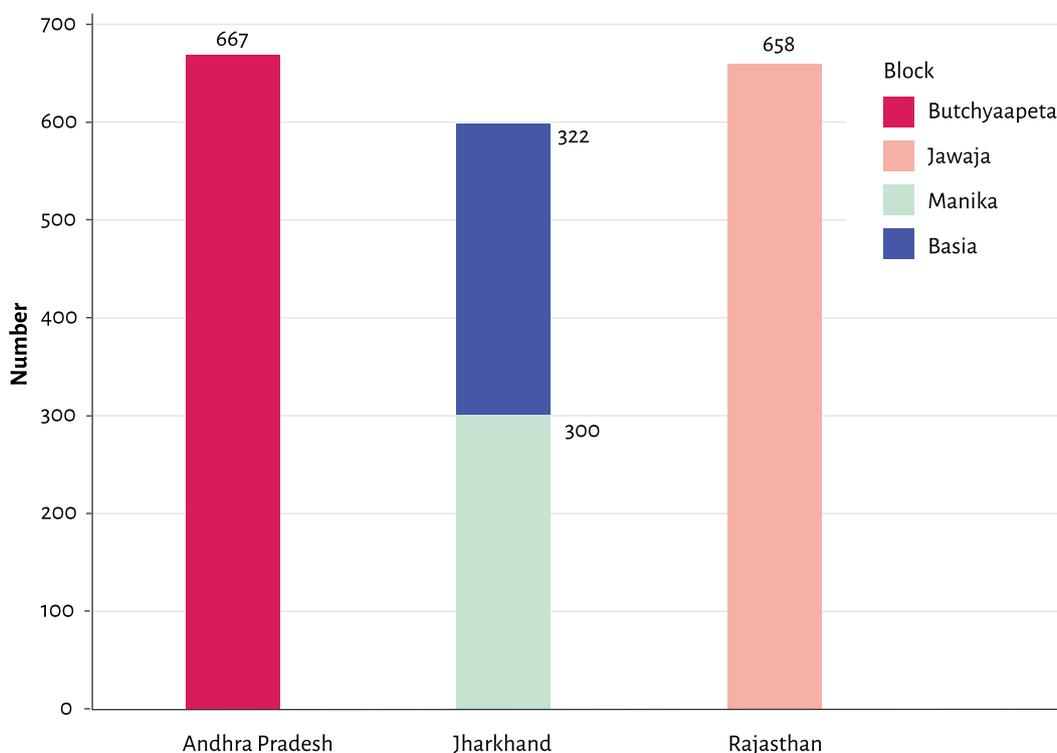
The number of respondents were similar across the three states - Andhra Pradesh (667), Jharkhand (622) and Rajasthan (658).

Majority of the respondents were women in the states of Andhra Pradesh (63.87%) and Rajasthan (85.87%). Most of the men in our surveyed block in AP were involved in construction work outside the district or state. Similarly, men in the surveyed block in Rajasthan seemed to work as migrant labourers in Gujarat or Jaipur. Additionally, in Jawaja block, it was observed that several men in the block worked in the Indian Army. Migration was not so common in the sample households of Jharkhand where workers were engaged in locally available farming or casual labour, aside from NREGA. In Rajasthan, around 80% of women respondents were involved in agricultural or animal husbandry work while those from AP were engaged in agricultural or casual labour as their main occupation.

Figure 6.1(b):

Gender Distribution of Respondents
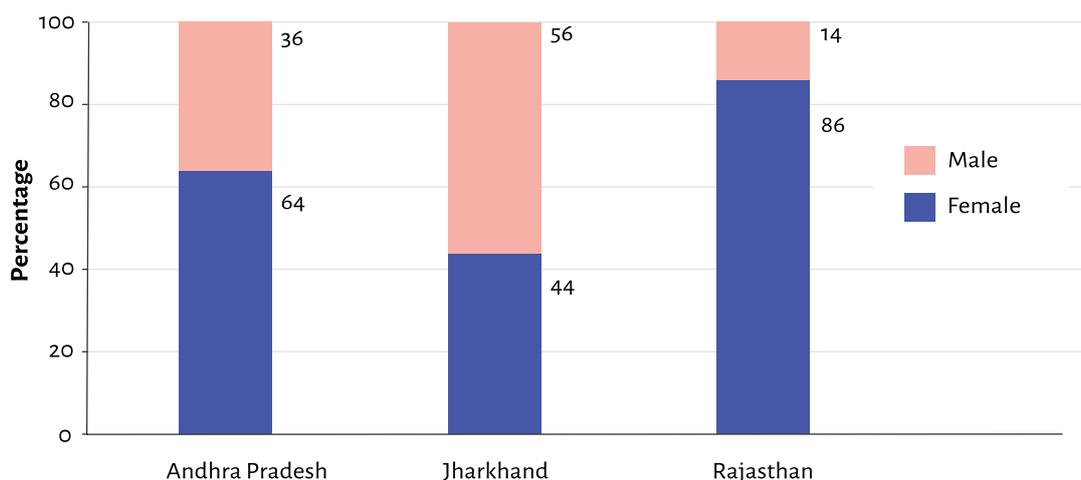
Table 6.1(c):

Percentage of respondents across age groups in the states

Age group	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
<18	0	0.6	0	0.2
18 - 25	4.5	11.7	4.3	6.7
26-35	22.0	31.6	30.4	27.9
36-45	29.1	26.1	26.4	27.2
46-55	21.6	15.4	16.9	18.0
56-65	16.0	10.6	16.1	14.3
>66	6.7	4.0	5.9	5.6
Total	100.0	100.0	100.0	100.0

There is also a notable difference in the participation of women and men across age groups. Amongst respondents from AP and Rajasthan, women are concentrated in the younger age groups while men are concentrated in the older age groups.

Table 6.1(d):

Percentage of respondents across caste groups in the states

Caste	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
SC	9.4	9.8	6.5	8.7
ST	0.0	61.4	1.4	20.3
OBC	51.1	25.3	91.0	57.0
General	38.8	0	0.5	13.6
Others	0.6	3.5	0.6	0.4
Grand Total	100.0	100.0	100.0	100.0

More than 90 percent of the respondents in the surveyed block in Rajasthan and more than 50 percent of those surveyed in Andhra Pradesh belonged to the 'Other Backward Classes (OBC)' . In Rajasthan, the Rawat caste group dominated those from the OBC. Jharkhand's respondents on the other hand, were largely Adivasis (ST). It is also noteworthy that the respondents belonging to the 'General' category constituted about 39 percent of our sample in AP while there were hardly any respondents from the 'General' category from Jharkhand and Rajasthan.

Table 6.1(e):

Distribution of respondents across religions in the states

Religion	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
Hindu	93.9	59.3	96.8	83.8
Muslim	0.0	4.5	2.4	2.3
Christian	6.1	14.4	0.0	6.7
Sarna	0.0	21.8	0.0	7.0
Others	0.0	0.0	0.8	0.3
Grand Total	100.0	100.0	100.0	100.0

As Table 6.1(e) indicates, respondents of all the three regions were largely Hindus. A notable proportion of Christian and Sarna population were observed in Jharkhand's blocks. A small proportion of Muslim respondents were found in blocks of Jharkhand and Rajasthan. Jharkhand therefore had the most diverse respondents across religions and caste groups. Details on education levels and main occupation of the sample households are provided here in Tables 6.1(f) and 6.1(g).

As Table 6.1(f) on education levels indicate, roughly three-fourths of the surveyed respondents in Andhra Pradesh lacked literacy. The surveyed block, Butchayyapeta, has lower levels of literacy compared to other blocks in Andhra Pradesh. Similarly, a significant proportion -- more than 60 percent -- of the respondents of Rajasthan lacked basic literacy. Interestingly, close to one-fifth of all the NREGA workers interviewed in Jharkhand had education levels beyond class 10 and about 3.5 percent of them had studied beyond the twelfth grade. In comparison, the number of NREGA workers we interviewed in Andhra Pradesh and Rajasthan who had studied beyond class 10 was minuscule. This is interesting and perhaps reflects an overreliance on NREGA as an employment opportunity for Jharkhand regardless of their education levels. It is not common for people who have studied beyond class 12 to work on NREGA as a source of employment.

Table 6.1(f):

Level of education attained amongst respondents in the states

Education levels	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
Illiterate	73.8	40.1	61.1	58.7
Literate (below primary)	7.0	14.9	14.7	12.2
class V	10.3	11.5	12.5	11.4
class VIII	3.0	15.5	7.4	8.5
class X	4.5	9.5	2.7	5.5
class XII	1.0	5.0	0.8	2.2
Above class XII	0.3	3.5	0.8	1.5
Grand Total	100.0	100.0	100.0	100.0

Nature of Employment	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
Agriculture/Animal husbandry	18.9	12.8	8.4	13.4
Self-employment	3.7	1.3	1.1	2.1
Casual labour	25.2	16.7	7.0	16.3
Agriculture and casual labour	51.1	67.3	81.0	66.4
Regular employment (naukri)	0.0	0.5	0.3	0.3
Remittance, pension etc	1.0	0.6	1.1	0.9
Others	0.0	0.8	1.2	0.7
Grand Total	100.0	100.0	100.0	100.0

Table 6.1(g): *Main occupation of sample households across the states*

Respondents from each of the three states were largely agriculture or casual labourers, or marginal farmers. This was also on expected lines as employment in casual labour is a reasonable alternative for NREGA workers.

6.2 Disbursement Agencies

As outlined in Section 1.1 , the NREGA wages are electronically transferred to the workers' bank or postal accounts. In an attempt to facilitate financial inclusion and improve last mile service delivery, additional disbursement agencies have been created. In our survey, we interviewed workers across the following exhaustive disbursement agencies.

- Bank Branches: Brick and mortar branches that offer the full range of financial services.
- Customer Service Points (CSP): CSPs are banking kiosks or service points where customers have access to limited banking services such as deposits and withdrawals up to a certain amount, and inquiry about their bank balance. These are usually small shops, operated by individuals in a public-private-partnership model located in panchayats or blocks. They require customers to authenticate transactions with Aadhaar-based biometrics. This biometric based transaction platform is provided by the National Payments Corporation of India (NPCI) in liaison with banks and is called Aadhaar enabled Payment Service (AePS).
- Business Correspondents (BCs): Business correspondents, also known as Banking correspondents, usually travel with a point of sale (PoS) machine across villages and do small banking transactions. BCs require customers to authenticate transactions through Aadhaar-based biometrics.
- Post Offices
- Automated Teller Machines (ATMs)

Figure 6.2(a):

*State-wise distribution of payment disbursal agencies*
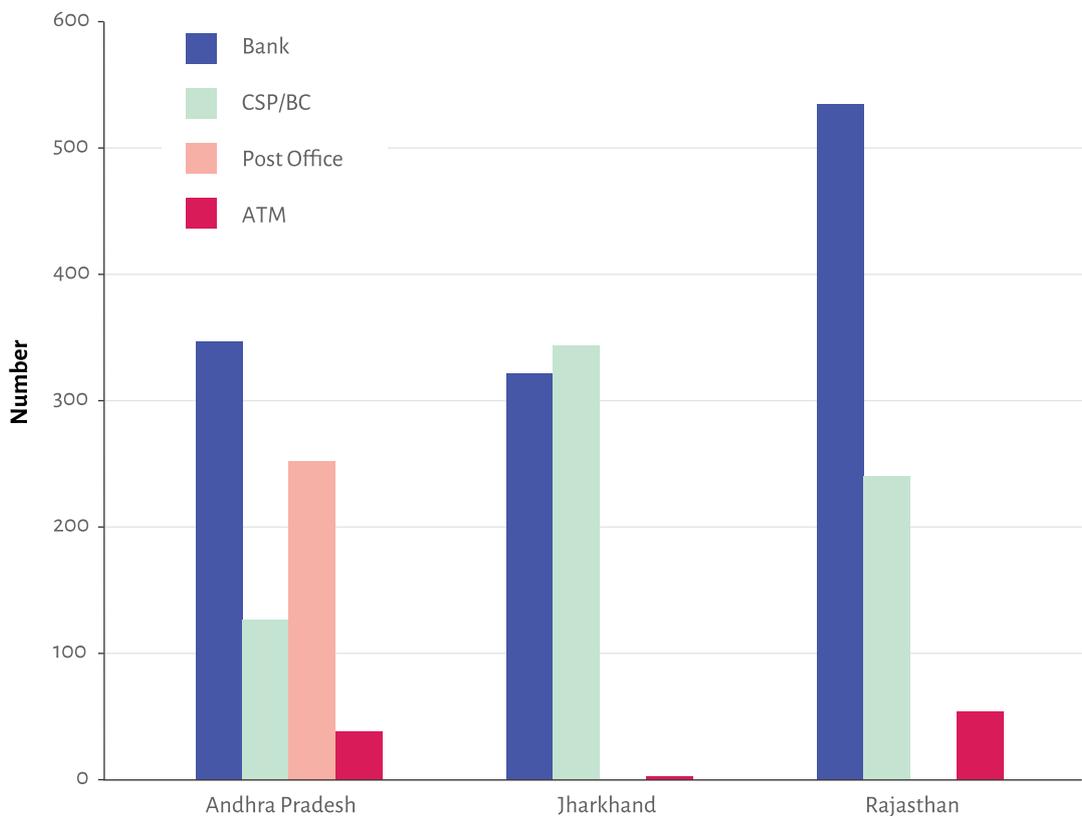
Figure 6.2(a) shows the state-wise distribution of payment disbursement agencies. Several respondents use more than one disbursement agency. However, all the respondents have a primary agency that they access regularly for withdrawal of wages. Figure 6.2(a) shows the cumulative number of workers using a particular payment disbursement agency. For instance, if an individual primarily uses banks but also uses CSP, it will reflect in the count of banks as well as CSP.

Banks are the main disbursement agency in each of the three states followed by CSP. NREGA wages are disbursed through post offices only in Andhra Pradesh. In Jharkhand, the usage of CSP and banks are comparable. Across the three states, the usage of ATMs is not as widespread as other agencies. While 93 individuals reported that they did indeed use the ATM, among them only 15 exclusively used the ATM to withdraw their money.

Table 6.2(b) shows the distribution of disbursement agencies by the primary and secondary choice of disbursement agency. And the shaded cells are the number of respondents who use a single disbursement agency. That means, 889 people use only banks, 319 use only the CSP and 15 individuals use the ATM exclusively and 252 use only the post office.

The first column in Table 6.2(b) is the primary disbursement agency and the first row is the secondary disbursement agency. Therefore, for 237 people, the bank is the primary disbursement agency, but who also use the CSP sometimes. 56 people reported that they use the bank as the primary disbursement agency but have also used the ATM sometimes. Similarly, 157 respondents used CSP as their primary disbursement agency, however they also went to the bank sometimes.

Table 6.2(b):

Distribution of primary disbursement agencies accessed by respondents across States*

	Secondary Choice of Payment Disbursal Agency				
Agency	Bank	CSP/BC	ATM	Post Office	Total
Bank	889	237	56	0	1182
CSP/BC	157	319	0	0	476
ATM	22	0	15	0	37
Post Office	0	0	0	252	252
Total					**1947**

(Primary Choice of Payment Disbursal Agency)

* Regardless of the users' primary disbursement agency, if they withdraw wages from any other disbursement agencies we have captured and reported their responses for both agencies.

	Andhra Pradesh	Jharkhand	Rajasthan	Grand Total
Nationalised Bank	62	71.7	97.7	77.2
Co-operative Bank	0.1	2.9	0.5	1.1
Private Bank	0.0	0.3	1.5	0.6
Post Office	37.8	0.0	0.0	12.9
Regional Rural Bank	0.0	24.3	0.2	7.8
Missing Values	0.0	0.8	0.2	0.3
Overall	100.0	100.0	100.0	100.0

Table 6.2(c):

Percentage of respondents in each state for each disbursement agency

Table 6.2(c) indicates that a significant majority of the respondents withdraw their wages from a nationalised bank.

6.3 Dimensions of challenges assessed

A quarter of the questionnaire was focussed on understanding the experiences of workers with banking systems concerning NREGA wages. The qualitative and quantitative responses collected indicate the quality of services provided, and helped us understand the consequences and hardships for workers when services fail. Digitised banking systems introduced over the years were aimed at improving the efficiency of public service delivery. While there are some positives like increased access, there are shortfalls in the translation from intent to implementation. This section shows that digital and banking services in and of themselves do not improve financial accessibility, and, in fact, can hamper it in some cases. In the interaction between workers and banking systems, the role of field functionaries was also explored. The dimensions of challenges assessed are:

- Awareness and Access to Information
- Sources of Information Dissemination
- Time and Cost related factors
- Transparency & Accountability
- Commissions
- Aadhaar and biometric related challenges

6.3.1 Awareness and Access to information

A total of five questions were asked to respondents to capture the extent of awareness regarding payment disbursement agencies: (1) Location of the bank branch (2) What is the minimum balance to be maintained for the account to be operational (3) Is there a minimum number of transactions to be done by the respondent in a given month (4) Is the respondent entitled to use the bank account for purposes other than NREGA and (5) Is the respondent allowed to withdraw wages from any other branch other than the parent branch? The state-wise distribution of the responses to these five questions on awareness is given in Figures 6.3.1(a).

From Figure 6.3.1(a), it appears that people were largely unaware about two aspects of their banking rights - number of transactions that can be done per month and whether other branches can be used to withdraw money from their bank accounts. On the other hand, most people are aware of the bank branch location.

Figure 6.3.1(a):

Responses of Awareness on indicators across states
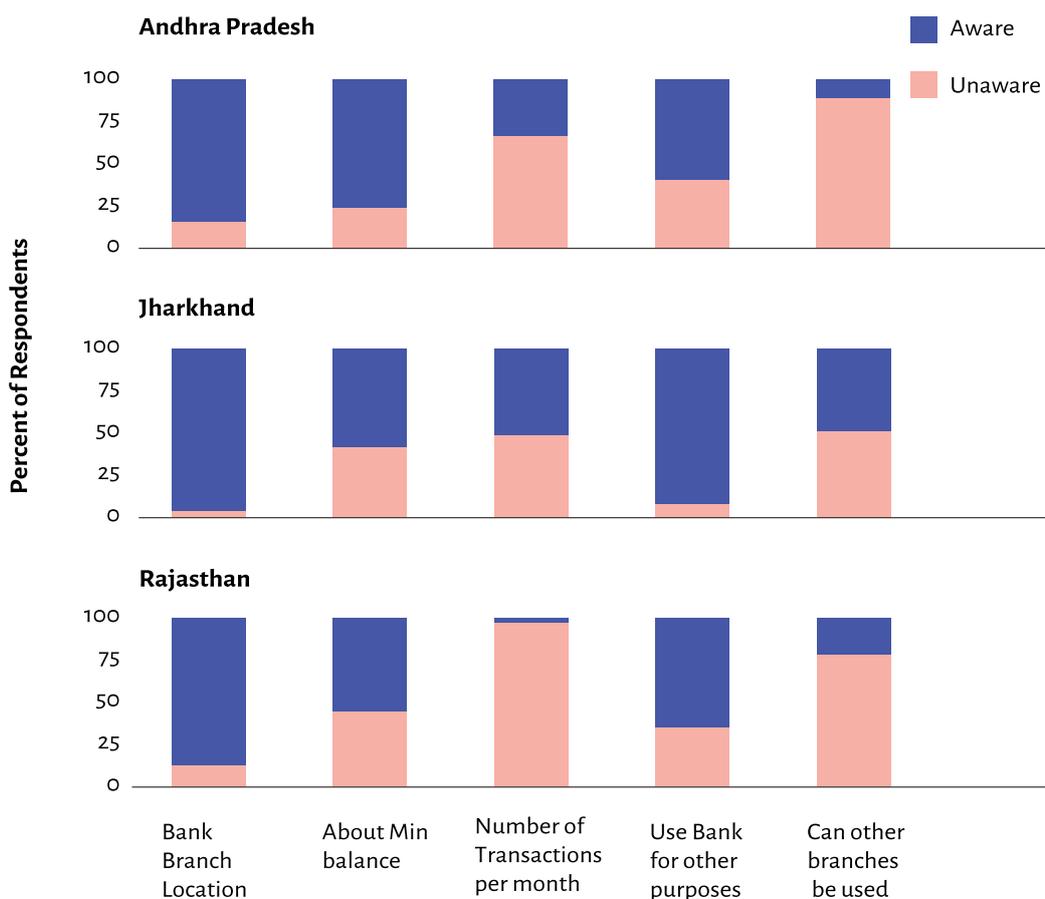
The responses to awareness by states and gender are depicted in the figure below. It appears from this figure that the awareness is independent of gender in each of the three states.

Figure

6.3.1(b):

Awareness across States by Gender
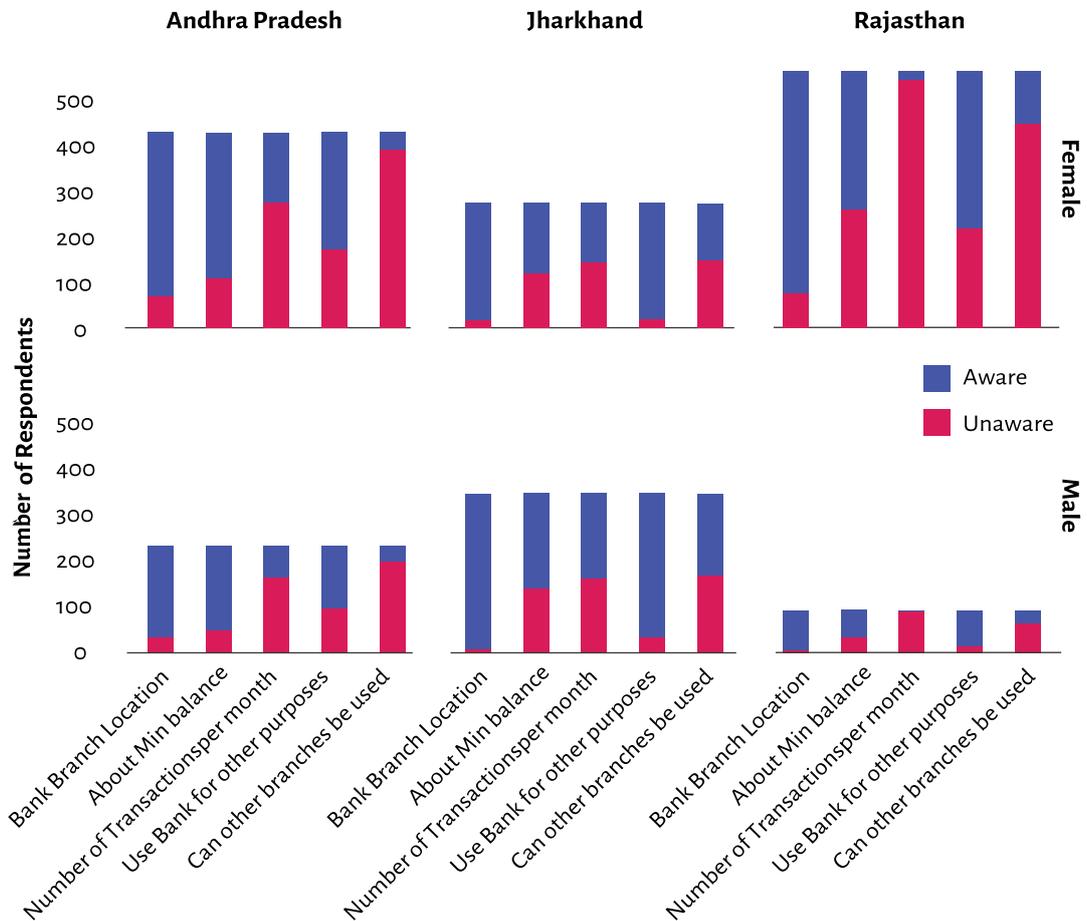
Figure 6.3.1(c) shows the location of the payment disbursement agency. A majority of the workers across the states have to travel to the block to collect their wages. In Andhra Pradesh the disbursement agencies are equally spread between villages, panchayats, and the block. As per the Committee on Comprehensive Financial Services for Small Businesses and Low Income Households, "By January 1, 2016, the number and distribution of electronic payment access points would be such that every single resident would be within a fifteen minute walking distance from such a point anywhere in the country" (Mor, Nachiket et al., 2013). However, we found that, barring a few exceptions, the disbursement agencies were usually located at the block which are, on average, at least an hour or more away from the villages.

By January 1, 2016, every resident of India would be within walking distance from a electronic payment access point.

Figure

6.3.1(c):

*Location of
Disbursement
Agency*
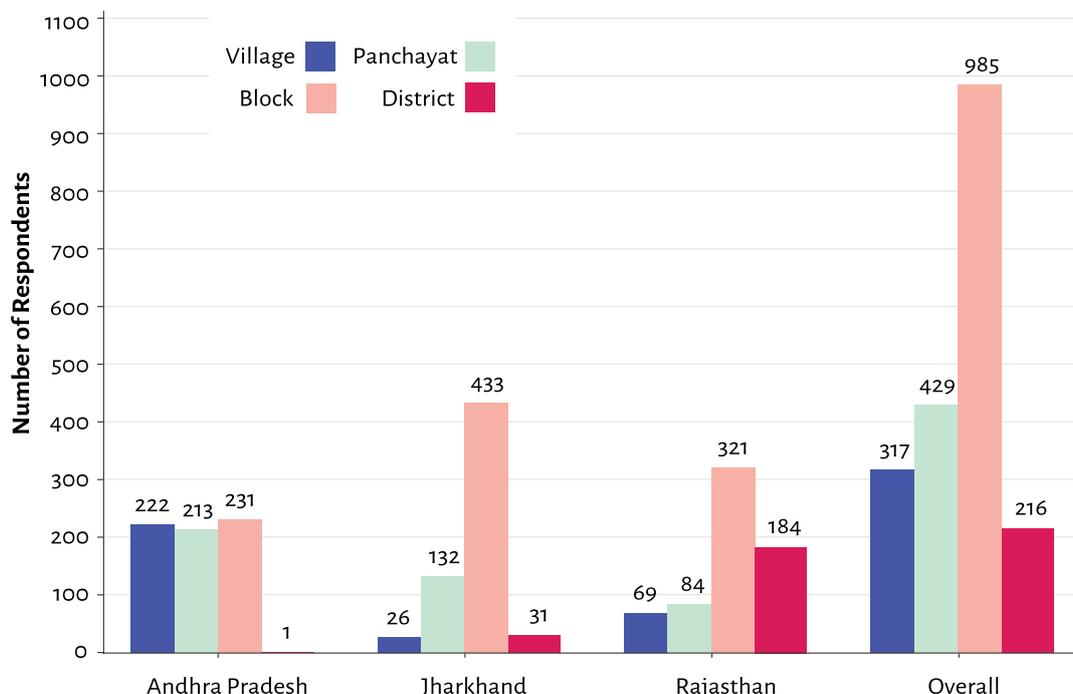
Awareness and Hardships

Individuals facing hardships were categorised into low, medium, high and very high based on their responses to certain questions. The hardships were then cross-tabulated against the levels of awareness to see if having greater awareness results in fewer hardships. We found no obvious relationship between awareness levels and hardships. We clubbed the high and very high hardship categories and clubbed the low and medium categories for this. If we just focus on the set of respondents with high awareness scores (>=3 out of 5) and look at their hardships we found that in Andhra Pradesh people with higher awareness face relatively less hardships. But in Jharkhand and Rajasthan it is the contrary. The Figure 6.3.1(d) demonstrates this. One of the possible reasons for this can be attributed to infrastructure limitations in Jharkhand and Rajasthan, compared to Andhra Pradesh. Therefore, our findings in this context suggest that higher awareness doesn't automatically lead to better outcomes in terms of lower hardships. An unexplored question is whether people with higher awareness of rights and entitlements are also more aware of their perceptions of hardships.

" *25 percent of respondents reported that despite being informed about wage credit, wages were not yet credited.* "

Figure 6.3.1(d):

Hardship among high awareness people
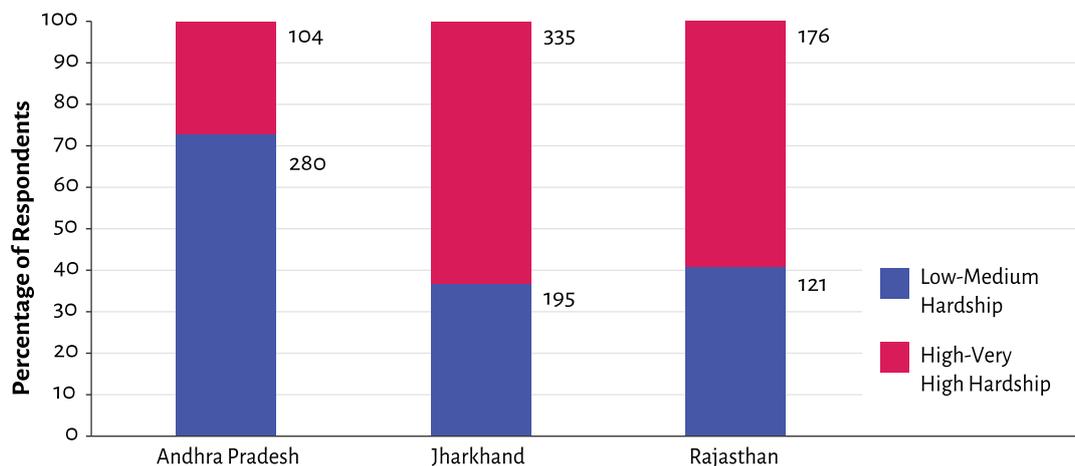
6.3.2   Information about wages

The rise in technological advancements in public welfare delivery systems has increased the importance of reliable and accessible information dissemination methods.

Method to find out about wage credit for bank users :

Figure 6.3.2 (a) shows the different ways in which workers find out if their wages have been credited. For a majority of the workers, a visit to the disbursement agency and information from the mate (a person from the village who acts as a link between the field functionaries and the workers) were primary sources. There appeared to be a contradiction regarding the source of information for wage credit between the workers and field functionaries. The field functionaries said that most workers received information about wages via SMS. We found in the survey that only about 11 percent of bank users received wage credit information via SMS. For workers with multiple bank accounts, we found a slightly greater dependency to visit the disbursement agency to know which account the payment is credited to in comparison with individuals having a single account.

LibTech team working with workers and civil society groups on identifying payment issues.

Figure

6.3.2(a):

Means of

finding out

about credit of

wages
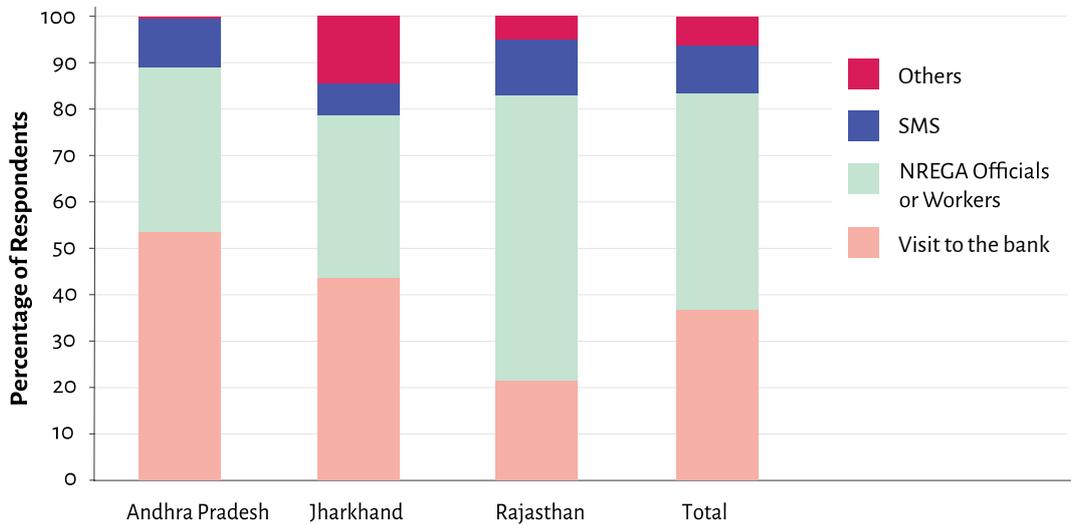
Reliable information is not enough:

Overall 25 percent of the respondents reported that despite being informed about wage credit (through any means) they went to the bank and found out that their wages were not yet credited. Therefore they would have to make multiple visits to the bank to access their wages.

SMS for wage credits:

We tried to assess whether people who receive SMS are indeed able to access wages quicker. Figure 6.3.2(b) indicates that about 20 percent of the total respondents received an SMS when wages were credited to their account. Amongst these individuals, about 42 percent still had to make multiple visits to the disbursement agency (bank/CSP/BC/Post Office) to access their wages. Moreover, the number of visits to the CSP/BC as observed in the survey responses is an underestimate of the true number of visits. This is because the survey considered repeated visits due to biometric issues alone. We did not capture the number of visits required due to other key factors such as overcrowding, network issues, and lack of electricity, recognized as other common reasons for rejection of withdrawal at CSP/BC.

Figure

6.3.2(b):

Wage

Information

via SMS and

number of
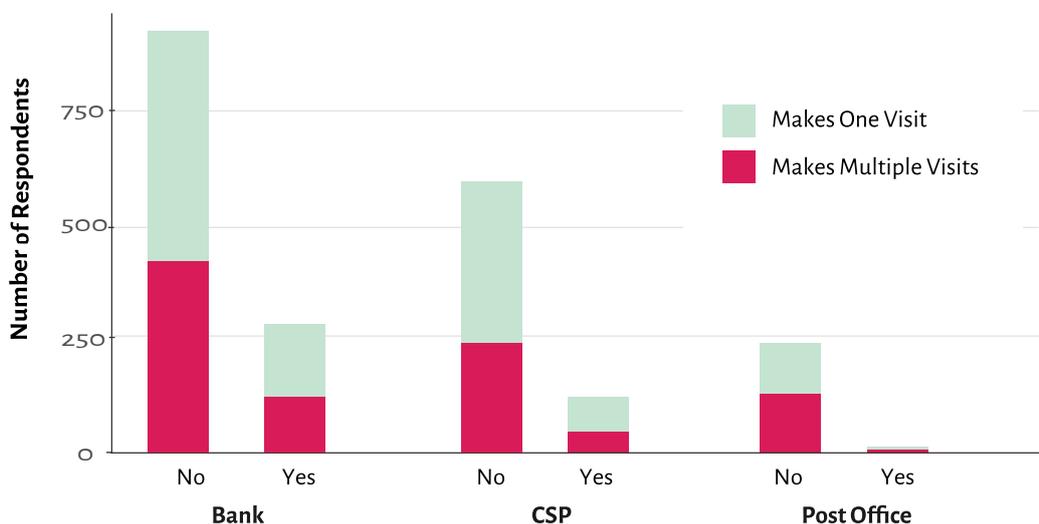
visits

Figure 6.3.2(b) for each disbursement agency indicates a lack of association between receiving information via SMS for wage credit and the number of visits made to the bank. Nearly the same proportion of people had to make multiple visits whether or not they received information via SMS. Indeed, for each disbursement agency, we performed a chi-square test of independence and found that in each case, i.e., bank, CSP and post office, the null hypothesis of independence couldn't be rejected. In other words, receiving SMSs doesn't result in a reduction of the number of visits made to the respective disbursement agency. This is possibly happening because the primary modes of receiving information about wages being credited are through a visit to the disbursement agency and/or by talking to a mate. Given the scarcity and unreliability of the rural banking infrastructure, it is necessary to provide a reliable means of credit information. It is critical to ensure that the disbursement infrastructure is able to cope with the footfall.

6.3.3 Time and cost related challenges

Time taken by Bank users:

There were a total of 1,204 bank users. The respondents were asked how much time it takes for them to travel, wait at the disbursement agency, withdraw their payments and return home. This is for a single visit to the bank. Many users had to make multiple visits for a single withdrawal so these numbers are on the conservative side. An overwhelming number of respondents from Andhra Pradesh took less than 1.5 hours. About 50 percent of the respondents in Andhra Pradesh took one hour or more to access their wages from their bank. About 50 percent of the respondents in Jharkhand and Rajasthan took more than 3 hours to access their wages from the branch. For a significant 30 percent of the respondents in Jharkhand, it took more than 5 hours while 30 percent of the respondents in Rajasthan said that it took more than 4 hours to access wages from the banks. For some people, it took more than 6 hours too. The panchayat sizes and the per capita bank penetration in Andhra Pradesh is significantly better than Rajasthan and Jharkhand. The average time taken by workers accessing various payment disbursement agencies across the states are highlighted in the figure and the table below.

Time taken for withdrawals at different disbursement agencies:

The same question about total time taken to and from the disbursement agency was asked to users of all four payment disbursement agencies. The time taken for withdrawal at CSP/BC is better than that for banks. For 50 percent of CSP/BC users in Andhra Pradesh, it took more than 1 hour to access wages. However, in Jharkhand and Rajasthan, 50 percent of the CSP/BC users reported to have taken more than 2 hours to access their wages. While for 30 percent of the respondents in Jharkhand and Rajasthan, it took more than 3 hours to access their wages at the CSP/BC, the time taken by the same proportion of people in Andhra Pradesh was still 1 hour. These are shown in Table 6.3.3(a)(ii).

A bank branch with long queues of people waiting to transact.

Banks are usually located in the block and tend to be more crowded, hence it takes longer for people to transact there. However, banks also offer important services like updating of passbooks and hence are viewed to be more secure by users. Therefore, a majority (~80 percent) bank users preferred to stick to banks for their payments and about 35 to 40 percent CSP users in Jharkhand and Rajasthan also preferred banks despite the longer hours spent transacting from banks. The reported numbers on time taken appear to be lower than what the experience of having worked in these areas indicate. For instance, in a 10 district survey of CSP of Jharkhand (Parthasarathy and Narayanan 2019) conducted in 2018, it was found that, on average, it took about 5 hours

for users to withdraw money from the CSP. Moreover, the aforementioned survey found that respondents had to revisit about 3 times to withdraw their wages. The reasons for revisits varied from lack of network connectivity, lack of electricity, overcrowding at CSPs and biometric related failures.

Table 6.3.3(a) (i): *Percentiles of Time taken to-and-from bank for respondents across the states*

	Bank total time (in minutes)			
Percentile	**Overall (n=1204)**	**Andhra Pradesh (n=347)**	**Jharkhand (n=322)**	**Rajasthan (n=535)**
10	60	30	60	60
20	60	30	120	120
30	95	60	120	120
40	120	60	150	150
50	120	60	180	180
60	180	90	240	186
70	210	120	300	240
80	250	120	300	300
90	360	180	360	404
100	720	300	630	720

Table 6.3.3(a) (ii): *Percentiles of Time taken to-and-from CSP/BC for respondents across the states*

	CSP/BC total time (in minutes)			
Percentile	**Overall (n=713)**	**Andhra Pradesh (n=127)**	**Jharkhand (n=346)**	**Rajasthan (n=240)**
10	30	15	30	30
20	30	30	60	30
30	60	30	60	60
40	60	40	90	90
50	90	60	120	120
60	120	60	152	144
70	180	60	180	180
80	190	60	240	240
90	300	90	300	300
100	960	180	960	720

Figure

6.3.3(b):

Disbursement
agency wise
average time
taken for
withdrawal
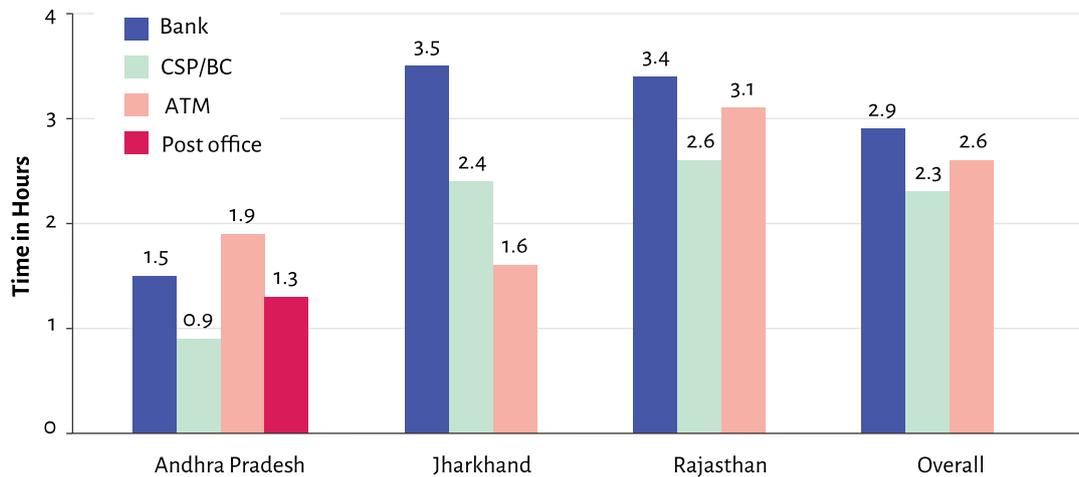
Multiple visits for withdrawals:

In many situations, workers often had to make multiple visits to the payment disbursement agency to access their wages. Respondents from Andhra Pradesh especially reported to have experienced this to a greater degree than the other two states. As Table 6.3.3(c) shows, overall about 45 percent of the respondents had to make multiple visits to the bank to withdraw their wages. While the time taken per visit to the bank in Andhra Pradesh might be lower compared to the other two states, the fact that more than 54 percent of them had to make multiple visits makes it difficult. In Jharkhand and Rajasthan, roughly 40 percent of the respondents had to make multiple visits. Since the time taken to access wages from banks in Jharkhand and Rajasthan are quite high, multiple visits amplifies the hardship. For their last transaction, roughly 50 percent of post-office users had to make multiple visits.

Denial of withdrawal at banks:

Another reason for having to turn back from the bank without wages is that the bankers often ask people to go to the CSP/BC to withdraw their wages because the bank is too crowded or that they aren't allowed to withdraw below a certain amount (Rs.5,000). This was reported by about 18 percent of bank users. 7.4 percent of bank users also reported that bank officials denied wages to them when it is crowded. Some respondents in Jharkhand whose biometric authentication failed at the CSP, had to get a written statement to this effect from the CSP owner. The users are then permitted to withdraw from the bank upon showing the written statement to the bank officials.

Coming back empty handed from CSP/ATM:

Questions to CSP/BC and ATM users were posed differently and so the figures may be lower estimates for them. CSP users were asked if they had been denied wages due to biometric authentication failures in the last five transactions. They may have been asked to come back again for many other reasons such as no electricity or because the CSP is too crowded. However, it gives us an estimate if the users had to make repeated visits. 40 percent of the CSP users reported that they faced Aadhaar based biometric authentication issues because of which they had to revisit the CSP/BC. This was, surprisingly, highest in Andhra Pradesh where 72 percent of the users said that they had to revisit more than once due to biometric issues. Roughly 35 percent of the respondents in Jharkhand and about 30 percent of respondents in Rajasthan reported that they had to make multiple visits to the CSP/BC owing to Aadhaar-based biometric authentication failures.

Nearly half the ATM users reported that they had to visit the ATM again because the machine did not dispense any cash. In the 10 district Common Service Centres survey in Jharkhand, mentioned earlier, it was found that out of 401 respondents, 13 percent had to revisit due to biometric issues. About 25 percent had to return owing to the CSC being overcrowded and about 37 percent reported to have had to make multiple visits owing to lack of network connectivity and electricity.

Table 6.3.3(c): *Percentage of respondents who had to make multiple visits for one withdrawal*	Percentage of respondents who had to make multiple visits for one withdrawal	Andhra Pradesh (in percent)	Jharkhand (in percent)	Rajasthan (in percent)	Overall (in percent)
	Made multiple visits to bank for last transaction	54.2	38.8	43.0	45.1
	Made multiple visits to CSP/BC due to biometric failure	72.4	35.3	30	40
	Made multiple visits to ATM due to insufficient cash	51.4	100*	55.6	55.3
	Made multiple visits to the post office for last transaction	52.3	NA	NA	52.3

There were only 3 people who reported using the ATM in Jharkhand

Cost to visit the disbursement agency:

The respondents were asked how much it cost them to travel to and from the disbursement agency for a single visit. Table 6.3.3 (d) shows the average cost reported by users of different agencies. The numbers have been rounded to the nearest whole number.

Table 6.3.3(d):

Average cost to and from payment agency (in Rs.)

Average Cost to and from payment agency (in Rs.)	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Bank	16	53	28	31
CSP	4	22	18	11
ATM	70	22	67	67
Post Office	6			6

The average cost incurred to visit post offices to withdraw wages is the lowest among all disbursement agencies but they are present only in Andhra Pradesh. 57.5 percent of the post-office users incurred no cost to visit a post-office and even the average cost for the rest of the respondents is only Rs. 6. From Table 6.3.3.(d), it seems that the cost incurred to visit a CSP is lower than visiting banks for withdrawal. This suggests that CSPs are a convenient alternative to banks in terms of both time and cost. In general, for NREGA workers, a visit to the disbursement agency implies that they don't get to complete a day's work that day. This, in turn, means that they don't get their full daily wages on the days that they visit the disbursement agency. Therefore, when a worker has to make multiple visits to the disbursement agency to withdraw wages, the time and cost incurred, in real terms, must account for that. For instance, the average travel cost to go to a bank in Andhra Pradesh was Rs 16 per visit. If a worker has to make two trips, then the cost incurred for one withdrawal for such a worker will be Rs 32. This is quite significant in Jharkhand where for two trips a worker, on average, has to spend about Rs 100. Adding the lost daily minimum wages (at Rs 171) for the 2 visit days, this becomes Rs 342 and adding a modest amount of Rs 25 for food, this becomes Rs 392. So effectively, a worker has to spend more than a third of her weekly NREGA wages just to withdraw her weekly wages.

Figure 6.3.3(e) shows the 'Actual time' time taken. The product of the average time per visit and the number of visits required for a worker to withdraw wages is what we call 'Actual Time'. Similarly, the product of the average cost per visit and the number of visits required for a worker to withdraw wages is called 'Actual Cost'.

Figure 6.3.3(e): Actual time taken on average to-and-from Primary Disbursement Agency across States
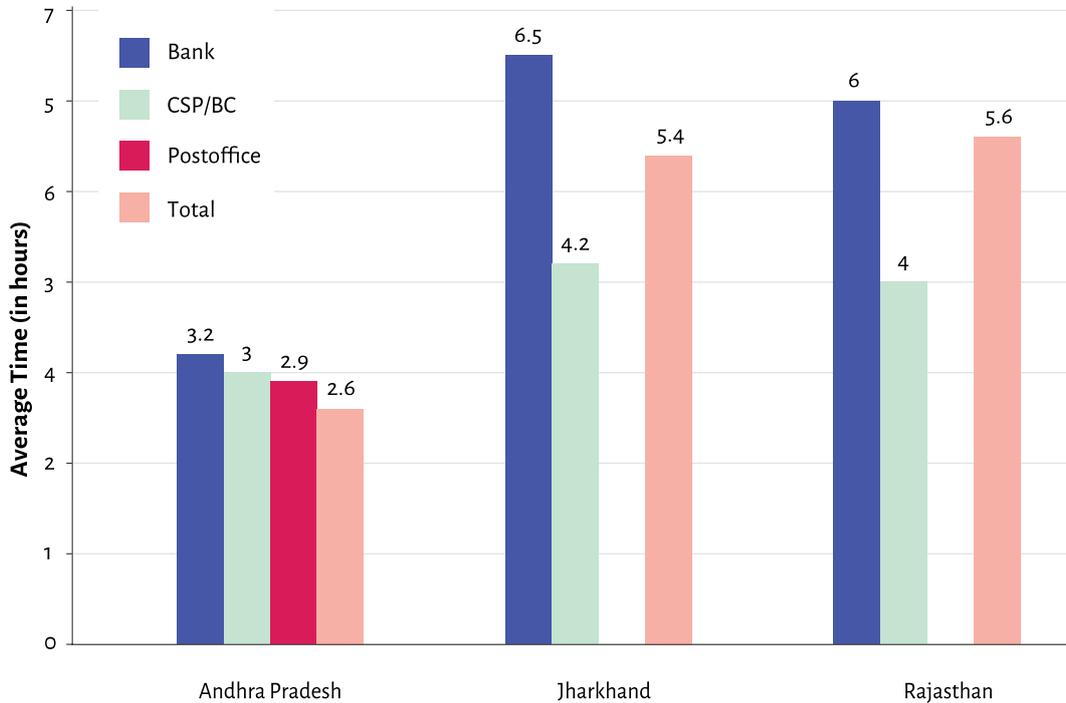
Similar to cost, there is a twofold increase in the amount of time taken to-and-from due to repetition of visits made to the payment agency for the last transaction. The average total time to-and-from post office is in fact more than doubled due to repetition of visits. Amongst post office users, more than 50 percent of the workers had to make multiple visits for their last withdrawal. The situation is similar for bank users where more than 40 percent of them had to make multiple visits for their last transaction. The increment is similar for bank users. The average total time, along with the actual time which accounts for multiple visits made, to-and-from the bank across the states is as shown in the figure above. The average of actual time taken to withdraw from a bank for the last transaction across the states is 6 hours. Even if we were to consider the amount of time it takes for a single visit, the average time for bank visits across the states is equivalent to almost half of a working day - 4 hours. This can also be interpreted as opportunity cost worth half-a-day wages for the workers, who are commonly daily-wage earners.
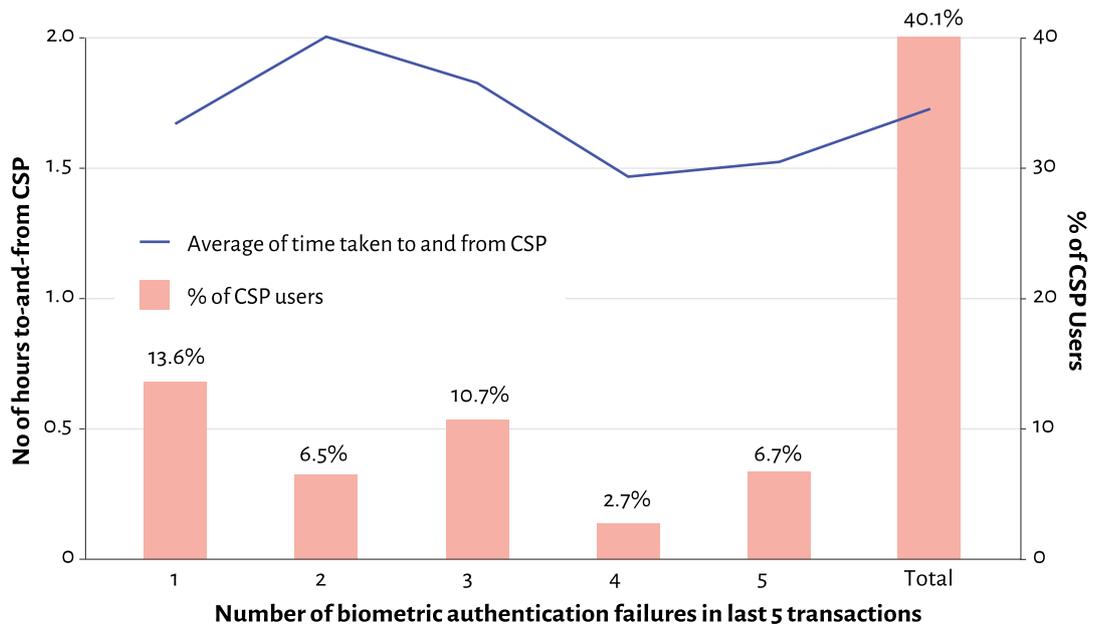
A total of 40% of the CSP/BC user respondents (286 respondents) claimed that they had experienced biometric authentication failure at least once in their last five transactions. The average number of hours spent by workers making more than one visit is shown on the secondary axis to the left. This shows that for every worker who made multiple visits to CSP/BC due to biometric authentication failure, they spent an additional 1.5 to 2 hours. The more the number of failures, the greater amount of time spent in travelling back and forth for their wages.

6.3.4 Transparency

Transparency and accountability are fundamental prerequisites of a well functioning democracy. This is especially critical when the rights of the marginalised are involved. In the context of rural banking, there are several crucial factors characterising this. First, is informed consent. The central government had made it peremptory for the workers to link their Aadhaar with job cards and bank accounts. Risks associated with this weren't specified and so consent was more of a myth for the workers. Second, while the NREGA workers contribute to production of information, they have no say in the methods of information dissemination and information use. For example, the workers have no idea why their payments get delayed and who is responsible when payments get delayed. They are also unaware of their right to delay compensation when wages are not credited to their account within 15 days of completion of work.

> *57% of the respondents said that their passbooks don't always get updated. In Rajasthan, 7 in 10 people said that their passbooks are never updated on withdrawals. Around 37% of people across the three states reported that bank officials refused to update their passbooks.*

In terms of disbursement agencies, banks seem to have better accountability frameworks compared to CSPs. Workers reposed more faith in banks compared to CSPs. This, despite the fact that there are several conveniences of CSPs such as proximity to the village.

Updation of passbooks in bank branches:

While nearly all respondents reported that they have passbooks, 57 percent of the respondents reported that their passbooks do not always get updated. Details are in Table 6.3.4 (a). This is largely from Jharkhand and Rajasthan. The scenario is most severe in Rajasthan, where 7 in 10 people have reported that their passbooks never get updated on withdrawals. Passbooks are key to increasing financial literacy. Survey responses indicated that there were instances when banking officials themselves refused to update passbooks. Roughly 37 percent of people across the three states reported that the update of passbooks were denied by bank officials. Once again, responses from Jharkhand and Rajasthan have higher rates of denial compared to Andhra Pradesh. **Since passbooks are the only way in which NREGA workers can keep track of their financial condition, it is imperative that this is given importance and prioritised by banks.**

Sign outside a bank in Andhra Pradesh: Internet is not working. account holders please cooperate. —Notice by BM

65
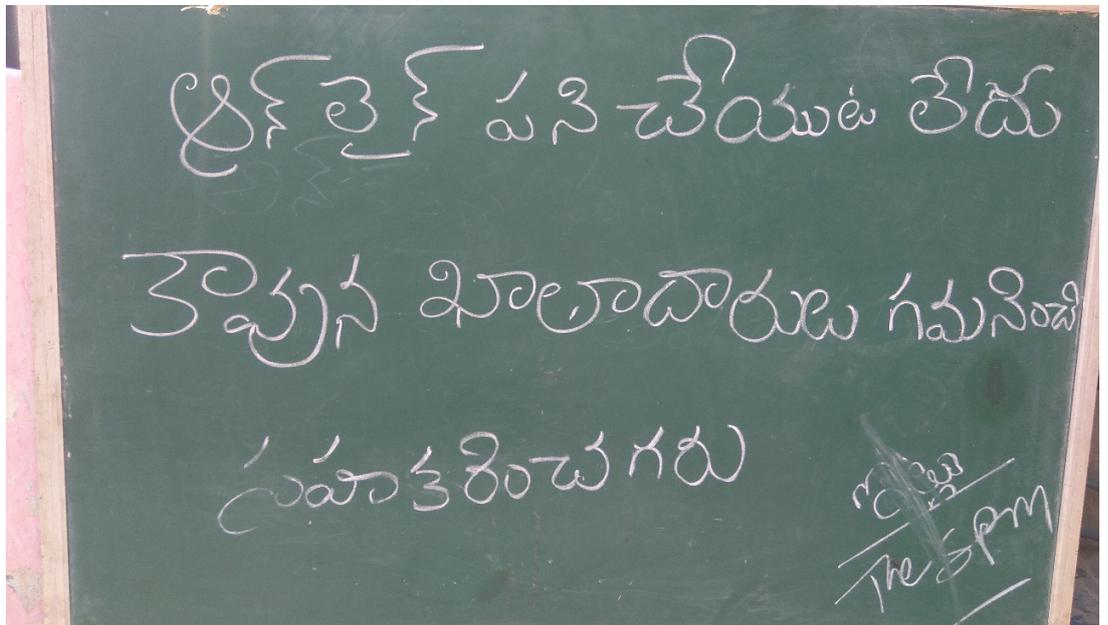
Table 6.3.4(a):	Passbook related issues	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Passbook related issues across States	Passbook does not always get updated on withdrawal (in percent)	40.3	54.3	69.3	57.0
	Bank officials refused to update passbook (in percent)	23.1	43.2	41.3	36.5

Reasons for denial of passbook update:

Figure 6.3.4(b) shows the reasons for denying update of passbooks of workers. As can be seen, more than two-thirds of the time, banks being too crowded or officials asking the workers to come back later were the primary reasons for denial of update of passbooks. Around 14 percent of the time passbooks couldn't be updated because either the machine was defective or the printer was dysfunctional.

Figure 6.3.4(b):

Reasons for refusing passbook update in banks

13.2%

1.7%

14.4%

24%

3.6%

43.2%

Legend:
- Worker didn't want to update
- Other
- Machine was not working
- Bank was too crowded
- Update only while transacting
- Asked to come back later
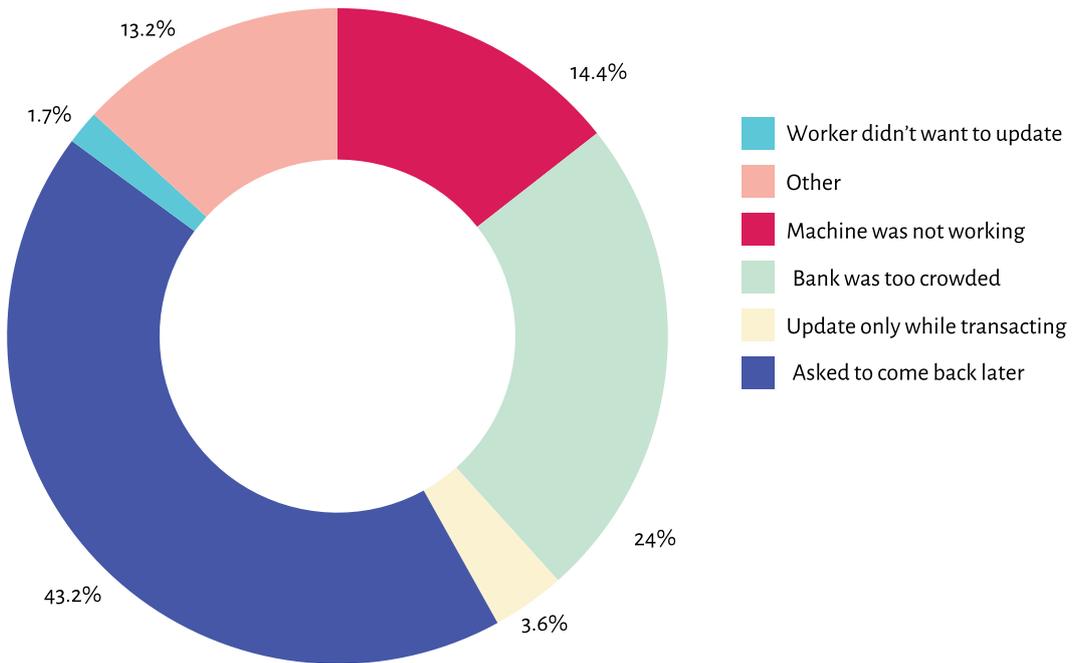
> *Over 80% of respondents in Jharkhand and Rajasthan never receive a receipt for bank transactions. While 80% BC users in AP do not have passbooks, most of them get a receipt.*

Account keeping for ATM users:

For ATM users there is a provision to get receipts for transactions since they cannot update their passbooks in rural ATMs. ATM users were asked if they are able to get receipts for transactions. About 57 percent said that they always get receipts. The remaining either never get it or get it a few times. Receipts are critical because around one third of the ATM users reported that they keep a tab of their account through receipts. About 30 percent also said they check their balance on the ATM screen. More than two thirds ATM users also said that the receipts fade away completely or are unclear to read after two-three months. Therefore, regular bank passbooks seem to be the best method to keep a track of account balances in rural areas.

Transparency for CSP/BC users:

While CSP/BC have their conveniences, these disbursement agencies were observed to have the weakest accountability structures among all the disbursement agencies across the three states. Further, many users who opened their accounts with CSP reported that they weren't given any passbooks either at the time of account opening or later. Overall about 56 percent of CSP/BC users said they don't have passbooks (see Figure 6.3.4 (c)-). Roughly 3 out of 4 workers reported that they do not keep account of wage payments.

Receipts in CSP/BCs:

CSP/BC users were asked if they received any receipt when they transact at the CSP/BC. As Figure 6.3.4 (d) shows, over 80 percent of respondents in Jharkhand and Rajasthan never receive a receipt for transactions. While 80 percent BC users in AP do not have passbooks, most of them get a receipt.

Figure 6.3.4(c):

Passbooks availability for CSP/BC users
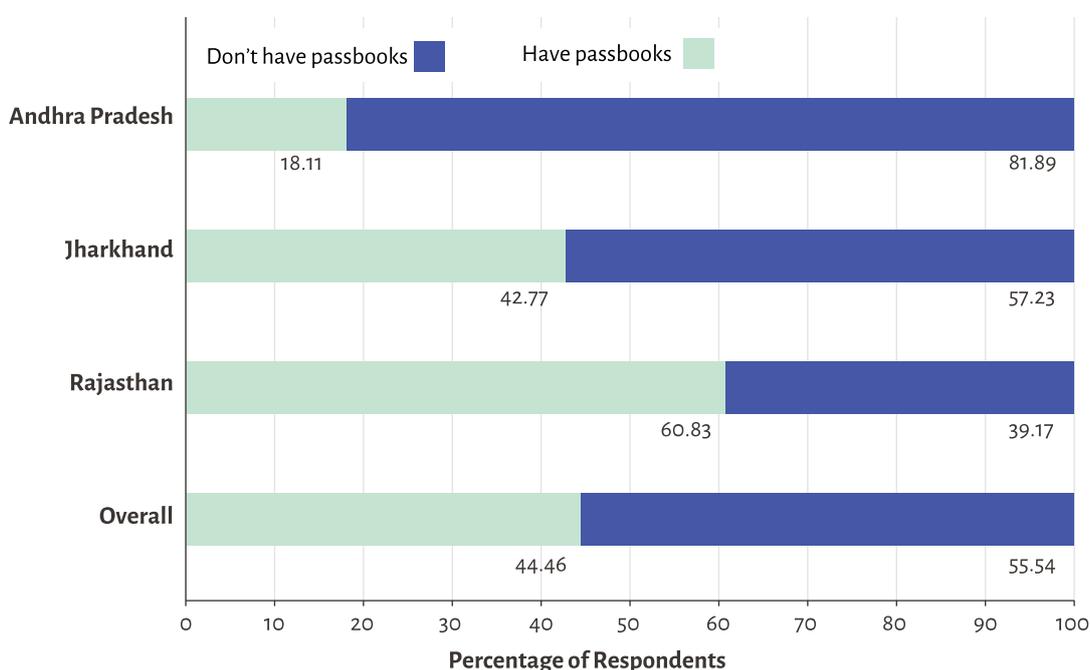
Figure

6.3.4(d):

Receipts on

withdrawals at

CSP/BC
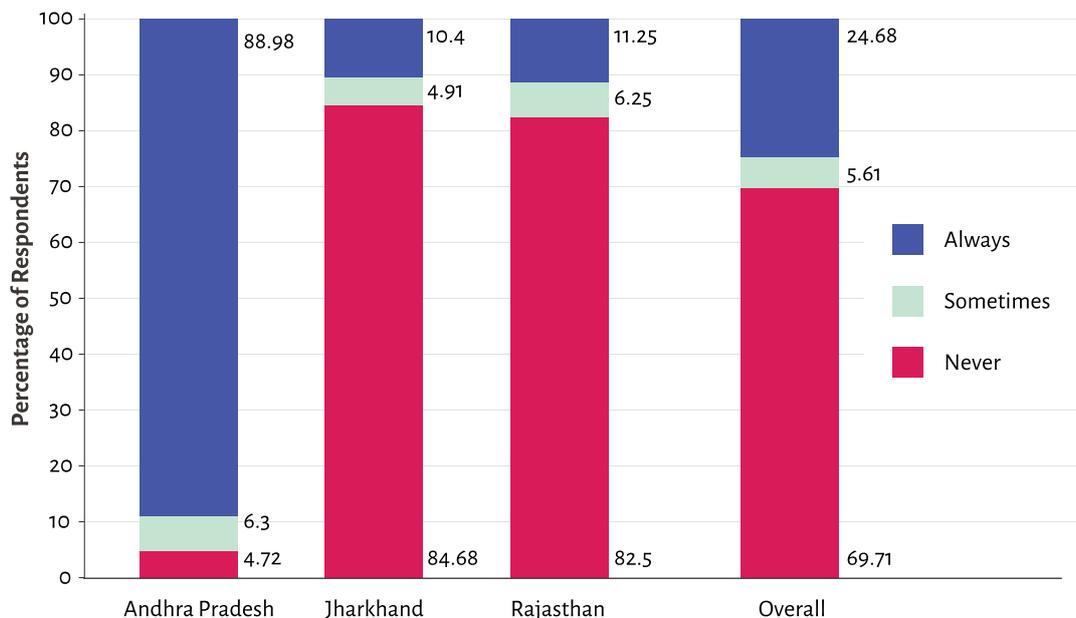
The reasons for not getting receipts from CSP/BC varied from lack of network connectivity, problems with the printer of the Point of Sale (PoS) machine, lack of electricity or that the CSP was too crowded. 50 percent of the CSP users who did not receive receipts (n=532) were usually not even given a reason. Moreover, roughly one in four CSP users who got receipts reported that the print on the receipts don't last beyond 2 months.

E-statements at CSPs:

According to the National Payments Corporation of India (NPCI) website,[6] one of the provisions of Aadhaar Enabled Payment Systems is for users to get a mini statement for transactions of upto 6 months. However, 80 percent CSP users were unaware of these provisions of such statements and hence had not asked for it. Only 20 percent users across the three states (majority from AP) had ever received e-statements.

Transparency in postal payments:

Contrary to the experiences of bank and CSP/BC users, post-offices appeared to have much better transparency systems. Nearly all postal users have passbooks and 100 percent of the post-office users reported that their passbook always gets updated on withdrawals.

6.3.5 Commissions

CSP users:

Over 30 percent of CSP/BC users reported having to pay a certain amount of commission that is deducted from the cash disbursed on withdrawals. The prevalence of this kind of corruption seems to be highest in Jharkhand where close to 45 percent of the CSP users reported to have been charged a commission. The average amounts collected as commission across the three states of Andhra Pradesh, Rajasthan and Jharkhand are around Rs. 10, Rs. 20 and Rs. 30 respectively for every withdrawal of Rs. 1000. In fact, 9 respondents from Jharkhand reported to have paid commission as high as Rs. 100-200 for withdrawal of Rs. 1000.

Figure 6.3.5(a):

Percentage of people paying commission at CSP/BC for withdrawal of wages
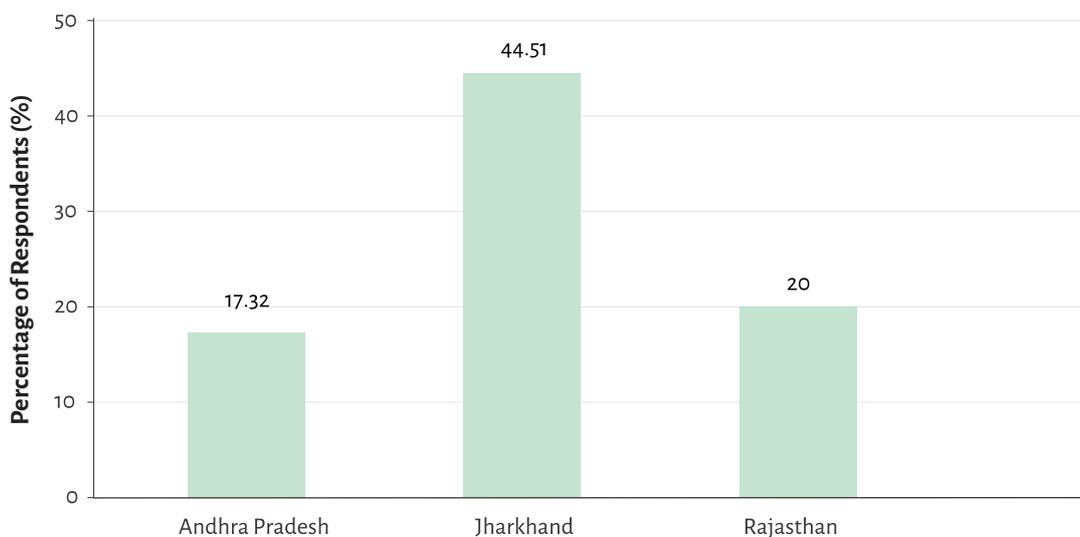
Post-office users:

In comparison to CSP/BC users, the proportion of people who paid any commission for withdrawal was smaller. Around 10% users reported to have paid amounts varying between Rs. 10 to Rs. 50 for every Rs. 1000 withdrawn.

Bank and ATM users:

Five ATM users reported that when their family or friends withdraw wages for them from the ATM, they usually cut some amount as commission. In the case of banks, our qualitative research indicates that there was no prevalence of charging commission to withdraw from banks.

6.3.6   Aadhaar and Biometric related challenges

In the past few years, Aadhaar has increasingly been made mandatory for social welfare programmes in India. While the process of shifting towards Aadhaar based payments started in 2013, a major push came from the Government of India (GoI) from 2014-15. This was a part of the government's flagship JAM trinity. In NREGA, Aadhaar plays a role at three levels:

1. Verification of Job Cards: Seeding the Aadhaar numbers of the workers with the NREGA job card.

2. Directing Payment: Making the payment through the Aadhaar Payment Bridge System (APBS), wherein the Aadhaar is the financial address of the individual.

3. Withdrawing Money: Withdrawing money from Customer Service Points (CSPs)/ (BCs) through Aadhaar based biometric authentication. This requires the individual to seed their bank account with their Aadhaar number. This is known as Aadhaar enabled Payment System (AePS).

For more details on the uses and processes related to Aadhaar payments in welfare, the reader is referred to Dhorajiwala and Niklas (2019).

Here, we examined the experiences of NREGA workers from three aspects:
- Biometric related challenges
- Issues with linking Aadhaar to job cards and bank accounts
- Perception of workers about wage payments after introduction of Aadhaar.

Figure 6.3.6(a) depicts the proportion of people who have reported at least one Aadhaar-related biometric failure while withdrawing money in the last 5 transactions from CSP/ BCs. Although the maximum biometric failures seemed to have occurred in Andhra Pradesh (~75 percent), many of the responses were missing and those values were imputed. It is the least in Rajasthan. Overall, about 42 percent of the people surveyed reported that they faced at least one biometric failure in the last 5 transactions.

———————

" Nearly 30% of the respondents reported at least 3 failures in the last 5 transactions, and 7% reported that all of the last 5 transactions failed due to biometric issues. "

———————

Figure

6.3.6(a):

*Biometric
Failures at
CSP/BC*
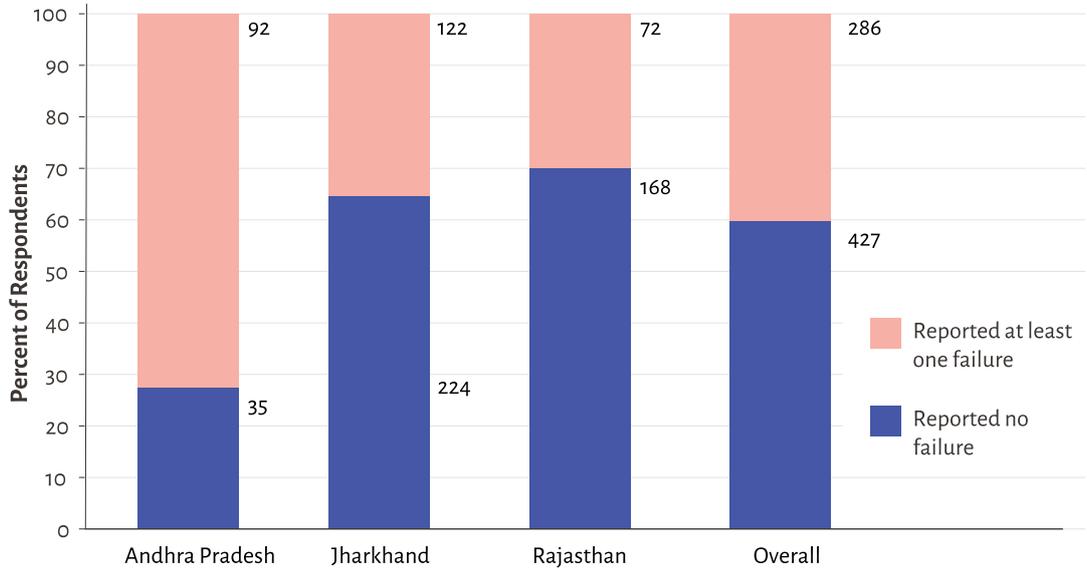
Denial of withdrawal services and biometric failures:

About 40 percent of respondents who use CSP/BC reported that they were asked to make at least one additional visit to withdraw their wages due to biometric failures, from among the last five transactions. Figure 6.3.6 (b) shows the state-wise distribution of the number of biometric failures experienced by the respondents in the last 5 transactions. For example, in Andhra Pradesh, 37 out of 92 CSP/BC users reported exactly one biometric failure in 5 transactions and 23 of them reported exactly 3 biometric failures in the last 5 transactions. Overall, it is compelling to note that nearly 30 percent of all the surveyed people reported that they experienced at least 3 biometric failures in the last 5 transactions and for about 7 percent of the respondents, each of the last 5 (i.e, 5 out of 5) transactions failed due to biometric issues. Moreover, nearly three fourths of the respondents added that they do not receive a receipt for a failed transaction.

Figure

6.3.6(b):

*Number of
biometric
failures at
CSP/BC
transactions*
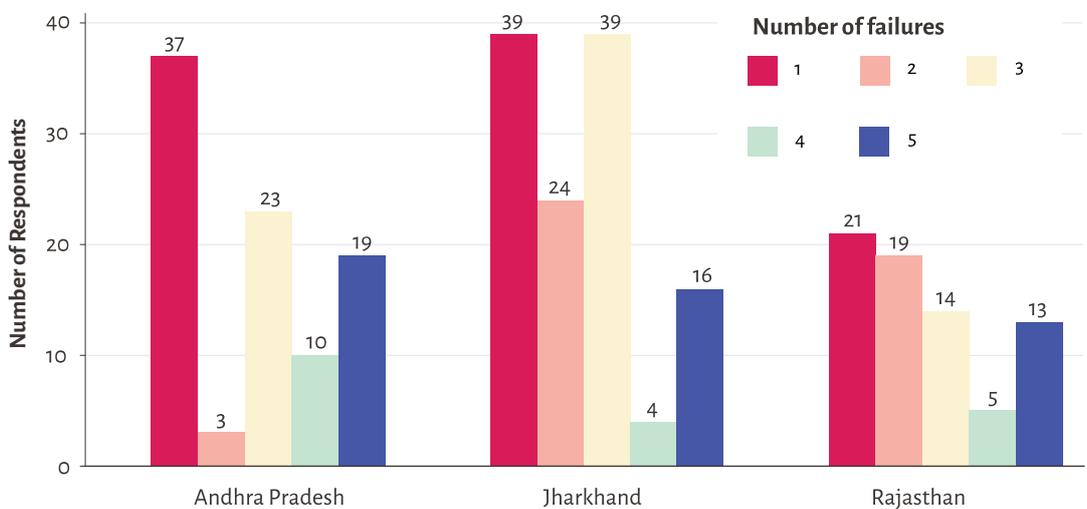
These are telling numbers. As mentioned before each failure implies a revisit to the CSP/ BC which involves time and cost and also in many cases an opportunity cost of having lost that day's wages.

In contrast to the CSP/BC users, post office users reported far fewer instances of biometric failures. About 15 percent of postal users reported at least one biometric failure in the last five transactions. However, three fourths of postal users also reported that they do not receive a receipt for the failed transaction.

Linking of Documents with Aadhaar: Workers were asked whether they had to make multiple visits to link their job cards and bank accounts with Aadhaar. The Table 6.3.6(c) shows that around one in four people had to make multiple visits to link their Aadhaar number to job cards and bank accounts. This is for 1853 respondents who answered this question.

Table 6.3.6(c): *Percent of people who made multiple visits to link Aadhaar to bank or postal account*	**Percent of people who made multiple visits to link Aadhaar with bank account (Bank/CSP/BC users) and postal account (PO users)**	**Andhra Pradesh (n=594)**	**Jharkhand (n=619)**	**Rajasthan (n=640)**	**Overall (n=1853)**
	Percentage of users	40.07	23.26	15.78	26.07

We also asked the bank & CSP/BC users if they thought that the process of linking their Aadhaar to their bank accounts was cumbersome. Table 6.3.6(d) shows that a sizable majority of the respondents in Andhra Pradesh perceived no difficulty in linking their Aadhaar to their bank accounts. However about 20-30 percent users in Jharkhand and Rajasthan thought the process of linking was difficult. This question was not posed to postal and ATM users.

Table 6.3.6(d): *Experience of perceived difficulty in submitting documents to link Aadhaar with NREGA bank account*

Difficulty while linking Aadhaar with NREGA bank account	Payment Disbursal Agency	Andhra Pradesh	Jharkhand	Rajasthan
Perceived NO difficulty (in percent)	Bank	93.7	81.4	68
	CSP/BC	94.5	80.3	82.5
Perceived difficulty (in percent)	Bank	7.3	18.6	32
	CSP/BC	5.5	19.7	17.5

Figure 6.3.6: *Percent of respondents who believed Aadhar provided quicker access to wages* **(e):** *Across payment agencies;* **(f):** *Across States*
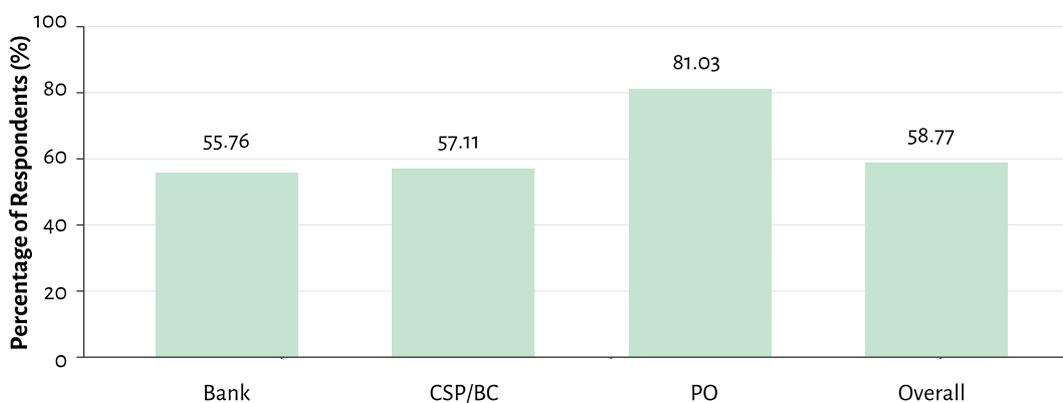
The levels of difficulty for Bank and CSP/BC users reported in Jharkhand is about 2.5 times, and in Rajasthan about 4.5 times of what was observed in Andhra Pradesh. This can be attributed to the difference in method and timeline of linking Aadhaar with NREGA bank accounts in the 3 states. In Andhra Pradesh, Aadhaar linking happened through dedicated campaigns that began at least three years before it happened in Jharkhand and Rajasthan[7]. However, in case of Andhra Pradesh, the perception of the repeated visits made for linking Aadhaar is not congruous to the reported difficulty.

One of the claims made by proponents of Aadhaar is that it will make welfare delivery (including cash transfers)more efficient. From the survey, no causal claims can be made on whether the introduction of Aadhaar has quickened access to wages. But we tried to understand people's perception about Aadhaar. In the block of Andhra Pradesh, there is a perception among the majority of the respondents that they have started getting their wages sooner after linking with Aadhaar. Across the states, Aadhaar implementation was made peremptory to access wages. In other words, workers were not given a choice about how to access their work and the dominant narrative was that "without Aadhaar it is impossible to get work and subsequently wages". The perceived benefits of Aadhaar in this context was most observed in Andhra Pradesh, where 81.31 percent of total respondents perceived to have quicker access to wages after linking NREGA wages account with Aadhaar. In the similar context, a little over half of all the bank users and about 57 percent of CSP/BC users perceived that their wages came quicker after linking with Aadhaar. Overall, in Jharkhand and Rajasthan, about 63 percent and 41 percent of the respondents respectively did not claim that Aadhaar provided quicker delivery of wages. The inconsistency between the perception of wages coming quicker after Aadhaar seeding and the reality of it is evident. In Andhra Pradesh, biometric systems were introduced prior to the Aadhaar biometric project so respondents were unable to distinguish between the earlier biometric system and the Aadhaar based biometric authentication system. This might have led to some confounding effect of perception versus reality. Second, there was a strong messaging by officials that wage credit would become quicker after Aadhaar seeding. How much of the perception is clouded by the messaging also remains unclear.

There is significant room for improvement in digitisation of services, in improving people's perceptions of services, while accounting for regional contexts of hardships. In Andhra Pradesh, a dedicated third-party agency called AP Online used to address all Aadhaar related problems during the linking period exclusively for postal payments. In Jharkhand and Rajasthan, on the other hand, there was no dedicated personnel/agency for Aadhaar-related resolutions. An MIS manager would help out with such issues, along with other responsibilities they may have. Hence, while the hardships caused by systemic changes may be common across states, the difference seems to lie in the focus of resolutions adopted to address them.

6.4 Hardships

As discussed in the methodology section, for each respondent, based on some questions, we have created a 'hardship score.' In this section, we discuss some findings based on the calculated hardship scores. To reiterate, these scores shouldn't be used as an absolute measure of hardship but instead as a measure of comparative hardship across states. Importantly, we would like to emphasise that this is neither meant to trivialise the hardships faced by rural workers nor meant to only present realities in a bad light. It is meant to signal the difficulties faced by a large section of the workers and think of constructive steps to minimise that.

In addition to the time and cost they incur to make single or multiple visits, NREGA workers often face humiliation by bank officials, travel in crowded buses in extreme weather conditions and more importantly, forgo the daily wage they could have otherwise earned during that visit period. In the last decade or so there has certainly been a deeper penetration of roadways, mobile phones, banking services and to a limited extent electricity and internet. However, increased access to rights, increased accountability of officials have not happened at the same pace of such notions of progress. Moreover, the assumption that more technology will necessarily lead to better functioning of the programme has repeatedly stood out as a false assumption. On the contrary, on many occasions, it has been used as a smokescreen to dilute workers' rights and government accountability.

One of the reasons to quantify some of the indicators on experiences of hardships is to draw meaningful insights that can feed in for alteration towards better policy.

In this Section we discuss some aspects of hardships faced by the NREGA workers that we surveyed. While some questions collected general information about banking rights, there were questions that attempted to capture the actual reported hardships and other questions tried to capture the perceptions of hardships. The choice of separating the hardships into the categories of 'reported' and 'perceived' is intentional. For example, if a worker has to make multiple trips to a bank to withdraw wages then that would constitute a reported hardship. Whereas, if a worker feels that accessing wages has become harder since the introduction of Aadhaar, then that would be a perception.

For example, we can see in the first row that 41.5 percent bank users in Andhra Pradesh reported that they had to make multiple visits to the bank to link their Aadhaar with their bank a/c. Similarly, we can see in the third row that 38.8 percent of CSP/BC users in Jharkhand had to make multiple visits to link their Aadhaar with their bank a/c.

Reported Hardships

There are five identified parameters to quantify hardship experiences of workers as outlined in Table 6.4.1(a). All the numbers in Table 6.4.1(a) represent the percentage of people reporting a hardship for the corresponding question.

Table 6.4.1(a):
Reported Hardships in disbursement agencies across States

Hardship Category	Hardship Variable	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Made Multiple visits for linking with Aadhaar	Bank Users (for linking with Bank a/c)	41.5	21.1	16.6	25
	Bank Users (for linking with NREGA Job Card)	41.2	19.3	12.9	22.8
	CSP/BC Users (for linking with Bank Account)	44.1	23.1	11.7	23
Made multiple visits for last withdrawal or have faced biometric authentication failure	Bank Users (multiple visits made for last transaction)	54.2	38.8	43	45.1
	Post office users (multiple visits made for last transaction)	53.2	NA	NA	53.2
	CSP/BC users (biometric authentication failures)	72.4	35.3	30	40.1

Hardship Category	Hardship Variable	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Time to visit payment agency	Bank users (1 hour or more on an average)	44.1	89.4	86.9	75.2
	Bank users (maximum time of 2 hours or more)	25.4	73.3	59.8	53.5
	CSP/BC users (half an hour or more on an average)	61.42	86.7	78.8	79.5
	Post Office users (1 hour or more on an average)	32.5	NA	NA	32.5
Cost incurred to visit payment agency	Bank users (greater than Rs.20)	19.6	67.4	35.1	39.3
	CSP/BC users (greater than Rs.0)	22.8	60.7	62.5	54.6
Accountability and Transparency	Passbook does not always get updated on withdrawal at Bank	40.3	54.3	69.3	57
	Passbook does not always get updated on withdrawal at Post Office	0	NA	NA	0
	Bank official refused to update passbook	23.1	43.2	41.3	36.5

Hardship Category	Hardship Variable	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Accountability and Transparency	Do not always get receipt upon withdrawal at CSP/BC in general	11	89.6	88.8	75.3
	Did not always get a receipt in the last 5 transactions at CSP/BC	23.6	95.7	94.2	82.3
	Do not get an e-statement on withdrawing wages at CSP/BC	30.7	88.4	88.8	78.3
	Does not use bank passbook for CSP/BC transactions	81.9	57.2	39.2	55.5
	Paid commission for withdrawal at CSP/BC	17.3	44.5	20	31.4
	Paid commission for withdrawal at Post office	9.9	NA	NA	9.9
	Was misinformed about deposit of wages in bank account at least once in the last 6 months	20.5	21.4	30.1	25
	Experienced others getting preference to get ahead in queue at CSP/BC	11	15.6	27.5	18.8

Figure 6.4.1(b), known as a box plot, shows the distribution of reported hardships for bank users across states on a 0-1 scale. As discussed in the Methodology section, the maximum value of reported hardship is 1 implying that such a person has experienced difficulty in every parameter depicted in Table 6.4.1(a) and the minimum value of reported hardship is 0 implying that such a person has experienced no difficulty in any parameter.

Figure 6.4.1(b): *Reported Hardships for Bank Users Across States*
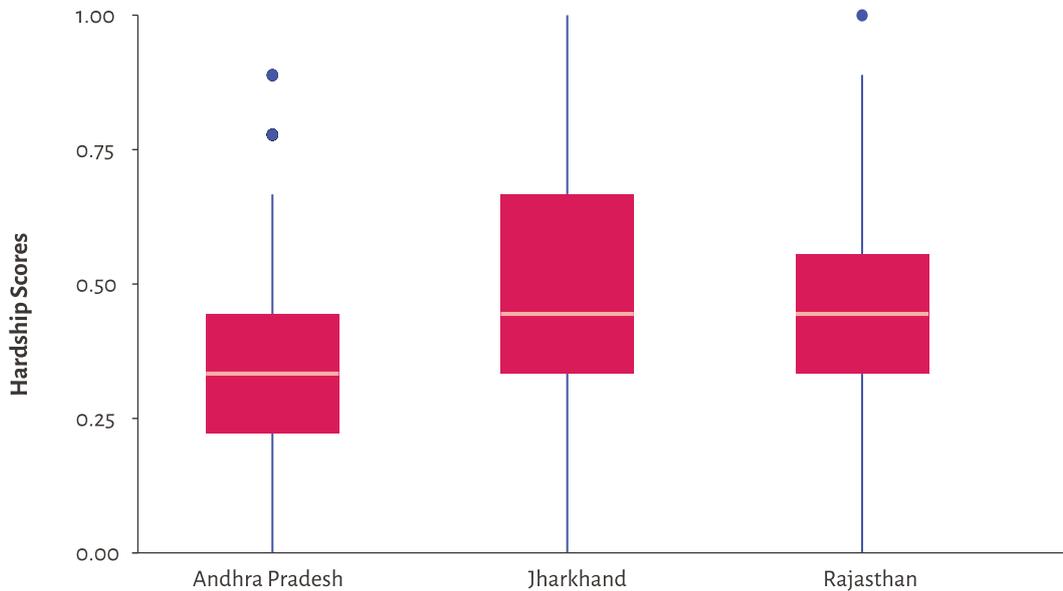
The red shaded part of the boxes in Figure 6.4.1(b) contains all the respondents whose hardship score is between the 25th percentile and the 75th percentile. The horizontal line inside each boxplot, shows the median hardship score for respondents of that state. For instance, the median reported hardship for bank users of Andhra Pradesh is 0.33 while the median reported hardship for all the bank respondents of Jharkhand is 0.48 and that of Rajasthan is 0.44. The red shaded part of the boxplot for Jharkhand is much broader and positioned higher compared to Andhra Pradesh and Rajasthan. This indicates a wide variation among those in Jharkhand who faced high to very high hardship compared to their counterparts in Andhra Pradesh and Rajasthan. In other words, 50 percent of people in Andhra had a hardship score of more than 0.33 while 50 percent of those in Jharkhand had a hardship score of more than 0.48. But, compared to Andhra Pradesh, there are many more in Jharkhand who experienced high to very high hardship.

The blue dots at the top of Andhra Pradesh and Rajasthan denote those people who have had extremely high hardships and they represent outliers or anomalies compared to the rest. For example, one such blue dot at the top of the box plot for respondents of Rajasthan has a reported hardship of 1. This means that this person has experienced difficulty in every parameter presented in Table 6.4.1(a).

Table 6.4.1(c) gives the average reported hardship score of bank users for each state. Since the questions are the same across the three states, on a comparative scale, we can say that the respondents of Andhra Pradesh faced least hardship in accessing wages from banks, followed by Rajasthan. Respondents of Jharkhand, on average, reported the highest hardships among these three states.

Table 6.4.1(c):

Average Hardship Score for Bank Users

State	Hardship Score for Banks
Andhra Pradesh	0.34
Jharkhand	0.48
Rajasthan	0.44

Figure 6.4.1(d):

Hardship Scores for CSP/ BC users
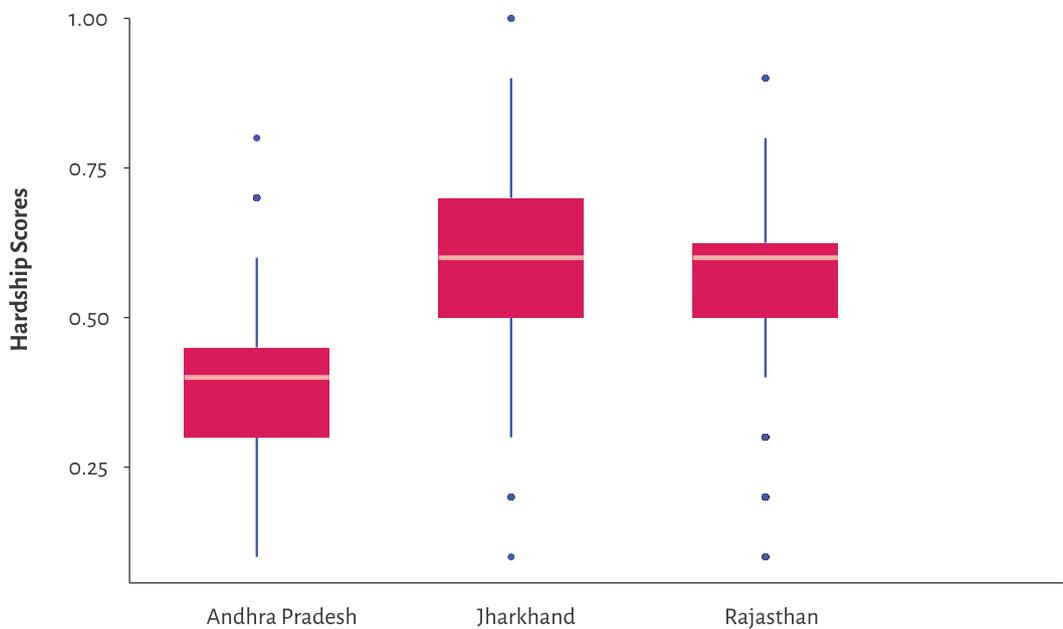
The interpretation of box plots are the same as in the case for banks. However, from Figure 6.4.1(d) it can be gleaned that the CSP/BC users of Andhra Pradesh face much less hardship compared to their counterparts in Jharkhand and Rajasthan. Although in absolute terms, the reported hardships are higher among CSP/BC users compared to banks, the two disbursement agencies are not comparable based on these scores since the questions used to calculate this are not the same.

The median hardship score for CSP/BC users in Andhra Pradesh is 0.4 while it is 0.6 for both Jharkhand and Rajasthan. Figure 6.4.1(e) also represents the distribution of hardship scores across states for CSP/BC users.

Figure

6.4.1(e)

Distribution
of Hardship
Scores for CSP/
BC users
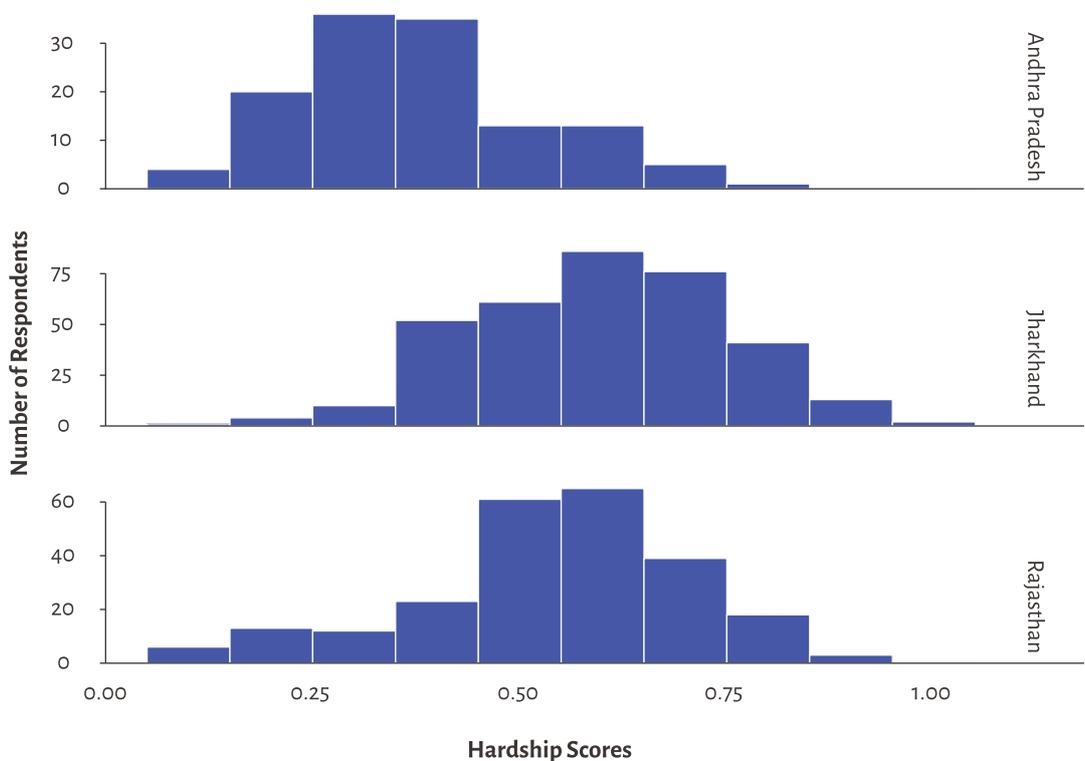
It's very clear from Figure 6.4.1(e) that the majority of the respondents from Andhra Pradesh have lower reported hardships compared to their counterparts in Jharkhand and Rajasthan. For example, the number of respondents to the right of a hardship score of 0.50 is much more in Jharkhand and Rajasthan compared to Andhra Pradesh. Indeed, this is also reflected in the average reported hardship for CSP/BC users for each state as shown in Table 6.4.1.(f).

Table 6.4.1(f):

Hardship scores comparison for CSP/BC users

State	Average Reported Hardship (CSP/BC)
Andhra Pradesh	0.38
Jharkhand	0.60
Rajasthan	0.54

Figure 6.4.1(g):

Degree of hardship for workers with primary disbursement agency as Bank or CSP/ BC across the States
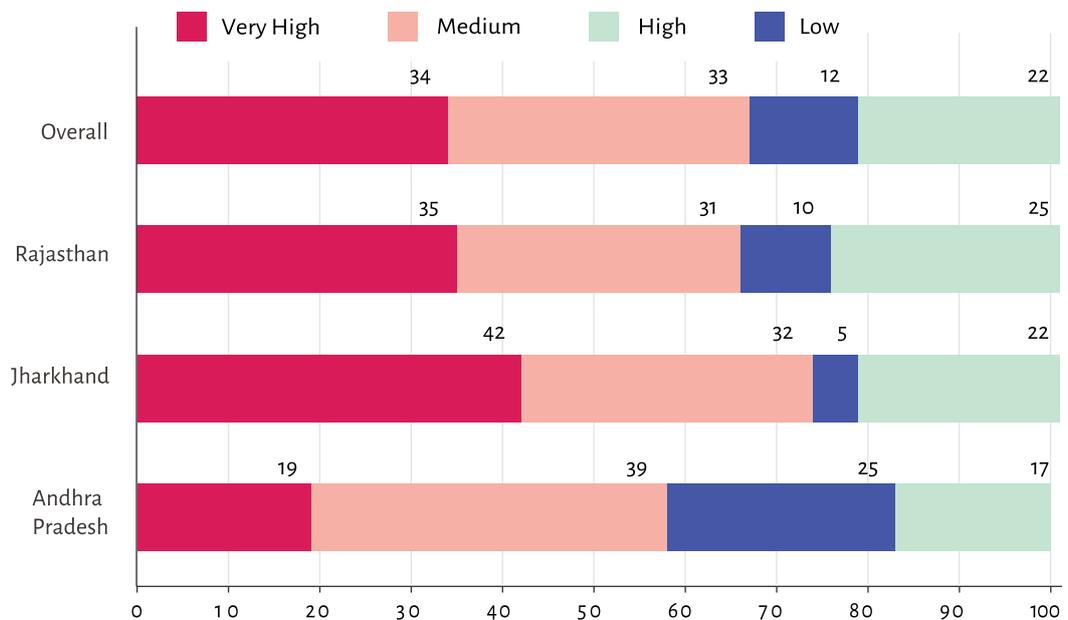
We looked at the overall hardship scores based on the primary disbursement agency of the respondent. For example, when a person uses both the bank & the CSP/BC but the bank is her primary disbursement agency, we considered the hardship score from the questions from the banking section. As such it can be seen that 6 in 10 people in Jharkhand and Rajasthan blocks have experienced "High or Very High" hardship. And a mere 5 in 100 people have "Low" hardship in Jharkhand. On the other hand, users in Andhra Pradesh block had relatively better proportions of people distributed across the degrees of hardship. 36 percent people experienced "High or Very High", while 25 percent people experienced "Low" hardship and about 40 percent respondents experienced "Medium" hardship.

Since postal payments are prevalent only in Andhra Pradesh, we cannot get a comparative picture on this disbursement agency across states. Figure 6.4.1(h) presents the spread of the hardship scores of post office users of Andhra Pradesh. The dashed vertical line in Figure 6.4.1(h) represents the median reported hardship for post office users. The median reported hardship for post office users is 0.14 and the mean is 0.20.

Figure 6.4.1

(h): *Hardship*

Scores for Post

Office users
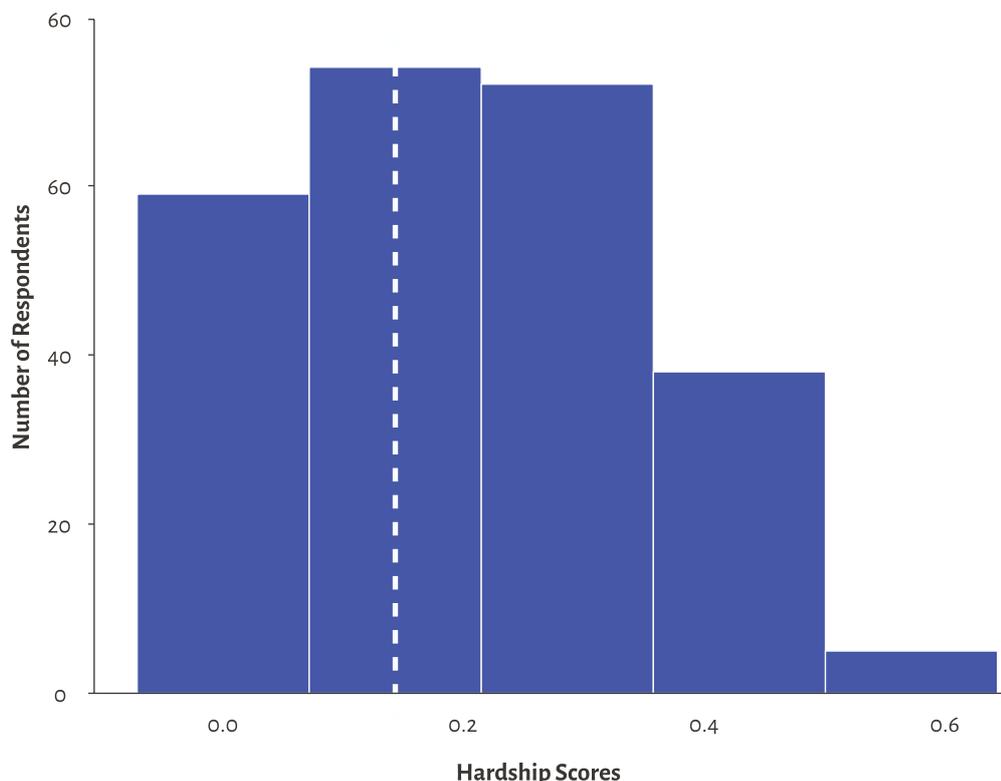
What we therefore see in Andhra Pradesh is that post office users face much less hardship compared to the banks and CSP/BC users. This is significant and even more so since payments through post offices are being phased out in Andhra Pradesh. A big reason is perhaps accessibility and ubiquity of post offices across villages. Given it's a state institution, people tend to have more faith in them compared to individuals disbursing money.

In order to see if there is any association between gender and hardship regardless of the disbursement agency, we created a combined category of hardship. We then split the combined hardship in two 4 bins (low, medium, high, and very high) based on the quartiles of the hardship score distribution. We then spliced the data by gender and state and the results are presented in Table 6.4.1(h). All the numbers in the table are in percent. They exclude responses from the individuals who used the ATM as their primary

disbursement agency. There does not seem to be any evident difference between the genders in most hardship categories in any state. However, more women seem to face 'very high' hardship compared to men in the same category in Andhra Pradesh and Jharkhand. There is no discernable difference between the hardship experience of men and women in Rajasthan.

Table 6.4.1(h):

Percentage of people across varying degrees of hardship, gender and State

Hardship Category	Andhra Pradesh (In Percent)		Jharkhand (In Percent)		Rajasthan (In Percent)	
	Female	Male	Female	Male	Female	Male
Low	35.5	36.1	4.4	5.1	9.7	9.7
Medium	39.7	41.9	29.3	33.2	30.6	31.2
High	11.7	9.5	19.4	22.9	25	20.4
Very High	13.1	9.5	46.5	38.4	33.6	38.7

6.5 Rejected Payments

This section captures the issues of people whose payments were rejected. The payments of about 13 percent of respondents in our sample were rejected. The total amount unpaid to 249 workers due to rejected payments when we did the survey for the period of one year was approximately Rs. 7.19 lakh. We have intentionally included respondents whose payments were rejected to ensure that we captured challenges faced by them. Those whose payments get rejected often have to undergo a long and cumbersome process to retrieve their wages. The process of correction is unclear and takes months before the issue is rectified. More importantly, the onus of identification of the problem and rectification falls entirely on the worker for no fault of theirs.

Members of the LibTech team with the members of Vikas Sahyog Kendra and NREGA workers in Palamu district, Jharkhand

Rejected payments are those transactions that are stuck due to technical errors of the payment system or data entry errors by the administration. When a fund transfer order is approved centrally, the wages either get 'credited' to the worker's bank account or get 'rejected'. So, a rejected payment is a failed transaction. The NREGA MIS provides numerous 'error codes' as to why payments are rejected. In practice, multiple error codes can be mapped to three broad categories:

- Data entry errors by the local administration - such as incorrect account number/ Aadhaar number entered in the system.
- Bank account related issues - such as dormant accounts, joint accounts, closed accounts
- Aadhaar related issues - delinking of Aadhaar from bank account due to mismatch of names, non compliance of KYC norms, participant bank related issues.

While the error codes (rejection reasons) are mentioned on the MIS, the real reason for the rejection can be understood only by someone who has a good knowledge of the banking system and the MIS. Most commonly the block computer operator is the person who has a grasp over the system. The digitisation of the entire NREGA process has made computer operators become quite powerful making it hard for workers to reach out to computer operators.

*Rejected
Payment Case
Study: Madhu
Devi's payments
were rejected
due to 'Inactive
Aadhaar'.*

We present a perplexing case of a woman from Rajasthan whose wage payments were rejected due to the reason categorised in the MIS as 'Inactive Aadhaar'. 'Inactive Aadhaar' typically means that the Aadhaar of the account holder has been deseeded/unmapped by NPCI from their mapper for various reasons. The ordinary Aadhaar - bank linkage could still be intact because the bank's database has the details of Aadhaar and customer linkage. In other words, when the bank asks for you to link your Aadhaar number it matches it with your customer identification number and stores it in their database. Thus, despite that she could use biometric authentication (AePS) to transact in her account, the deseeding/unmapping in the NPCI mapper means that any payment directed to that particular Aadhaar number will fail.

We met Madhu Devi in November 2019 when we were working on the issue of rejected payments in Bhim block of Rajsamand district. Madhu Devi had one bank account in Bank of Baroda. Her account was closed due to a long period of inactivity. She was advised to open a new account. She did so and linked her Aadhaar number with her bank account as well.

Before we met her, Madhu had approached the village NREGA officials and had complained to the NREGA mate. She had gone to the bank a few times too. Despite having made multiple visits, she always returned with her case unresolved.

Between April 2019 to November 2019 she had earned wages worth Rs. 6793 - which were never deposited in her bank account. We checked whether her account was active, whether her name matched on the job card, bank account and Aadhaar card. In fact, she was able to withdraw money through the AePS mechanism, which indicated that her Aadhaar was correctly linked in the bank's software. When all seemed fine, we approached the bank branch where she held an account to enquire what was wrong with her account. The bank checked her account and found that her Aadhaar was correctly linked with her bank account and the latest status on their screen was 'VERIFIED AND MAPPED IN NPCI.'

We were perplexed as to why her payments continued to be rejected when everything seemed fine at the end of the bank and in the NREGA software. The bankers suggested that in such cases they either try to deseed the Aadhaar and try the whole linking and mapping process again or simply advise the worker to open an account in another bank.

We were able to understand at least part of the problem in Madhu Devi's case due to persistent efforts of the Rajasthan Asangathit Mazdoor Union (RAMU) in Bhim block with the cooperation from the administration. However, ordinary workers are made to go from pillar to post in order to find out what happened to their hard earned wages. It also requires an understanding of the nuances of the payments system. Let alone workers, bankers and field functionaries themselves are not aware about the rules and constant changes in the banking software.

After the payment failure, it is incumbent on the local administration to rectify errors on their part or inform the worker and help her take corrective action. Once the worker has completed the necessary steps, the fund transfer order has to be generated again at the block. The entire payment process is then repeated. In most cases, the failure is completely due to technical errors and sometimes the banking norms are unreasonable for workers to be able to comply with. It is obvious then, that people whose payments are rejected have to face a higher degree of hardship. Not only do they have to run from pillar to post to find out why their payments have failed but also have to make multiple visits in order to get the rectification done.

In our sample, we had 249 individuals whose payments were rejected. Andhra Pradesh had negligible cases of rejected payments at the time of our survey and therefore we did not include any rejected payments from Andhra Pradesh. We wanted to have one-third of the sample of each panchayat as cases of rejected payments. Where the one-third threshold of rejected payments for each panchayat was not reached, we divided the remaining numbers between the other two categories of payments - credited within 30 days and credited after 30 days.

Table 6.5(a):

State wise number of workers with rejected payments

State	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Workers with rejected payments	0	111	138	249

While trying to understand the causes of rejections, field functionaries (including bankers and local NREGA officials) were asked as to why payments were rejected. They did not seem to have clarity about it. Some reasons they suggested were wrong Aadhaar seeding, change in names and data entry errors by computer operators. And when asked if they knew how to resolve these issues, they had some broad ideas of resolution. It was a trial and error method in most cases. Many of the field functionaries seemed to indicate that when workers have multiple bank accounts, it can cause more complications.

Table 6.5(b):

State wise number of bank accounts per worker

No. of Bank Accounts	Jharkhand (in percent)	Rajasthan (in percent)	Overall (in percent)
1	78.9	75.4	77
More than 1	21.1	24.6	23

As Table 6.5(b) indicates, a significant proportion of respondents whose payments were rejected own multiple bank accounts across the three states. Having multiple bank accounts could mean that workers have confusion in identifying the bank account where NREGA wages are supposed to be credited. And thus when wage payments are rejected, they find it harder to identify which account to rectify. Even when the payments are successful and a worker has multiple bank accounts, it can become difficult for the worker to identify the bank account where NREGA payment is transferred.

6.5.1 Awareness among people with Rejected Payments

We tried to assess the awareness of the respondents as far as resolution of rejected payments were concerned. For instance, we asked if they knew that their payments were rejected, if they knew the reasons for rejection and the methods to rectify them. Overall, we found that the awareness about rejected payment was low on all counts and compared to those in Rajasthan people in Jharkhand had lower awareness on these parameters. We present the details in this section.

One of the reasons for this is because respondents in Rajasthan had a colloquial term to express the failure of payment "sitta rudi gayo" (money was cancelled). Therefore when asked in the survey, about whether they were aware about rejections, they were able to understand the difference between not receiving payments due to delays as opposed to a rejection.

About 89% of the respondents did not know why their wage payments were rejected. Hence, they did not know what measures to take in order to rectify these errors.

Awareness of Payment Rejection	Jharkhand	Rajasthan	Overall
Aware	41	104	145
Unaware	70	34	104
Overall	111	138	249

Table 6.5.1(a): *Number of people aware of payment rejection*

Figure 6.5.1(b): *Source of information about payment rejection*
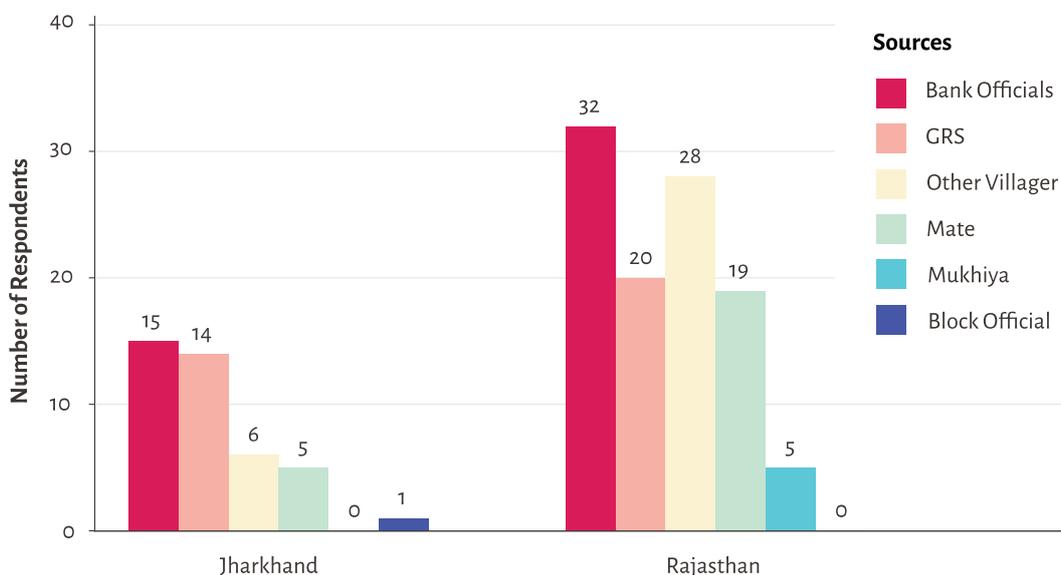
Figure 6.5.1(b) shows that among those who were aware of the fact that their payment was rejected, they got the information from bank officials, the Gram Rozgar Sahayak (GRS) and other workers from the village most commonly.

A relatively higher proportion (57 percent) knew about the bank account to which the payment was attempted (77 percent in Rajasthan and only 32 percent in Jharkhand). However, respondents did not seem to know why the payments were rejected and what documents have to be used to rectify the error.

Table 6.5.1(c) shows the levels of awareness of rejection reasons. About 89 percent of the respondents did not know the reason for the rejection of their wage payments. As a corollary, they did not know what measures to take in order to rectify these errors.

Table 6.5.1(c):

Percent of people who had knowledge of rejection reasons

Knowledge of Rejection Reason	Jharkhand (n = 111)	Rajasthan (n = 138)	Overall (n = 249)
Aware	13.51	9.41	11.24
Vaguely Aware	5.40	17.39	12.04
Unaware	81.08	73.18	76.70

As Figure 6.5.1(d) shows, more than two-thirds of the respondents did not know what documents to be submitted to rectify the errors.

Figure 6.5.1(d):

Awareness of documents required for rectification of problem of rejection
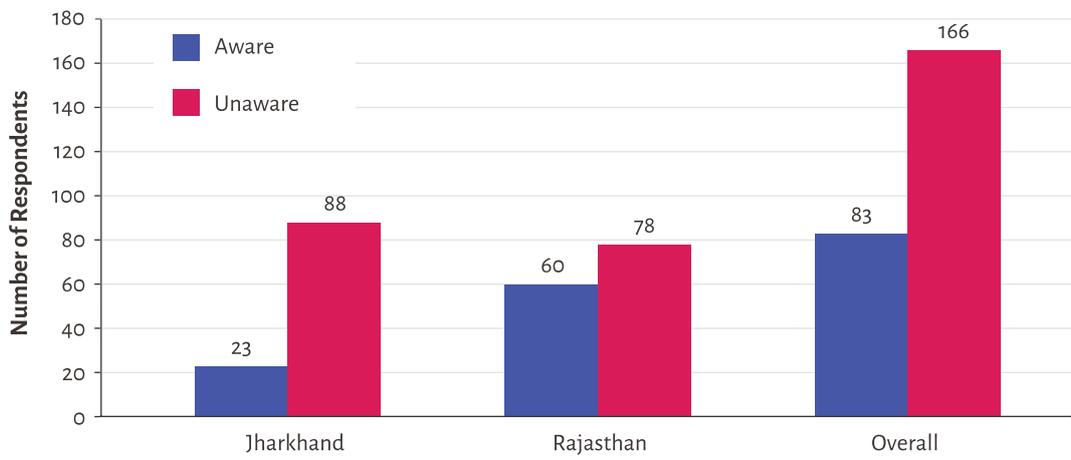
It is important to note that even when the awareness levels about rejection are high, people face enormous hardship in order to get the issue rectified. It is common to take several months before the payment finally gets credited. Among those who knew, most workers reported that they submitted the required documents to the GRS or at the block office.

6.5.2   Hardships among by workers with rejected payments

We look at the reported hardship scores for those whose payments were rejected. It is unsurprisingly higher compared to those whose payments weren't rejected. As Figure 6.5.2(a) indicates, 70 percent of people with rejected payments have experienced high to very high hardships at their respective payment agency. This indicates that people with rejected payments have to face a two fold problem. They not only face the brunt of the payment rejection but also experienced greater hardship at their payment agency. The rectification process is long and arduous in most cases. The payment is stuck upto months, and it takes several visits to the block office and bank for identifying the issues, let alone resolving it. Workers have to submit copies of documents and seldom get an assured response or written acknowledgement for their complaints.

Figure

6.5.2(a):

Hardships among workers with rejected payments

Figure 6.5.2(a): Hardships among workers with rejected payments

- 3.6% — Low Hardship
- 25.7% — Medium Hardship
- 24.1% — High Hardship
- 46.6% — Very High Hardship
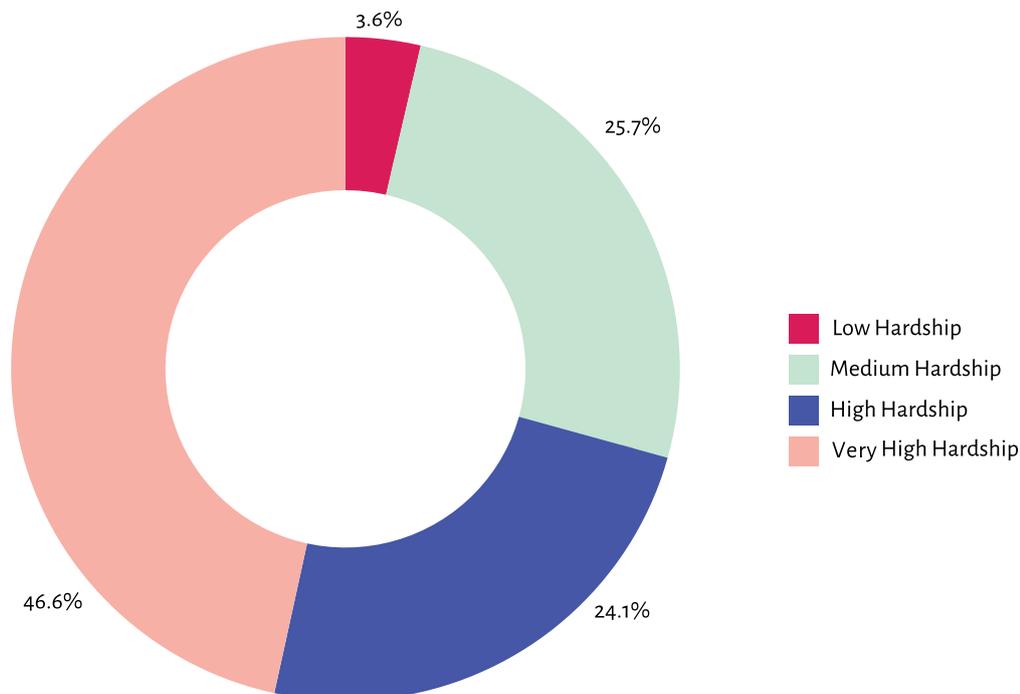
6.6 Grievance Redressal

One good way to assess the effectiveness of any programme is through its grievance redressal architecture. Despite being one of the most critical parts of any programme implementation, grievance redressal seems to be the most difficult to operationalise properly. For NREGA, in most states, several grievance collection facilities such as toll-free helpline numbers, presenting grievance letters to administrative functionaries, registration of grievances on web portals etc. are available. However, on both counts, i.e., collection and redressal of grievances, there are many gaps. The administration's perspective is usually quite different from the workers' perspective as far as grievance redressal is concerned. Three broad themes emerge in this regard. First, is the question of what constitutes a legitimate grievance for workers. Second, assuming the workers identify and acknowledge a grievance then how easy is the process of registering these grievances. Third, the level of empathy and inclusion displayed by the State machinery in following up on and redressing the grievances in a time bound manner.

An important part of the survey was to understand access to grievance redressal systems with respect to payment delays as well as last mile issues from the workers' perspective. The focus was more on understanding the first two themes mentioned in the previous paragraph.

Delays in wage payments have become so normalised that even if payments are delayed by a month or more, workers don't see it as a violation of their rights. People do not perceive long queues and waiting time at the bank, biometric failures at the CSP resulting in non-withdrawal of wages, or even the lack of passbooks or updating mechanisms as legitimate grievances to register. Despite evident hardships, the regularity of it has normalised the hardships to a large extent which makes acknowledging something as a legitimate grievance in itself uncommon. As such, although these complaints exist, they go unregistered.

The Jharkhand Survey team speaking to the villagers about their work and informing them about their rights as part of NREGA

Let us assume that a is worker is able to identify and acknowledge a grievance. The next step is to be able to register it formally. Many people did not know where they could possibly raise a complaint. Many of them were afraid to file a complaint against the field functionary because they are often people from their village, or known to them. It is not uncommon for the field functionaries or block officials to reprimand those who have filed complaints. Even where toll-free helpline numbers were available, people haven't heard of them or haven't found them useful. On many occasions, the person at the call centre receiving the telephonic complaint may not know the local language of the worker and/or may be asking too many questions. These create massive entry barriers for workers to call and register their complaints. Unless there is active mediation by some civil society organisations, grievance registration using web-based systems is difficult. As for banks and CSPs, people did not know whom to approach about their complaints. It is therefore not surprising that about one in five respondents overall, said that they had a complaint but hadn't registered it.

The final layer in the sequence of hurdles are formats. For the administration, resolving grievances would be relatively easy if there are standardised formats for collecting grievances. For the workers, many details in the desired format might be too cumbersome. There are series of barriers that a worker has to face. Even in the rare case that grievances do get registered, the state administration, on many occasions lacks the capacity to redress them. Since wage payments are entirely the prerogative of the central government, the state governments plead lack of ability to pay the workers. For more complex issues pertaining to rejected payments, the state officials often lack the technical capacity to understand the nature of the problem. But for the workers, it's simply a case of payment not received. In case it's an issue pertaining to incorrect Aadhaar mapping, then the resolution lies with the banks, UIDAI, and/or NPCI. MoRD may not have the capacity for this. All these present a unique set of challenges for grievance redressal in NREGA thereby jeopardising the workers' right to be heard. One possible explanation for a weak grievance redressal system is that the grievance redressal and implementation authorities are the same.

In order to capture the reality, we had to probe a lot more to make the respondents comfortable to discuss their complaints as we assured them anonymity. We also asked them about the details of the complaint(s) filed in the last six months, to ensure that the recall period is reasonable.

6.6.1   Grievances among those facing hardship

In Figure 6.6.1(a) each horizontal bar is a level of hardship experienced by workers categorised as Low, Medium, High and Very High. This is across payment agencies. Each segment of the bar shows whether they registered their complaint and if so the mode of doing so, i.e., written, verbal etc. It can be seen that 50 percent of those experiencing High or Very High hardships said that they had no complaints. This points to the fact that people do not recognise legitimate hardships as reasons to file official complaints. However, the percentage of respondents who said that they have complaints but did not register them increased significantly as the levels of hardships increased. This could indicate that there are reasons that hinder workers from registering a grievance.

> " *Of the respondents whose payments were rejected, nearly 30 % said they had a complaint but did not register it. Only about 6.3% registered a written complaint.* "

93

Figure 6.6.1(a): *Grievance Redressal and Hardship Scores*

Legend: Online, Registered Verbally, Has a complaint, but did not register, No Complaint, In Writing

Very High: 16, 119, 143, 277, 11
High: 8, 74, 76, 201, 7
Medium: 7, 194, 110, 351, 6
Low: 4, 122, 23, 180, 3

Hardship Category / Percent of Respondents
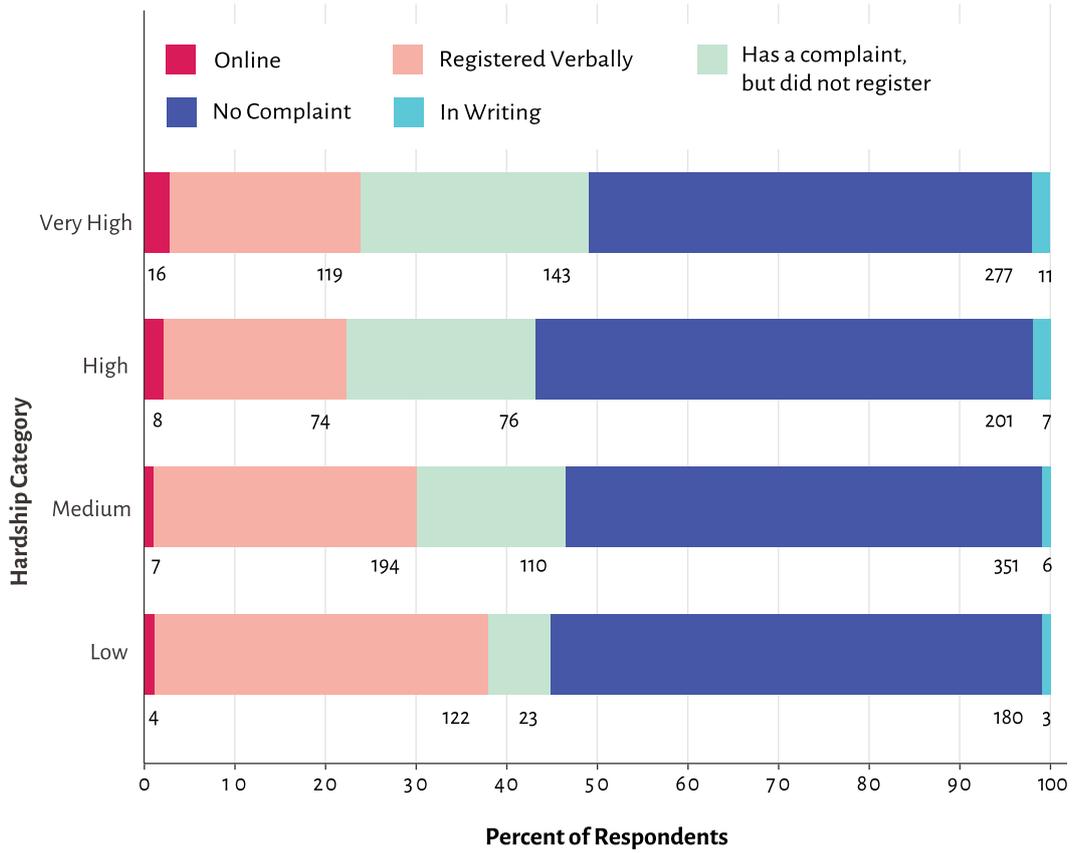
Figure 6.6.1(b): *Rate of Grievance Registration among those with rejected payments.*

6.3% 2.3% 23.5% 38% 29.9%

Legend:
Do not wish to disclose
No Complaint
Has a complaint, but did not register
Registered Verbally
Registered in Writing/Online
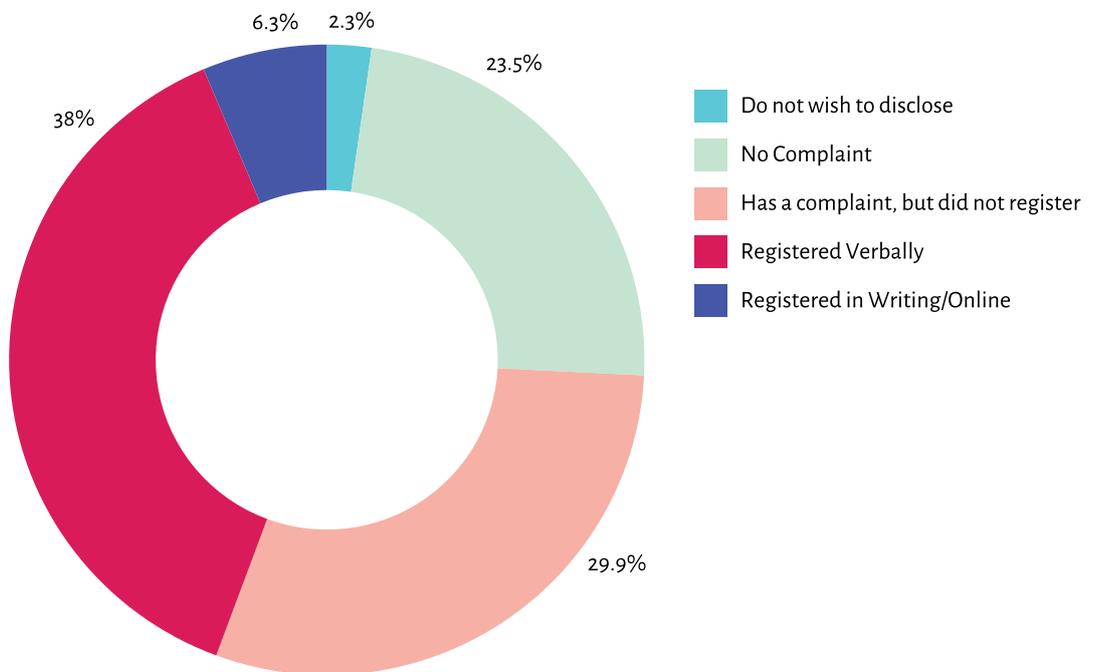
Rejected payments are legitimate and serious grievances. As mentioned earlier, for workers with rejected payments unless the problem is correctly identified and rectified, they would not get paid. Figure 6.6.1 (b) shows that only about 6.3 percent of those whose payments were rejected registered a written complaint. Nearly 30 percent of the respondents whose payments were rejected said they had a complaint but did not register it.

This illustrates two important points:

a. People often didn't recognise legitimate grievances
b. Even when they did recognise that the issue constituted a grievance, they seldom registered it officially

Some of the causes for not registering complaints have been listed above. However, even those who did register complaints often did so verbally instead of submitting it in writing or online. Filing a complaint verbally has no official bearing and therefore it is equivalent to not filing it at all. It is impossible to track the complaint because there is no paper or digital acknowledgement of verbally filed complaints.

> " *A worker had worked for 4 weeks but had received payments for only 1 week. Such delays in payments in the first two quarters of the financial year is worrisome as delays usually set in the third quarter.* "

6.6.2 Grievances Registered

Overall about 546 respondents communicated their complaints of which about 94 percent did so verbally. The remaining 6 percent filed them in writing and only 1 respondent among them filed the complaint online. As Figure 6.6.2(a) shows, about 30 percent of the respondents in Rajasthan and 24 percent in Jharkhand reported that they had grievances but had not registered them.

Figure

6.6.2(a):

Grievances by

States
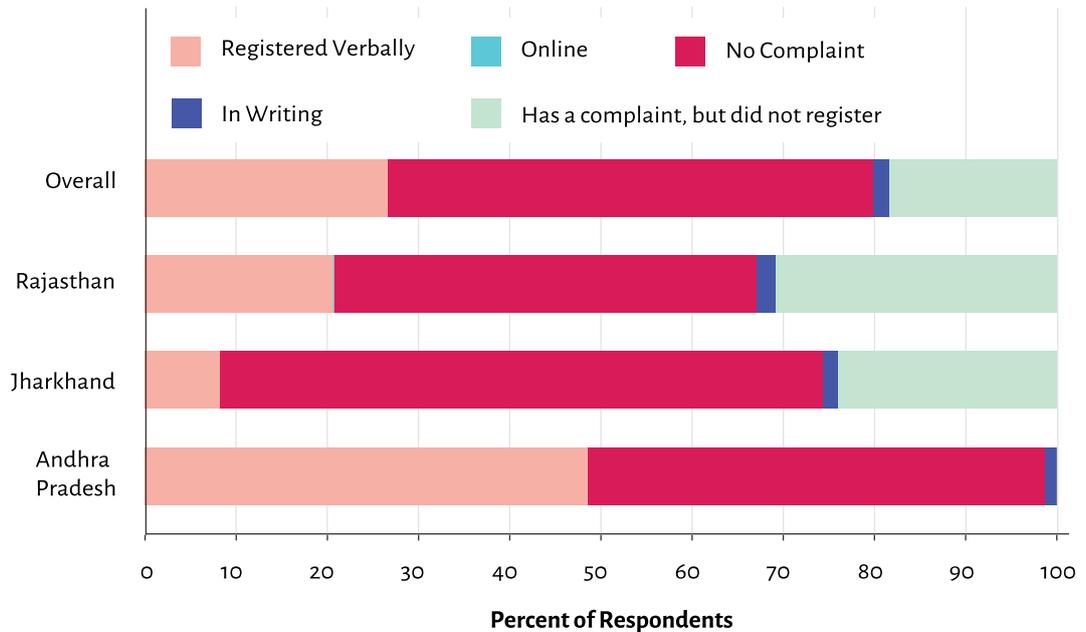
Of the 546 individuals who communicated any complaints (including those filed verbally), there were several who filed complaints about more than one issue. Most complaints pertained to payments, and in particular, pending wage payments. For example, a worker had worked for 4 weeks but had received payments for only 1 week. Such delays in payments in the first two quarters of the financial year are worrisome as delays usually set in the third quarter. Figure 6.6.2(b) shows the categories of complaints that people had.

Figure

6.6.2(b):

Categories of

Grievances
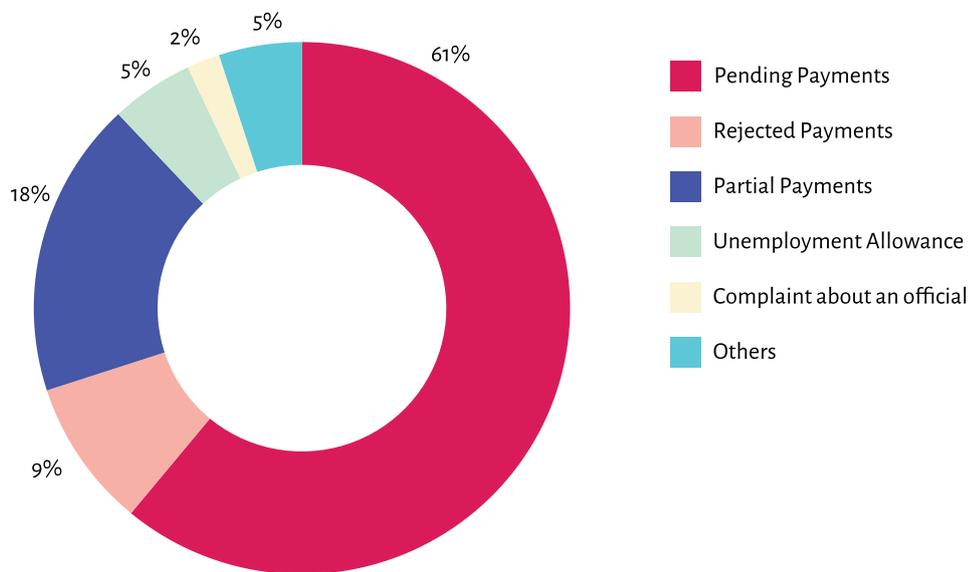
" *None of the 546 individuals with complaints had used the toll-free number or government helpline to raise a complaint.* "

Filing a grievance typically would consist of submitting it in writing, online or on a helpline. However, it is very common for people to verbally communicate to an official that they have a certain grievance. When registering a complaint, a worker may discuss individual problems (like a payment rejection). Sometimes, workers also go in groups, submit a petition or an application together as a group. This usually happens in places where labourers work in groups or there is some form of a workers collective. For instance there have been stray instances of collectivisation seeking unemployment allowance otherwise this is seldom paid. Table 6.6.2(c) shows that most workers who filed complaints in Jharkhand and Rajasthan did so as individuals. In Andhra Pradesh, however, most complaints were filed collectively.

Table 6.6.2(c):
Level at which grievance is registered.

Type of Complaint Filed	Andhra Pradesh	Jharkhand	Rajasthan	Overall
Individual	116	55	92	263
Collective	179	7	56	242
Both	38		3	41
Overall	333	62	151	546

Verbal complaints were mostly communicated to a panchayat official. The others to whom workers raised their concerns were NREGA mates or middlemen. It is important to note here that we had asked people if they had used the toll-free number to raise a complaint. None of the 546 individuals with complaints had used the toll-free number or government helpline to raise a complaint.

Table 6.6.2(d):
Individual/ Collective registration of grievance.

Level at which the complaint was filed	Andhra Pradesh	Jharkhand	Rajasthan	Overall
To a Panchayat Official	226	36	90	351
To a Block Official	5	10	17	32
To a Payment Agency	21	5		26
NREGA Portal	5			5
State Grievance Redressal Portal		1	1	2
Toll Free Number/ Helpline	0	0	0	0
Others	76	10	44	130
Overall	333	62	152	546

Figure 6.6.2(e):
Statewise Grievance Resolution
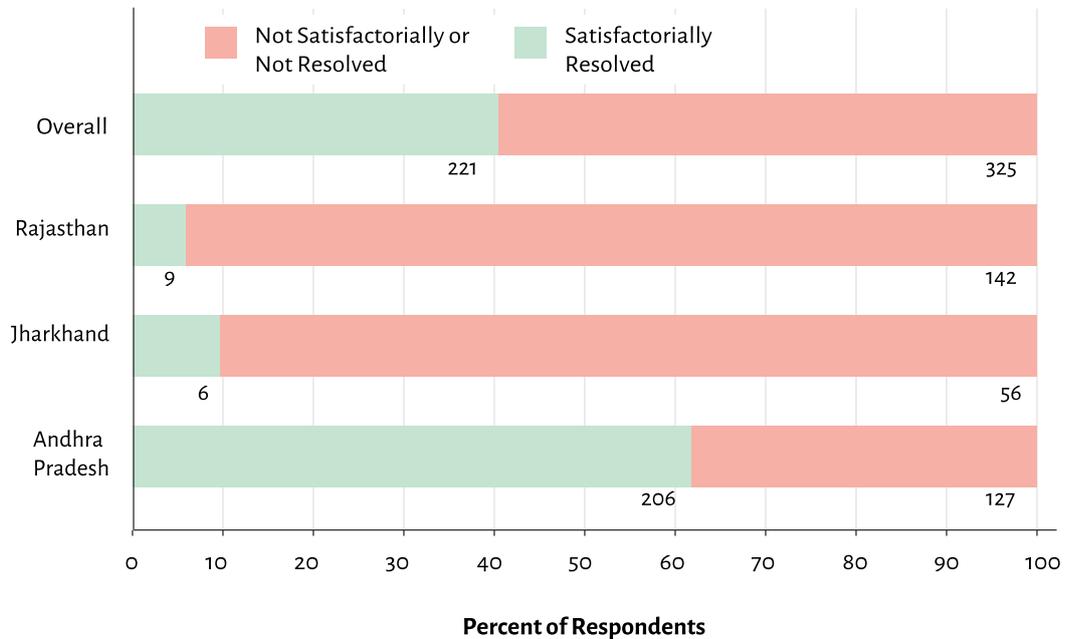
Most respondents who filed complaints across the states did not have them satisfactorily resolved or resolved at all. Among those who said that their complaints were not resolved at all, they were either told to wait for a few days or didn't know the status of their complaints. Very few (about 9 percent) knew the level at which their complaint was pending.

6.6.3 Time and Costs of Filing Complaints

About 64 percent (n=348) of the complainants had to follow-up two or more times to resolve their complaints. This could mean asking the GRS on multiple occasions about the status of the complaint or concern. Sometimes, people make multiple visits to the Gram Panchayat bhavan and wait to speak to the GRS about their issue.

On a positive note, 80 percent of those who complained, reported that they did not spend any money to follow-up on the complaint. However, about 57 respondents said that they spent over Rs. 50 to follow-up on their complaints, with about 6 people spending more than Rs. 1000 (possibly as a bribe or commission).

One third of the complainants (n=100), whose complaints were resolved (n=290) said that it took more than 15 days for their complaint to be resolved. 3 people even said it took up to 1 year for their complaint to be resolved. Among those complaints that were pending to be resolved, about 50 percent (n=125) of the respondents were given an ambiguous response "to wait for sometime". And about 32 percent did not have any idea about the status of their complaints.

Grievance registration and redressal remains an extremely weak link in the chain of NREGA implementation. Making it easier for individuals to register grievances will go a long way in ensuring workers continue to work through the programme, in addition to significantly strengthening its implementation.

6.7 Preference of Payment Disbursement Agencies

Following a comprehensive analysis of workers' experiences with different disbursement agencies, they were asked what would be their preferred disbursement agency if they had the choice of all of the existing agencies, i.e., banks, CSPs, BCs and Post Office. Respondents were also given the choice of 'no particular preference' or 'can't say' because they have only ever used one agency.

Preference of payment disbursement agency for bank users
A majority of the bank users in Rajasthan and Jharkhand (~80 percent), preferred to continue using banks for collecting wages while more than two-thirds in Andhra Pradesh preferred to continue with banks. In general, there was a greater sense of trust and security in accessing wages through banks in these states.

" In Andhra Pradesh, about 90% of post-office users prefer continuing with currently used disbursement agencies. "

Figure 6.7(a):

Preference of payment disbursement agencies for bank users.

Andhra Pradesh

6.8% 0.3% 0.7%
24.6%
67.6%

Jharkhand

0.3% 3.8% 1.4%
13.6%
80.9%

Rajasthan

2.1% 4%
0.2%
12.1%
81.6%

- ■ Bank branch
- ■ CSP/BC
- ■ Post Office
- ■ ATM
- ■ No preference/ can't say
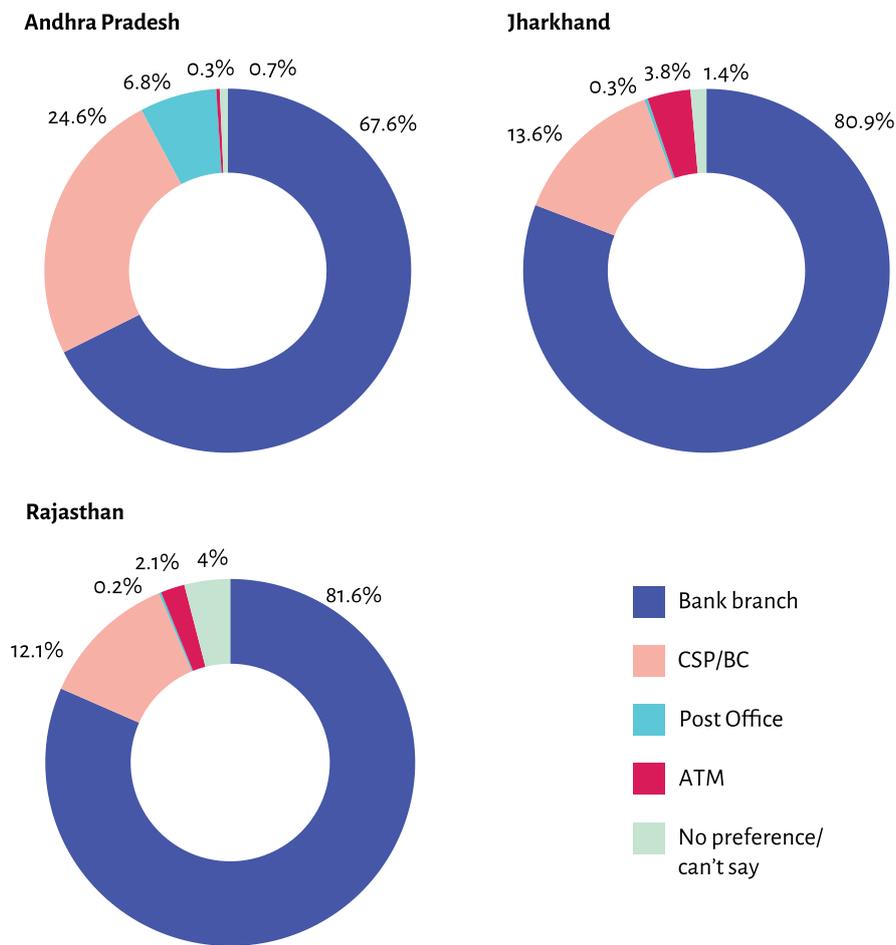
Preference of payment disbursement agency for CSP/BC users

In Andhra Pradesh, there was a preference for CSP/BC if it was in their village. A greater proportion of respondents (84 percent) from Andhra Pradesh preferred to continue with BC in comparison with those who prefer to continue with banks (67 percent). In Jharkhand and Rajasthan, 35 to 40 percent of the CSP/BC users would have preferred to transact through a bank branch instead. Some of the main reasons to use CSPs instead of banks is that banks in rural Jharkhand and Rajasthan are located in the block and they tend to be over crowded. A 10 district survey of CSPs/BCs in Jharkhand, Sabhikhi, Lahoti, and Narayanan (2019) show that about 37 percent of the 401 respondents had to revisit CSP/BC owing to network/electricity problems. About 24 percent experienced over-crowding and about 13 percent had to make repeated visits owing to biometric issues. However, many CSPs are present at the panchayats making them more proximal to the workers compared to banks. Further in many banks in Jharkhand, workers who want to withdraw any amount below Rs.10,000 have been instructed to use CSPs.

Figure 6.7(b):

*Preference
for Payment
Agency for
CSP/BC users*

Andhra Pradesh

3.3% 0.8% 0% 11.5%

84.4%

Jharkhand

5.2% 4.1%

0.6% 34.9%

55.2%

Rajasthan

51.7% 1.2% 1.2% 5.4% 40.4%

- Bank branch
- CSP/BC
- ATM
- Post Office
- No preference/
  can't say
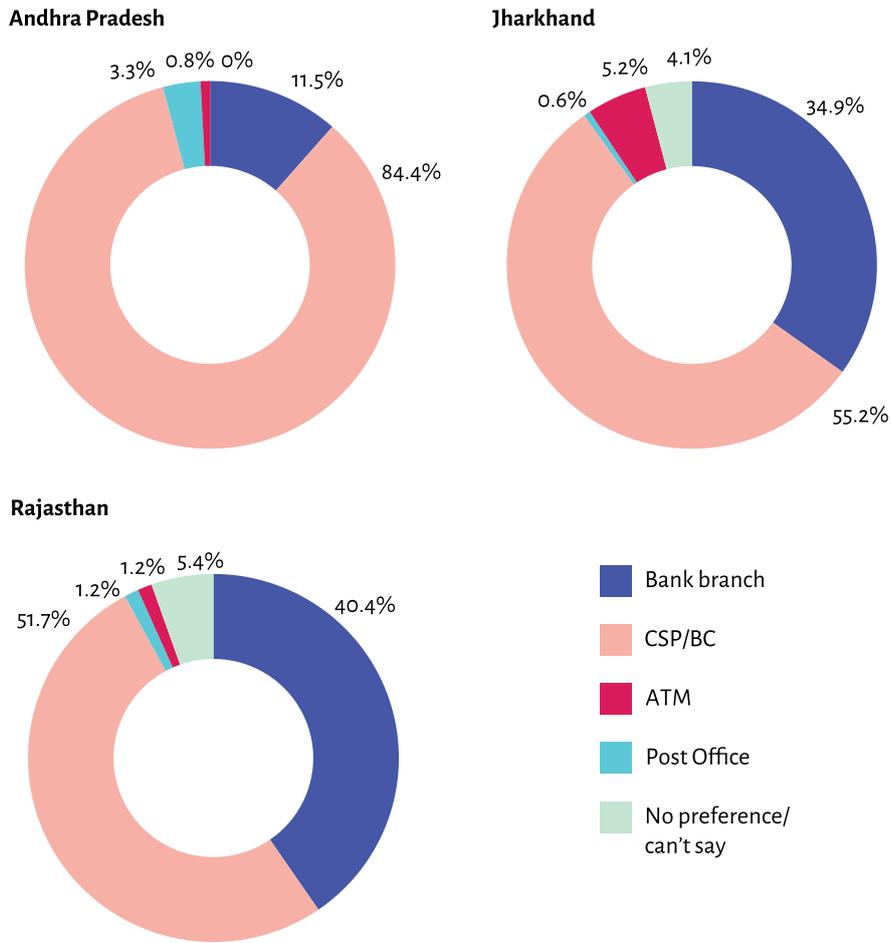
Preference of disbursement agency for PO users

The preference of continuing with currently used disbursement agencies is the highest amongst post-office users. In Andhra Pradesh, about 90 percent of post-office users prefer continuing with it. The reasons for willingness to continue with post-office can be inferred from the general lack of challenges amongst post-office users as compared to bank or CSP/BC users. The field functionaries in Andhra Pradesh also suggested that postal payments are preferred by the administration and workers alike. Postal agencies have a wider reach and branch postal managers are known to villagers.

Figure 6.7(c):

*Preference
for Payment
Agency for
PO Users*

0.8% 1.6% 6.3%

1.6%

89.7%

- Post Office
- ATM
- No preference
- Bank branch
- BC
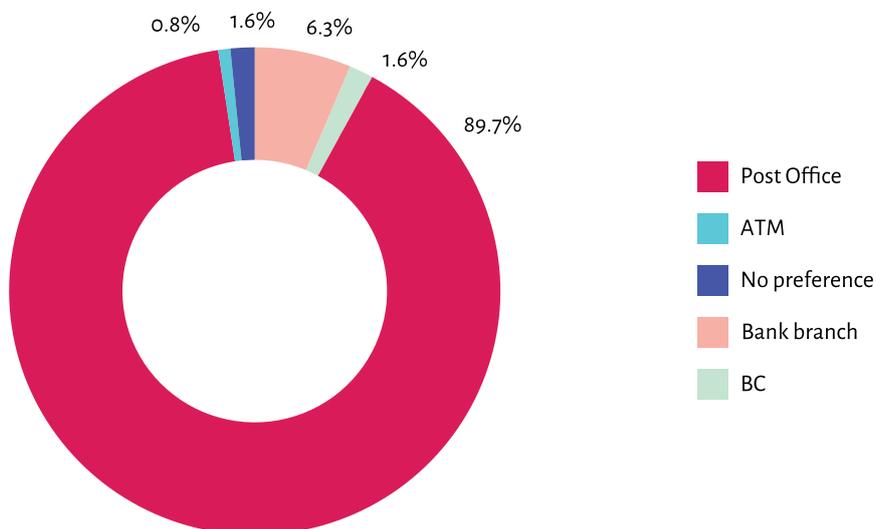
A worker in Andhra Pradesh narrated her story to our team. She was in need of cash late one night, because her husband had to be hospitalised. She went to the BPM's house late at night and he was able to disburse some cash to her. She exclaimed, "Will a bank be ready to help me out that late at night? I prefer the post office for my wage payment disbursal".

6.8 Transaction Verification

In addition to the questions on experiences of using different disbursement agencies, we sought to verify if the transactions of wage payments as per online reports on the NREGA MIS matched with workers' testimonies. Each transaction corresponded to works as per a single muster roll. For each worker in our sample, we downloaded all their transactions between 15 August, 2017 and 14 August, 2018. The transaction verification format included the following pre-filled fields obtained from official records: work name (also called scheme), dates for work for that muster roll, the wages earned, the date on which wages were credited, and the number of days of work. Workers were asked if they worked on the scheme, how many days of work they did and the wages earned. While this was done in consultation with the social audit teams of the states, the responses have been treated as estimates.

Workers who did not work on a particular scheme as reported on the MIS: We observed a wide variation between responses and the MIS data across the states. In Basia and Manika blocks of Jharkhand, about 18 percent of the transactions seemed to be fake work, whereas in Andhra Pradesh and Rajasthan they were 0.25 percent and 2.4 percent respectively.

> *In Basia and Manika blocks of Jharkhand, about 18% of the transactions seemed to be fake work*

Figure 6.8(a):

Percent of Work Done as per official records

Figure 6.8(a): Percent of Work Done as per official records
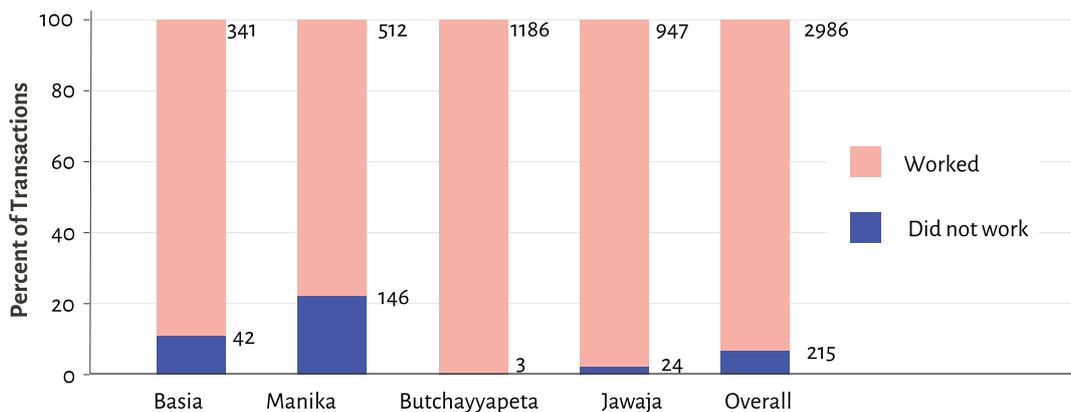
Difference in work days: Among those who claimed that they had genuinely worked on particular schemes, they were asked how many days of work they completed for each of them. The Table 6.8 (b) shows the difference in work days between what is there in the MIS and what the respondent said. For example, if we look at row number three of Table 6.8 (b), there were 7 transactions or 0.23 percent of the total transactions for which the MIS showed a greater number of workdays by about 50 to 74 days compared to that reported by workers. On the other hand, in about 16 percent of transactions, respondents reported to have worked for a greater number workdays by about 1 to 25 days, when compared to that reported on the MIS. This is worrisome since it means that, in reality, people have worked but they won't be paid as their completed work is not recorded on the MIS. For 1694 transactions or 59 percent of transactions there was no difference between the days worked as reported by the respondent and the MIS data.

Table 6.8(b):

Discrepancy of work days between MIS and the workers' response

Row Number	Difference in Work Days (respondent reported - MIS figures)	Frequency of Transactions	Percent of Transactions
1	Less than -100	2	0.07
2	-99 to -75	1	0.03
3	-74 to -50	7	0.23
4	-49 to -25	49	1.64
5	-24 to 0	2294	76.83
6	1 to 25	479	16.04
7	26 to 50	33	1.11
8	51 to 75	9	0.30
9	76 to 100	9	0.30

25% of the respondents reported that they received less money than was reported in their name as per the MIS

Difference in wages earned: In addition to the difference in work days, the respondents were also asked how much money they have received for the work they have done. The difference between the reported amount and the amount as per the MIS was calculated to understand the extent of discrepancies.

In about 1425 (of 2810) of the transactions the difference was zero. Thus, in about 50 percent of the transactions, respondents received the full amount as per the MIS. Table 6.8(c) shows the difference in the wages received by the respondents and what is reported on the MIS.

For example, the row number 2 shows that for 12 transactions the difference was between -10000 to - 8000. This means that the MIS reported that the wages for 12 transactions were paid but the respondents claimed that they were not paid and the amount lies between Rs. 8000 to Rs. 10000. About 25 percent of the respondents reported that they received less money than was reported in their name as per the MIS. The numbers lie anywhere between Rs.500 to Rs. 10000. There could be several reasons for this. Some of them are discussed below.

First, the workers were perhaps asked to work for a certain number of days and the recorded attendance was lower. Second, fewer muster rolls were issued but work happened without the issuance of muster rolls. These are common in many parts of Jharkhand and Rajasthan where workers often work without looking at the physical copy of the muster rolls. In fact, musters are routinely issued after completion of work. Third, the workers' money may have been wilfully deposited in the wrong account. This could happen if the work is conducted by a contractor, which is illegal as per the Act. Fourth, the workers' money has been inadvertently diverted to a completely different or unknown account due to errors in linking the Aadhaar card with the jobcard/ bank account. The members of LibTech have documented a few such cases of diverted payments. We document the case of a woman in Chhattisgarh when one woman's NREGA wages were deposited to another woman's bank account (Narayanan, Dhorajiwala, and Paikra 2017). And yet another particularly severe case of diverted payments in Jharkhand where one woman had lost all her savings due to an error at a bank branch (Narayanan and

Dhorajiwala 2019b). The case also illustrates the particular vulnerabilities that the rural poor are exposed to in transactions at CSPs. It is possible that a few such cases are a part of the sample as well. Finally, recall errors like respondents not being able to remember clearly how much they have received as wages could also be one of the reasons for the difference.

Table 6.8(c):

Difference in the wages reported in the MIS and the workers' testimony

Row Number	Difference in amount (in Rs.) (Respondent reported - MIS data)	Frequency of Transactions	Percent of Transactions
1	Less than 10000	15	0.53
2	(-10000 to -8000]	12	0.43
3	(-8000 to -6000]	21	0.75
4	(-6000 to -4000]	76	2.70
5	(-4000 to -2000]	240	8.54
6	(-2000 to -1000]	221	7.86
7	(-1000 to -500]	123	4.38
8	(-500 to 0]	1824	64.91
9	(0 to 500]	120	4.27
10	(500 to 1000]	55	1.96
11	(1000 to 2000]	55	1.96
12	(2000 to 4000]	33	1.17
13	(4000 to 6000]	4	0.14
14	(6000 to 8000]	8	0.28
15	(8000 to 10000]	3	0.11

On the other hand, it was also found that some workers reported getting wages more than that was reported on the MIS. It is also possible that workers may have reported working on a particular scheme for the financial year, whereas the transactions were for the period between 15 August, 2017 to 14 August, 2018.

7 Recommendations

The recommendations to improve delivery of payments in NREGA are critically hinged on resolving some of the issues that NREGA has faced in the past few years. Wages need to be increased and made commensurate to the spirit of a moral living wage (Dhorajiwala and Narayanan 2019a). This would make the programme meaningful for workers. The second crucial point is to ensure that wages are paid in a timely manner. As empirically shown by Narayanan et al. (2017), delays in wage payments and administrative rationing of work reduces the demand for work subsequently. As such, unless the basic rights such as right to employment on demand and right to timely payment of wages are implemented in letter and spirit, the workers lose faith in this programme. Third, NREGA has also been envisioned as a means to strengthen the 73rd Constitutional Amendment. However, with a highly centralised architecture, Gram Panchayat's strengths have undergone dilution. It is therefore imperative that Gram Panchayats be given more authority in sanctioning and payment of wages.

We present below a minimal set of recommendations categorised by different aspects of NREGA. This is based on our continued engagement with NREGA over the years. The recommendations are largely focused on NREGA payments. However, given that rural distress has been exacerbated by the COVID-19 pandemic, we present a minimal set of recommendations concerning work demand before presenting our recommendations concerning payments.

Job Card Registration and Work Demand

1. Increase the administrative strength by at least doubling the number of field functionaries to deal with the increased demand for work.

2. Ensure that job card registrations can happen at the work sites to avoid delays in job card procurements.

3. In light of the rural distress, the number of work days must be increased to 200 days per year.

4. Given the massive exodus of migrant workers back to their villages, increase the shelf and scope of admissible NREGA works. Prioritise community works over individual asset creation to absorb more labour.

5. Ensure that dated receipts are provided at the work sites for work demand requests.

Many of the following transparency requirements are not restricted to NREGA payments but are valid for cash transfers (DBT) across many programmes such as scholarships, maternity entitlements, pensions etc. So we present a minimal set of transparency measures that would largely hold true for DBT in general.

Sign painted on a road in Andhra Pradesh which demarcates an area where there is good network to make transactions on a POS machine

7.2 Transparency on Cash Transfers

1. Information system design must be worker centric. Worker participation in designing and rolling out such systems is critical. For instance, all information from work demand to payments must be made available in each panchayat in formats arrived at through consultation with workers.

2. Passbooks must be made available to everyone who has a NREGA wages account irrespective of the payment or disbursement agency.

3. People should be able to update their passbooks for free at any time they request. The passbook entry should clearly mention the amount and the name of the programme for which they have received money. For instance, if it's a NREGA payment, then the passbook entry should clearly say that.

4. While transacting at the disbursement agency, there needs to be a screen facing the user which shows the amount withdrawn/deposited. This should be accompanied by a voice message in local languages of the amount withdrawn/deposited. This would also help users if the transaction has failed. Such a screen should be made available in local languages.

5. There should be a strong Know Your Rights (KYR) framework prominently displayed for users at every disbursement agency including in public spaces such as panchayat bhavans, Aanganwadis, schools etc. This would help users know what their rights are - right to have a passbook, right to update it for free etc. A minimal suggested KYR list can be found in the Annexure.

6. Informed consent must be sought in local languages before linking a worker's Aadhaar to the Aadhaar Payment Bridge System (APBS).

7. People should know which bank account their payment has been directed to and they should have a convenient way to find out where and when their payments have been credited.

8. Risks associated with payment types must be clearly communicated in local languages. People must be given the choice to withdraw their money from any disbursement agency regardless of the payment types. For instance, for some NREGA workers, post offices might be closer than their bank branches. They should be given the facility to open post office accounts and collect NREGA wages from the post offices. Alternately, payments through BCs can happen through a designated period of 5 days every alternate week at public spaces. These could be referred to as the 'bhugtan weeks.'

9. Every cash transfer programme must be accompanied with two paper copies of payment slips or cash transfer slips. One copy of such a slip should be retained by the cash transfer recipient and the other copy can be signed and given back to the disbursement agent/implementing agency. The signed copies need to be uploaded on the corresponding DBT website within the next day.

The next 3 points concern examples for such payment slips as in NREGA

10. For example, for NREGA, implement the Government Circular, RE-I (360078), dated 31st July, 2018 concerning the distribution of wage slips to workers. Such wage slips should be generated through NREGAsoft and must also be downloadable from the MIS. It is the responsibility of the Gram Rozgar Sevak to distribute the wage slips to workers at a public place e.g. the worksite, panchayat bhavan, gram sabha.

11. The wage slips should minimally contain the following information: Name of the worker, Worker's Job Card number, Scheme on which work was done, Muster Roll Number, Muster Roll Start Date and End Date, Number of days worked on the Muster Roll, Amount of wages credited in the worker's account (Rs), Bank account number in which wages are credited, Name and branch of account in which wages are credited, Date of generation of wage slip, wage rate for the wages.

12. The job cards should be updated with the work they have done, wages they have earned etc. In addition to manual updating of information on job cards, equip each panchayat to a job card printing facility similar to passbook updation facilities in banks.

7.3 Reduction of Time and Cost per transaction

1. Every panchayat must be equipped with a disbursement agency.

2. Most workers express the maximum comfort for banks/post offices as opposed to BCs. Consequently, there is an urgent need to increase the number of rural bank branches.

3. Implement a key recommendation from the Nachiket Mor Committee Report on Financial Inclusion: 'The number and distribution of electronic payment access points would be such that every single resident would be within a fifteen minute walking distance from such a point anywhere in the country.'

4. CSPs operate on extremely meagre commissions per transaction. This prevents them from operating in the gram panchayat they are assigned and instead operate in the blocks. This is one of the reasons they overcharge workers. Lack of internet connectivity in gram panchayats further precludes them from operating there. The government must ensure that they have electricity and internet connectivity and offline capabilities to ensure workers and other beneficiaries don't have to be turned away.

7.4 CSPs/BCs

We reproduce here the relevant set of recommendations based on consultations with different stakeholders after a 10 district survey on Common Service Centres (Sabhikhi et al. 2019). These are applicable for CSPs/BCs as each CSP or a BC is in principle a Common Service Centre. Building upon the clear preference for convenience, the CSC policy of 'single window' should be extended to a 'No Wrong Door' policy. Instead of being substitutes, they should be add-ons to existing systems. There is a need for institutional platforms at all levels, for all stakeholders (citizens, CSCs, Civil Society Organisations, technology developers etc.) to participate in the policy design and monitoring. Below we list specific recommendations for CSPs.

1. Move from service-only model to an information facilitation model: CSPs should provide free information to citizens on eligibility for various government entitlements, help in accessing government schemes, register grievances and assist complainants in their tracking.

2. Mixed Financial Model: All government services should be free for all citizens and CSP owners should be given a basic salary in addition to incentive-based commission to improve long term sustainability.

3. Gram Panchayat Oversight: Gram Sabhas must have a role in the selection and removal of CSP, and monitoring of their functioning. Human Resource funds from the 14th Finance Commission may be used to hire operators for CSPs.

4. CSP Operator Diversity: Affirmative action and skill ladder policies should be implemented for women, SC and ST groups to increase their numbers as CSP operators.

5. No Mandatory Aadhaar: To improve the operations of CSPs an alternative to Aadhaar-based biometric must be introduced.

6. Enforce Minimum Standards: Even if the CSPs are private entrepreneurs, minimum standards for a CSP operation should be enforced, particularly reliable working hours and functioning printers for updating passbooks and provision of free receipts.

7. Citizens' Banking Records: It must be a right of every citizen that they have a detailed record of all their banking transactions in a robust document such as a passbook. Thus, ensure that every CSP is equipped to do passbook updation facility.

8. Services delivered through CSPs must be brought under existing legal frameworks such as the Right to Guaranteed Services and the Right to Information Act.

9. Proactive Disclosures: Official government issued rate chart should be enhanced to include timelines. Clear Job Charts of processes and officials responsible for service delivery should be widely publicised, offline and online.

10. Social Accountability: The CSPs should adhere to the minimum standards of social audits formalised by the CAG.[8]

11. Addition of New Services: Follow a transparent, consultative policy with all stakeholders, including citizens and CSPs on type and manner of services to be included.

7.5 Accountability

1. The MoRD is primarily responsible for ensuring that workers get their wages within 15 days of completion of work.

2. Given the scarcity of administrative staff, there is immense burden on the field functionaries to complete tasks on time. To truly implement NREGA in letter and spirit, there is an urgent need to double the administrative budget and ensure more field functionaries per panchayat. This would also ensure that accountability norms of field functionaries are achievable.

3. The MoRD should be responsible for the delays in wage payments until it is credited to the workers. A meaningful compensation (at least matching the savings interest rate) should be offered to people for the delay in crediting the cash transfer.

4. Every agency involved in the payment of NREGA wages must be brought within the ambit of social audits with clear penalty norms in case of violations. In addition to field functionaries such as the Gram Rozgar Sahayak (GRS), Junior Engineer, the Programme Officer, the following institutions should also be brought under social audit norms: the National Payments Corporation of India (NPCI), UIDAI, banks, and BC/CSPs.

5. At the moment, the filled muster rolls handed over by Mates to the GRS are entered in the MIS. However, to ensure more transparency and accountability, it would be useful to have a 'dated and signed handover slip' that the Mates can show the workers.

6. Implement account based payments instead of APBS. APBS is opaque and unfriendly from the workers' perspective.

7. Any payment related interventions should be worker centric and must be piloted with wide consultation with workers before rolling out.

7.6 Rejected Payments

The current system puts the onus of recognising the problem of rejection and resolving it entirely on the worker. It is similar when payments of other cash transfer programmes also fail.

The government department responsible for the cash transfer should ensure that individuals for whom the payment transfer fails do not suffer. They must proactively take steps to rectify the problem due to which the payment has failed.

1. The error codes and rejection reasons should be standardised across banks and payment agencies. For each rejection reason there must be concrete steps for resolution. The steps should spell out the responsibility of the government functionaries, banks and payment intermediaries.

2. Each state government should set up a system to monitor rejected payments regularly and ensure that they provide prompt support to resolve grievances. They should include members from the UIDAI, NPCI and banks so that workers do not suffer due to the lack of coordination among these agencies.

3. All payment intermediaries must be accountable for rejections. If the central government is soliciting the services of a private body (such as the NPCI), there must be clear accountability norms, failing which there should be penalties.

4. There must be officers appointed to review the extent of rejections and they should be held responsible when such payments are not cleared beyond 30 days.

5. Camps must be held once a month in each panchayat and bank so that issues concerning rejected payments can be rectified without the workers having to make multiple visits.

6. Workers must be given a dated receipt every time they submit documents for rectification at the block, bank or any agency. The time for resolution should be printed on such a receipt.

7. There should be special social audits for rejected payments.

7.7 Grievance Redressal

In the section on grievance redressal, we outlined the broad issues from the workers' perspective. Here we present some thoughts on how the State can construe an apparatus with principles of empathy and primacy to workers' rights and limitations.

1. Create and spread awareness about multiple access points to collect grievances. Common Services Centres (CSCs) may also be used for this purpose.

2. Grievance collection should not have conditionalities. Any manner in which the worker is presenting grievances must be recorded.

3. Block level grievance collection centres with block level toll-free numbers could be set up to account for variation of language across blocks.

4. Technology can be used effectively for grievances. For example, calculation and payment of unemployment allowance and delay compensation should be automatically approved and transferred to the workers' accounts. This should be automatically treated as a grievance without the workers having to register them as such.

5. Given the complexity of the DBT architecture, a Grievance Redress Commission (GRC) for DBT programmes may be set up. Such a GRC could be a statutory body with a well-defined appellate structure for complaint escalation with strong principles of time-bound resolution mechanisms. Such a GRC would draw upon expertise from various line departments involved in the cash transfer process and must include representatives of all major banks, line departments, UIDAI, SLBC and NPCI. The GRC must operate at state and national levels and must meet weekly with a strong feedback component with workers. Some principles from the Information Commission (prior to the RTI amendment) could be used to set up the GRC. There are pros and cons of another Commission. Alternatively, a robust and efficient grievance redressal system should be set up by the Finance Ministry so that all DBT related grievances can be addressed at one place. The grievances registered on the system should be monitored by the Cabinet Secretary/Finance Secretary every week and by the Finance Minister once every month for speedy resolution of grievances.

8 Appendices

In this section, we will present the mathematical underpinnings concerning several calculations in the report. In Appendix A.1, we present the data cleaning and imputation strategies used for missing values in the survey responses. Appendix A.2 is further subdivided into three parts: Appendix A.2.1 presents some robustness checks concerning the choice of cut-offs of some continuous variables used in the creation of the reported hardship scores. We then present two different statistical techniques used to justify the use of a simple average of hardship scores. In Appendix A.2.2, we describe the method and the application of Exploratory & Confirmatory Factor Analysis to the response data. In Appendix A.2.3 we discuss the method and the application of another statistical technique called Multiple Factor Analysis to the survey response data. Using measures of association between each of these techniques with the simple average of reported hardship, we can conclude that using simple average serves the Occam's razor principle that using a parsimonious, easy to understand technique serves as good a purpose as using any of these statistical procedures. We attempt to explain the mathematics in words instead of resorting to mathematical symbols and equations for the sake of readability

A.1 Data Cleaning & Missing Value Imputation

As is common in survey responses, there were missing values and responses saying "I DON'T KNOW" (IDK). In situations when the data is either missing at random or has IDK values entered erroneously, it is a common practice to impute such data with meaningful values. For a few questions and responses, the values entered as 'unclear' was coded as 888 in the survey responses. By treating some of them as IDK values, we imputed them depending on whether they could be treated as missing at random. There is no well defined scientific consensus on what is an acceptable proportion of missing or IDK values that can be imputed. Our imputation strategy ensured that the data distribution before and after imputation are very similar.

The objective of imputation is the following: What would be a reasonable guess for an unobserved value had the respondent answered or had the data for this respondent been entered correctly. The literature on missing value imputation is vast and sophisticated techniques have emerged that borrow insights from the responses of other questions of the same respondent in making a reasonable guess for the question with missing values. Multiple Imputation strategies, proposed by Rubin (1987), has become a popular choice for complex missing data problems.

Multiple imputation broadly has the following three steps:

1. The missing values are imputed with m values drawn randomly from some distribution to get m complete case data sets.

2. The same analysis is performed on each of the m data sets.

3. The results are pooled in some meaningful manner.

Performing multiple imputations instead of single imputation accounts for the statistical uncertainty in the imputations. Schafer and Graham (2002) present a detailed account of the various multiple imputation procedures. One imputation approach that has gained enormous currency and ratification among theoreticians and practitioners alike is called the Multiple Imputation using Chained Equations (MICE). In literature it is also called fully conditional specification or sequential regression multiple imputation (SRMI). MICE rests on the basic idea that it uses information from other observed values of variables to predict and impute the missing values of one variable. A number of simulated datasets with complete cases are created and the imputed value is obtained by pooling from these simulated datasets. To appreciate the idea of fully conditional specifications in creating multiple imputations for multivariate data the reader is referred to Raghunathan et al. (2001), van Buuren (2007) and the references therein. A practical and an applications oriented perspective of using MICE is presented by Azur et al. (2011)

We implemented the MICE algorithm using the R software[9] to impute some variables used in the calculation of hardship scores. The R software has an excellent package of the MICE algorithm developed by Van Buren and Groothuis-Oudshoorn (2011) and has over 5500 citations across various application domains. The missing values were imputed for each state separately since the profile of respondents of each state are different.

For bank users, there were 9 variables that were used to build a hardship score for each respondent. For each of these variables, to impute a missing value for a variable, we used the other 8 variables as predictors in the MICE algorithm. For the complete list of the hardship variables refer to table 6.4.1(a). For example, the number of visits required to link one's Aadhaar to the bank account is a discrete ordinal variable. To impute its missing values, the predictors used were: number of visits to link Aadhaar to the job card, whether there was any misinformation regarding crediting of wages, whether banks update the passbooks of respondents, whether reasons were provided in case of refusal to update passbooks, the number of visits made to access the wages for the last transaction, the time taken to access wages, the cost incurred to access wages, and the maximum time taken to access wages. The first 5 of these variables are either ordinal or categorical while the last three are continuous. To impute each of the first 5 variables, we used polytomous regression methods and for each of the last 3 continuous variables, we used predictive mean matching methods. Further, we set m=5 to impute each variable where m denotes the number of multiple imputations done. All the variables used to construct the simple average of reported hardship for both banks and CSP/BC had around 10 percent or less missing or IDK values except for two variables: Biometric issues faced by respondents at the CSP/BC and whether respondents get a receipt for transactions at the CSP/BC. These variables had roughly 15% IDK values. Table A.1(a) presents the simple average of reported hardships at CSP/BC by dropping these two variables from the calculation and by using imputed values for these two variables. Column 2 depicts the simple average of hardship scores of respondents excluding the two variables having high percentages of IDK. Column 3 depicts the simple average of hardship scores of respondents by including the imputed values of these two variables. As can be easily seen from this table, the imputation strategy works very effectively even when there are about 15 percent IDK values among respondents in the survey. The trend and the values of reported hardships across states are practically identical.

Table A.1(a):	State	Simple Average of Reported Hardship Variables excluding Biometric issues and Receipt Variable at CSP/BC	Simple Average of Reported Hardship Variables including the imputed values of Biometric issues and Receipt Variables at CSP/BC
Average Reported Hardship for CSP/BC users by excluding variables having the highest IDK values and by using imputed values for them in the calculation.	Andhra Pradesh	0.37	0.38
	Jharkhand	0.59	0.60
	Rajasthan	0.53	0.54

Figures A.1(b) and A.1(c) demonstrate the accuracy of this novel imputation strategy of some variables that had IDK values. The magenta lines in Figures A.1 (b) and A.1(c) indicate the original data and the blue lines are the imputed values for data that is missing for a variable. For example, consider Figure A.1(b). It shows the distribution of the original data for the variable "Number of Visits made to the bank to submit documents for linking". The last point in the original data indicates the IDK responses that needed to be imputed. The blue line represents the distribution of the data after using the MICE imputation strategy. We can see that the distribution remains quite similar to the original data. The trend follows in each of the remaining variables too. T he figures below are similar plots for a few other variables.

Figure A.1(b):

*Original vs Imputed: Time taken per visit for withdrawal*
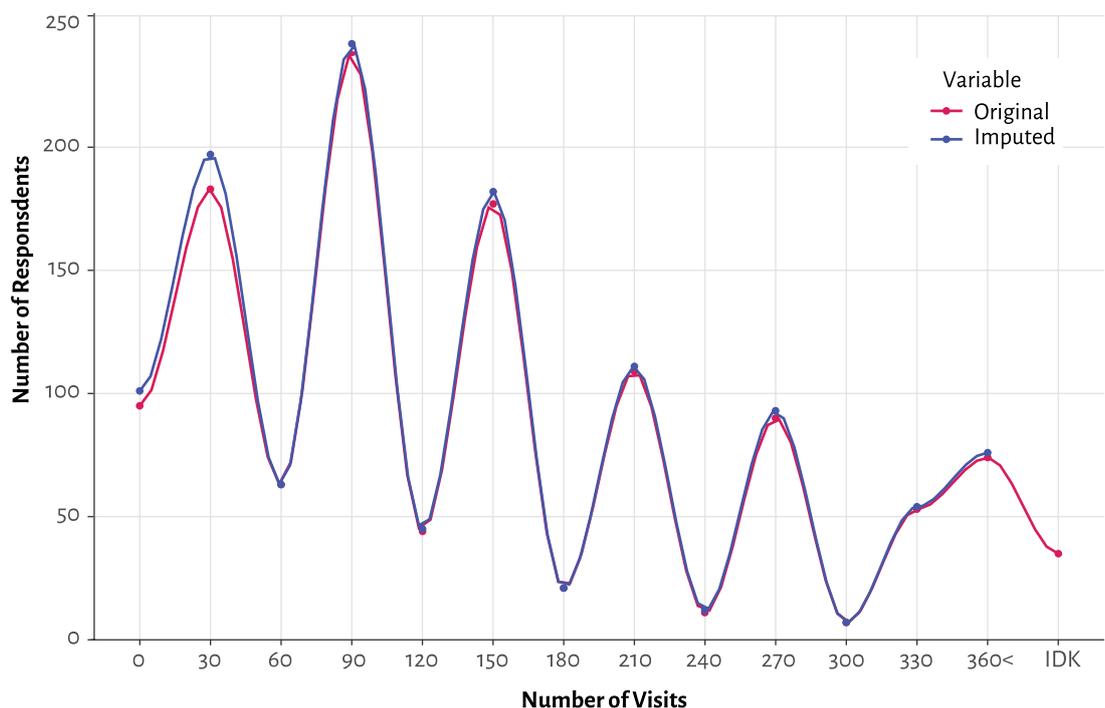
Figure A.1(c):

Original vs Imputed: Number of Visits to the bank for last withdrawal
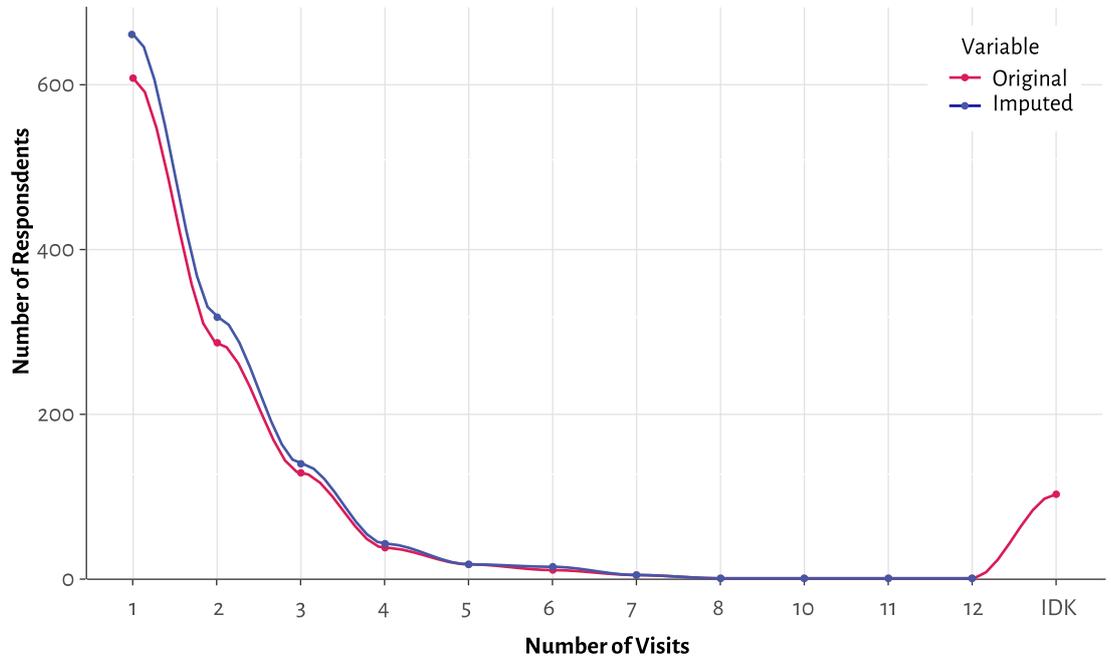

Figure A.1(d):

*Original vs Imputed: Number of visits to link Aadhaar to Bank*
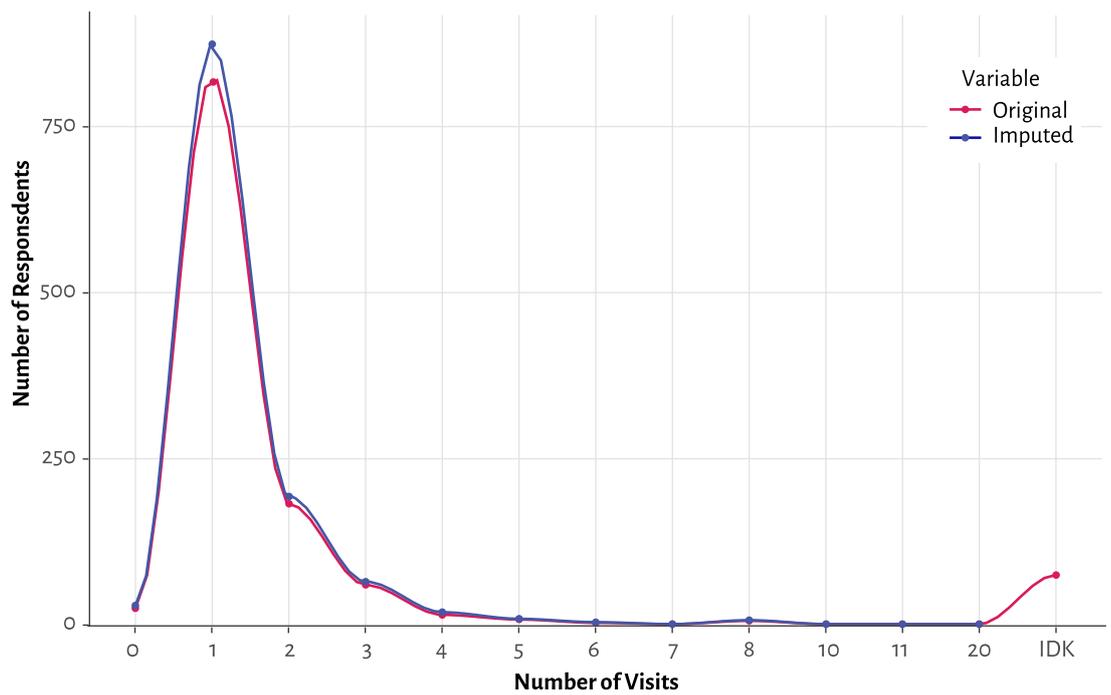
Figure A.1(e):

*Number of biometric failures at CSP/BC*
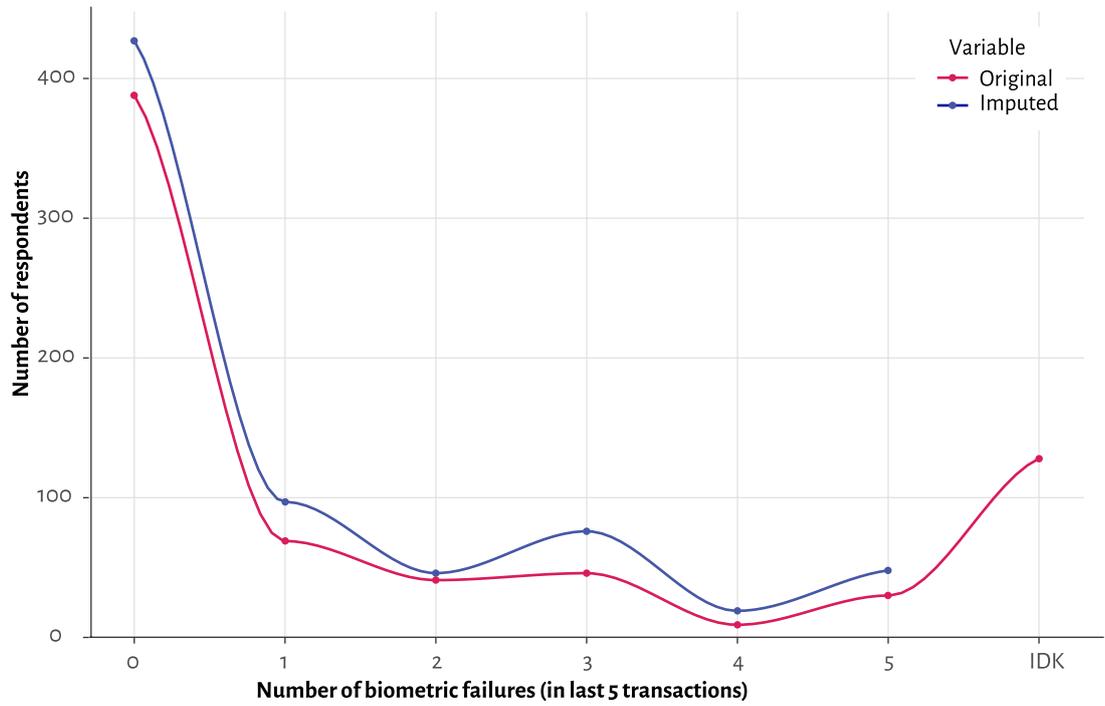
Figure A.1(f):

Original vs Imputed: Time Taken by CSP/BC users for withdrawal
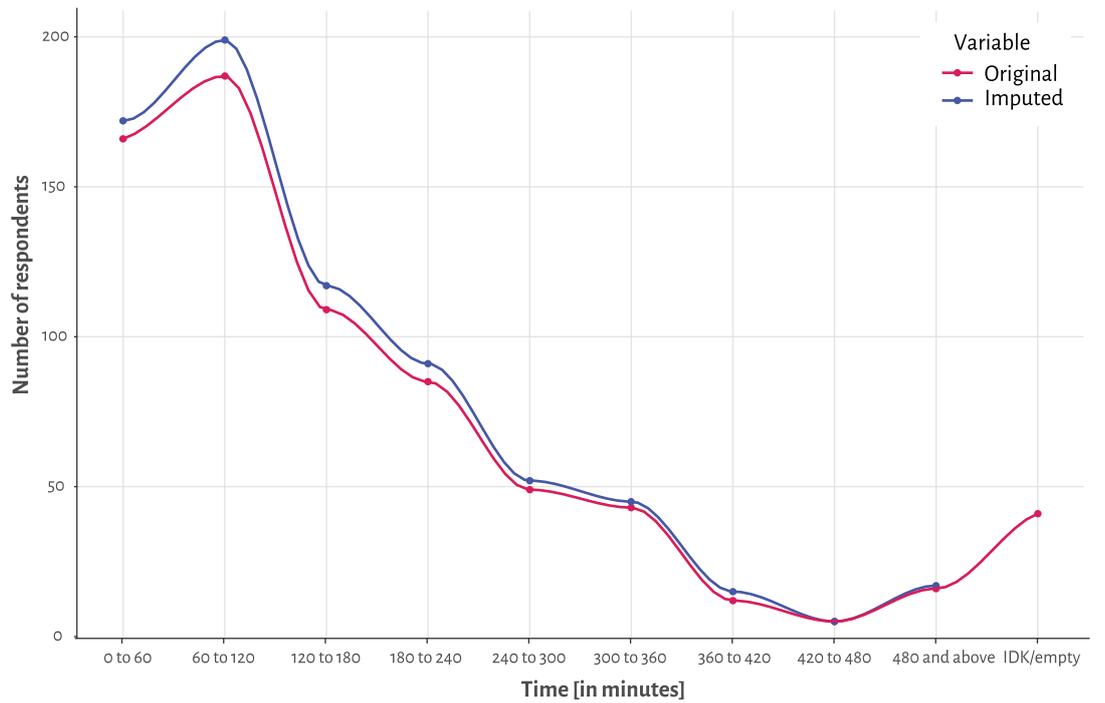
A.2 Robustness Checks for Reported Hardship Scores

When numerous variables are used to measure some characteristics, it's sometimes useful to find some meaningful approach to combine them into a single number. Such a number, an index, becomes an objective measure of the underlying phenomenon that is being studied.

There are a few distinct advantages of using a measure such as a simple average of variables, each of which is a binary variable (0 = no hardship and 1=hardship). First is obviously its ease of interpretation. Second, given that each is a binary variable, taking a simple average creates an index of hardship that is between 0 and 1 for each respondent. An individual whose score is close to 0 indicates that this person had to face fewer hardships compared to an individual whose average score is close to 1. This aids in comparing the hardships faced across respondents. For example, the overall average reported hardship for bank users in AP was 0.34 and those in JH was 0.48. Given the simple scale, we can easily conclude that, on average, respondents in AP faced less difficulty compared to the respondents in JH. It should be pointed out that these average scores are better suited as comparative aids and not as an absolute measure because they could be sensitive to the choice of the cut-offs for each variable.

This brings us to the caveats of using a simple average of reported hardships. There are broadly three categories of variables capturing the reported hardships. (a) Biometric Authentication related (b) Transparency/Accountability such as ability of passbook updation and (c) Time and cost related variables. Thinking of time taken as a proxy for opportunity cost, we could club the time and cost related variables and refer to them as cost variables. While what constitutes hardship for the variables pertaining to biometric authentication and transparency/accountability are self explanatory, the cut-offs chosen for the time and cost considerations are indeed arbitrary. This is the first legitimate concern in this approach. The second concern is the usage of simple average as a single measure of hardship in each state. What are the statistical justifications for using such a measure as an index of hardship?

The hardship scores of respondents for each disbursement agency was calculated based on a few discrete variables (number of visits to withdraw wages, number of biometric failures etc) and a few continuous variables (time taken to access wages, cost incurred etc.). Categorising an experience as hardship is simpler for discrete variables since multiple visits to withdraw one's own wages is an obvious hardship. However, there

is potentially some arbitrariness in choosing appropriate cut-offs for continuous variables such as time taken and cost incurred in categorising a respondent's experience of withdrawing wages as a hardship. For example, Should we consider exceeding 1 hour to access wages as hardship or should we consider exceeding 2 hours as hardship? For our reported hardship, we have chosen cut-offs for time and cost based on our experience of working with local worker communities in each state. In order to check whether our cut-off choices are reasonable, we explored other cut-offs for these variables and see if the pattern of reported hardships across states remains consistent with different cut-off choices. If indeed they do then there is legitimacy of our cut-off choices. We refer to our chosen cut-offs based on ground experience as the experiential cut-offs.

For time and cost variables, we created hardship scores based on cut-offs chosen on a sliding scale. We chose cut-offs based on the 75th percentile, median, and the 25th percentile of these variables. For each such case, we recalculated each respondent's hardship score and then took an average of these recalculated hardship scores. The is presented in Table A.2(a).

Table A.2(a):

Robustness checks of Reported Hardships for Bank Respondents

State	Reported Hardships using cut offs based on ground experience	Reported Hardship using 75th Percentile as cut-off	Reported Hardship using Median as cut-off	Reported Hardship using 25th Percentile as cut-off
Andhra Pradesh	0.34	0.25	0.32	0.40
Jharkhand	0.48	0.36	0.44	0.52
Rajasthan	0.44	0.31	0.41	0.50

From Table A.2(a), we can see that the hardship scores we have reported based on our experiential cut-offs are closer to the median cut-offs. AP being comparatively better off than Rajasthan followed by Jharkhand holds true for cut-offs based on higher percentiles too. While AP continues to reflect better performance when using the 25th percentile as a cut-off, the average hardship of RJ and JH become more comparable in this case. What this means is that there are many respondents in JH and RJ who are clustered around the 25th percentile cut-off.

We performed another confirmatory means to check if our chosen cut-offs in the calculation of reported hardships are reliable. To do this, for each state, we rank the individuals based on the reported hardship calculated using the experiential cut-off and based on the cut-off using the 25th, 50th (median), and the 75th percentile values. We then calculated Kendall's tau rank correlation measure. Kendall's tau is a non-parametric measure of rank correlation between two continuous variables. Kendall's rank correlation is used to test the similarities in the ordering of data when it is ranked. It is a normalised measure that lies between 0 and 1. A value of zero implies that rank of individuals in one variable is completely opposite to the rank of the individuals in the other variable. A value of one indicates perfect association. In other words, a rank of one implies that rank of individuals in one variable perfectly coincides with the rank of the individuals in the other variable. This in turn means that one variable serves as a perfect proxy for the other variable. For our case, if the reported hardships for banks using experiential cut-off has a high rank correlation with cut-offs based on other percentiles, then we can conclude that the reported hardships using the experiential cut-offs are robust to alternative choices.

Figure A.2(b) shows the relationship between the reported hardships based on experiential cut-off and if the cut-offs were chosen based on the 25th percentile. This is done for each state.

Figure A.2(b):

Hardship scores using experiential cut-off and using 25th percentile for bank users.
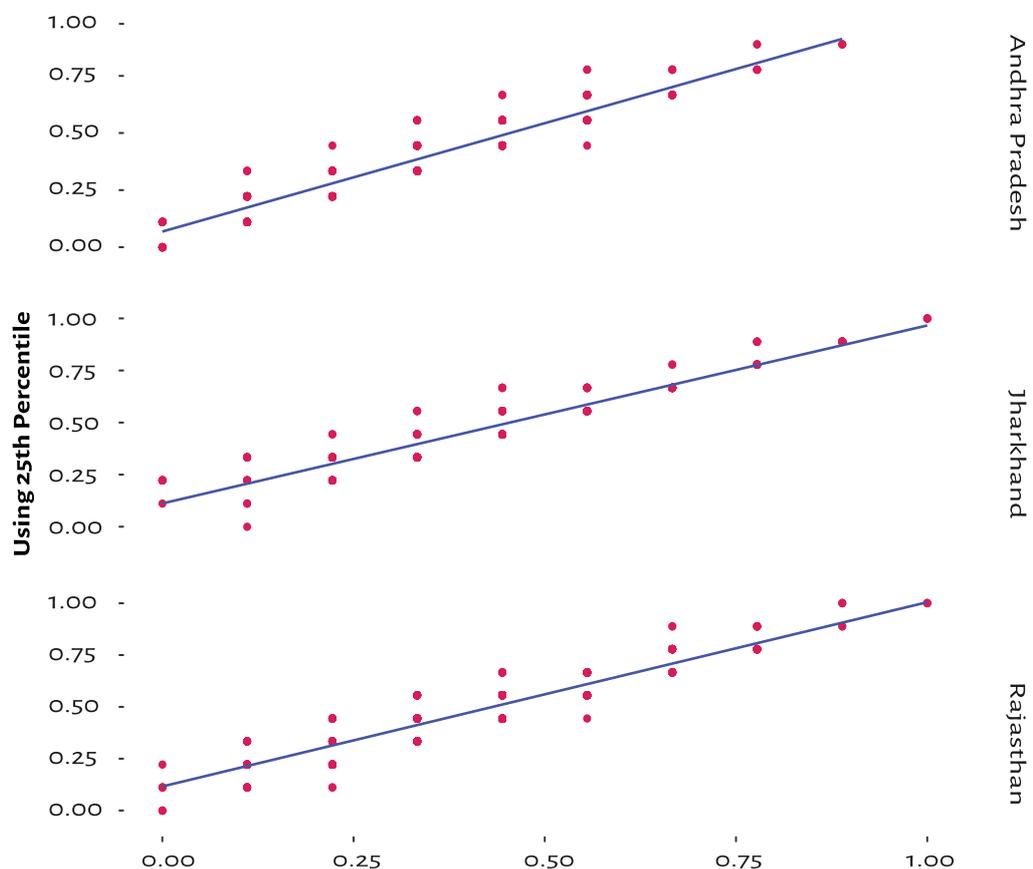
Figure A.2(b) depicts that there is a high rank correlation between hardship scores using experiential cut-off and using the 25th percentile cut-off. These would be much better for higher percentiles since the rank correlations between hardships based on experiential cut-offs and those based on higher percentiles are higher. The blue line through each scatterplot shows the regression line between the two variables. Indeed the adequacy of using the experiential cut-off can be further sanctified statistically using a statistical test of rank correlation between the experiential cut-off and the cut-off using 25th percentile, 50th percentile (median), and the 75th percentile. The results of this are presented in Table A.2(c).

Table A.2(c): *Rank Correlation between experiential cut-off for bank hardship scores and cut-offs using 25th, 50th, and 75th percentile*	State	Kendall's Tau Between Experiential Cut-off and Using 75th Percentile as Cut-off (p value)	Kendall's Tau Between Experiential Cut-off and Using Median as Cut-off (p value)	Kendall's Tau Between Experiential Cut-off and Using 25th Percentile as Cut-off (p value)
	Andhra Pradesh	0.79 (p value < 2.2e-16)	0.93 (p value < 2.2e-16)	0.89 (p value < 2.2e-16)
	Jharkhand	0.86 (p value < 2.2e-16)	0.94 (p value < 2.2e-16)	0.91 (p value < 2.2e-16)
	Rajasthan	0.82 (p value < 2.2e-16)	0.93 (p value < 2.2e-16)	0.85 (p value < 2.2e-16)

Table A.2(c) shows the Kendall's rank correlation between the experiential cut-off for reported hardship scores for banks with the 25th, 50th (median), and the 75th percentiles. The calculated correlations are very high. Indeed a statistical test of association reveals that the scores using experiential cut-offs are very highly correlated (in the rank sense) with each of the 25th, 50th (median) and the 75th percentile. Indeed the p-values for each of these for every state is incredibly low. The null hypothesis of no association between the hardships based on experiential cut-off and other percentile cut-offs are rejected at a significance level of 0.01. This indicates that our choice of cut-off to calculate the reported hardships for banks is robust to the choice of the

cut-offs. Table A.2(d) gives the comparison between reported hardships based on experiential cut-offs and cut-offs using the 75th, 50th (median), and the 25th percentiles for the CSP/BC users. The methodology for populating this table is identical to that for bank users presented in Table A.1(a).

Table A.2(d):
Robustness checks of Reported Hardships for CSP/BC Users

State	Reported Hardships based on experiential cut offs	Reported Hardship using 75th Percentile as cut-off	Reported Hardship using Median as cut-off	Reported Hardship using 25th Percentile as cut-off
Andhra Pradesh	0.38	0.30	0.31	0.33
Jharkhand	0.60	0.51	0.56	0.58
Rajasthan	0.54	0.45	0.51	0.52

One can clearly glean from Table A.2(d) that the pattern of reported hardships based on a variety of cut-offs is consistent with the experiential cut-off finally adopted by us (column 2).

Table A.2(e) gives the rank correlations and the corresponding p-values for testing association between experiential cut-offs and other choices.

Table A.2(e):
Rank Correlation between experiential cut-off for CSP/BC hardship scores and cut-offs using 75th, 50th, and 25th percentile

State	Kendall's Tau Between Experiential Cut-off and Using 75th Percentile as Cut-off (p value)	Kendall's Tau Between Experiential Cut-off and Using Median as Cut-off (p value)	Kendall's Tau Between Experiential Cut-off and Using 25th Percentile as Cut-off (p value)
Andhra Pradesh	0.85 (p value < 2.2e-16)	0.85 (p value < 2.2e-16)	0.87 (p value < 2.2e-16)
Jharkhand	0.85 (p value < 2.2e-16)	0.90 (p value < 2.2e-16)	0.93 (p value < 2.2e-16)
Rajasthan	0.79 (p value < 5.4e-16)	0.90 (p value < 6.1e-13)	0.94 (p value < 3.4e-13)

The null hypothesis of no association between the hardships based on experiential cut-off and other percentile cut-offs for CSP/BC users are rejected at a significance level of 0.01. This indicates that our choice of cut-off to calculate the reported hardships for CSP/BC is robust to the choice of other percentile cut-offs.

A similar robustness check analysis can be easily replicated for post office users. However, since postal payments were prevalent only in AP, such an exercise would not add anything to our understanding of comparative performance across states.

A.2.1 Exploratory & Confirmatory Factor Analysis (CFA)

Factor analysis is a popular statistical method that exploits the variation in the data by combining the measured variables into factors. Each factor is a linear combination of the variables. For our case, there are numerous variables used to measure various dimensions of hardship. These variables act as observable proxies for the directly immeasurable notion of 'hardship'. An important analytical question then is how to meaningfully combine the measured variables to arrive at the unobservable factor hardship.

Every factor explains some amount of the total variance. The amount of variance that each factor explains is measured by the eigenvalue. For example, if the eigenvalue of a factor is say 3, then this single factor has the capacity to explain the variance contributed by 3 variables. In practice, only the factors that cumulatively explain a large percentage of variance are retained. The coefficient of variables in the linear combination of a factor can be considered as a measure of association between the variable and the underlying hidden factor. This coefficient is known as the factor loading of the variable. The factor loadings are then used to arrive at factor scores for each individual respondent. The factor scores reflect the individual's relative position in the corresponding factor.

We used Factor Analysis to arrive at factor scores of individuals based on their reported hardships with disbursement agencies. We explain the process and the results in the case of reported hardships for banks. Without loss of generality, the process and the explanation are the same for CSP/BCs. All the software implementation for this has been done using the R programming language. In particular, the factor analysis implementation has been done using the psych package (Revelle 2020) of R.

Steps involved in Factor Analysis

1. Since the variables under consideration are all binary, we construct a tetrachoric correlation matrix of all the variables.

2. We then assess whether factor analysis is an appropriate procedure for this dataset. There are two statistical tests we employed for this purpose. First, Bartlett's test of sphericity - this evaluates whether or not the variables intercorrelate at all, by evaluating the observed correlation matrix against an identity matrix. Here the null hypothesis is that that correlation matrix is the identity matrix, i.e., the variables are uncorrelated. If the null hypothesis is rejected, the dataset is said to be amenable for factor analysis. Table A.2.1(a) presents the results from Bartlett's test of sphericity.

Table A.2.1(a): *Bartlett's test of sphericity*	**chi square value**	**P value**	**Degrees of Freedom**
	967.5272	1.017e-179	36

As the results in Table A.2.1(a) indicate, the p value is practically zero suggesting that the variables under consideration are highly correlated with each other.

3. Passing the Bartlett's test is a necessary condition for factor analysis and a more robust test for factorability of a dataset is obtained by doing another statistical test called Kaiser-Meyer-Olkin (KMO) test. The KMO tests to see if the partial correlations in the data are close to zero to indicate the presence of at least one underlying factor for the variables. As a rule of thumb, a mean sample adequacy (MSA) value in the KMO test exceeding 0.50 is considered to be acceptable for factor analysis. The overall MSA is 0.64. Table A.2.1(b) gives the KMO for the respondents of banks.

MSA for each variable is given in the Table ---

Table A.2.1(b):

Kaiser-Meyer-Olkin Factor Adequacy Test

| Variable	MSA
Number of visits to link Aadhaar with bank account	0.56
Number of visits to link Aadhaar with NREGA job card	0.54
Number of times misinformed about wages being credited	0.68
Does the passbook get updated every time	0.61
Has the respondent been refused getting their passbooks updated	0.62
Number of visits made to get the wages for the last withdrawal	0.71
Time taken on average to visit the bank	0.69
Maximum time taken at the bank	0.74
Cost incurred on average to visit the bank	0.70

As Table A.2.1(b) indicates, the overall MSA is high suggesting that the dataset is highly amenable for factor analysis and even the MSA of each variable comfortably exceeds the threshold.

4. Having established that the dataset is amenable for factor analysis, the next step is to decide the number of factors required for this exercise. One usually relies on a 'parallel analysis scree plot' to arrive at the desirable number of factors.

Parallel analysis was a method developed by the cognitive psychologist John Horn and has come to be synonymous with him (Horn 1965) . The method relies on a comparison of the eigenvalues of the actual dataset with eigenvalues of randomly simulated datasets having the same structure as the original dataset. The eigenvalues of the actual dataset and the simulated datasets are plotted on the same graph and then find the number of eigenvalues of the actual dataset that are greater than those of the simulated datasets. The number of such eigenvalues would constitute the number of factors to be retained for analysis.

Figure A.2.1(c):

Parallel Analysis Scree Plot for Bank Users
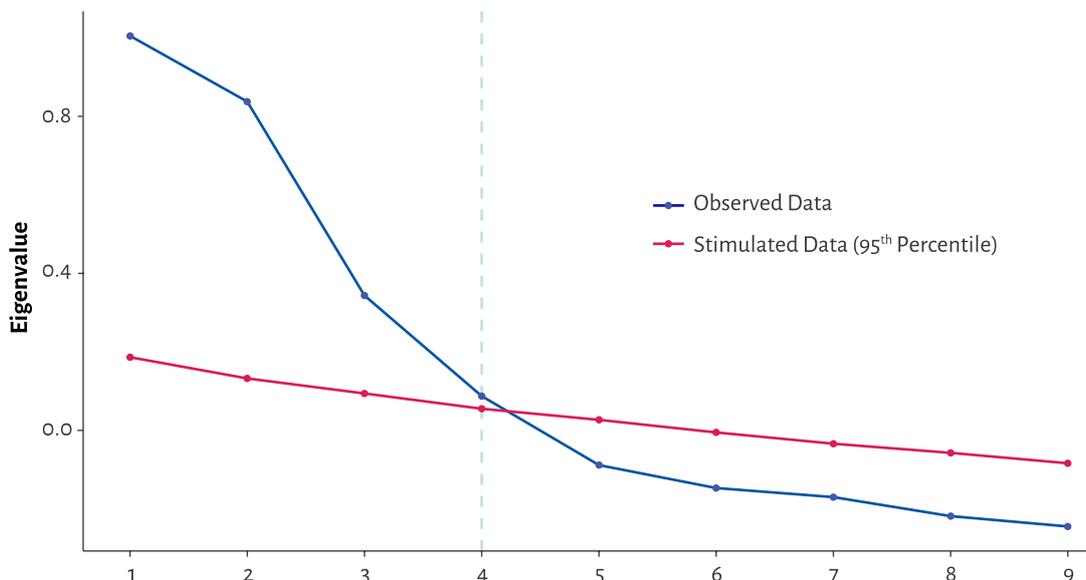
In Figure A.2.1(c), the blue line represents the eigenvalues of the original dataset and the red line denotes the eigenvalues of 50 simulated datasets. As can be observed, 4 eigenvalues of the original dataset are above the eigenvalues of the simulated datasets. Therefore we retain 4 factors for our analysis. For a detailed explanation of the procedure, the reader is referred to (Hayton and Scarpello 2004).

5. We then estimated the four factors using the Maximum Likelihood method. Since the factors are uncorrelated with each other, the option 'varimax' yielded the best results. Table A.2.1(d) presents the output of the factor analysis exercise. As a rule of thumb, the RMSR and RMSEA index must be low (< 0.10) and the Tucker Lewis Index of factoring reliability should be around 0.90. As can be seen from Table A.2.1(d), the model seems to be a good model for this dataset.

Table A.2.1(d):

Model Selection for Factor Analysis for Bank users

Model Selection Criteria	Output
The root mean square of the residuals (RMSR)	0.02
Tucker Lewis Index of factoring reliability	0.942
RMSEA index	0.059

In practice, we ignore the contribution of those variables to a factor where the correlations are low. Table A.2.1(e) presents the factor loadings of those variables that exceed a threshold of 0.40 to represent the dominant variables that contribute most to that factor. This threshold is arbitrary but it gives a sense of which variables correlate more with each factor.

Table A.2.1(e): *Correlation of variables with respective factors to demonstrate the dominant variables for each factor*	Variables	Factor 1 (ML1)	Factor 2 (ML2)	Factor 3 (ML3)	Factor 4 (ML4)
	Number of visits to link Aadhaar to Bank Account	0.691			
	Number of visits to link Aadhaar to NREGA job card	0.988			
	Average time taken at the bank		0.749		
	Average cost incurred to visit a bank		0.643		
	Maximum time taken at the bank		0.641		
	Passbook doesn't get updated at the bank			0.571	
	Have been denied update of the passbook at the bank			0.971	
	Misinformed about wages being credited				0.452
	Number of visits made to the bank to access the wages for the last withdrawal				0.653

Table A.2.1(e) also gives an interesting picture. One observes that the variables connecting to say, time and cost, dominate the correlations with the second factor while they make negligible contributions to the other factors. Similarly, the variables connected to linking Aadhaar dominate the correlations for factor 1 and have negligible correlations with the other factors. When this happens in a dataset, it's said that the dataset exhibits a 'Simple Structure'.

From Table A.2.1(e) we can conclude that Aadhaar related variables are the main drivers for the first factor. Cost related variables are the main drivers for the second factor. Transparency and accountability pertaining to passbook updation drive the third factor and the number of visits made to the bank to withdraw wages constitute the last factor.

Table A.2.1(f) summarises the proportion of variance explained by each factor in descending order.

Table A.2.1(f): *Proportion of variance explained*	Variables	Factor 1	Factor 2	Factor 3	Factor 4
	Proportion of variance explained	22.12	19.11	10.03	5.23

The four factors taken together account for roughly 57 percent of the total variation in the dataset.

6. As a reminder, the idea of hardship is latent and what we have attempted here is to capture that using measurable features. We now have four interpretable factors to depict the drivers of the underlying structure of hardship faced by the respondents. We then combined the different variables for a factor, based on their loadings, to arrive at a score for each individual on the factor. Factor scores are an optimally weighted linear combination of variables and can be used as proxies for all the measured variables to explore an underlying structure. So each individual is assigned a score on each factor. This is akin to ranking the individuals based on these measurable features of hardships. We use a regression-based method that fits a linear regression of the variables to estimate the factor scores. The factor scores so obtained have zero mean and the variance is equal to the squared multiple correlations between the variables and the corresponding factor. As a reminder our analysis revealed four distinct factors with the following interpretation -- (a) hardships due to biometric authentication issues, (b) hardships due to cost (c) hardship due to transparency and accountability with respect to passbooks and (d) hardship due to the visits to the bank due to misinformation. Since the proportion of variance explained by each factor is different, we need to account for that when combining the factor scores of individuals.

7. Once we obtain the factor scores of each individual for each factor, we have to combine the factor scores of each factor in a meaningful way. We achieved this by combining the factor scores of each factor using a weighted linear combination of the factor scores weighted by the contribution of each factor to the total variation. This is more meaningful than combining using equal weights. This is statistically called weighting by the 'communality' of each factor to the total sum of squares.

Upon completion of the above seven steps, we get a 'Net Hardship Score using Confirmatory Factor Analysis' that we have called 'Confirmatory Factor Score'. We have done this exercise for both bank users and CSP/BC users.

If the reported simple average of the reported hardship variables adequately capture the underlying hardship structure, then the simple average scores of respondents should exhibit high correlation with the factor scores of individuals created using the procedure just described. So people with low average reported hardship would also have low factor scores and people with high average reported hardship should have high factor scores in case the simple average reported hardship serves as a reasonable candidate of reported hardship.

Figure A.2.1 (g) shows the correlation between the simple average reported hardship scores (x axis) of bank users with the confirmatory factor scores (y axis) for each state.

Figure A.2.1(g):

Correlation between Simple Average Hardship Scores with the Confirmatory Factor Scores for bank users
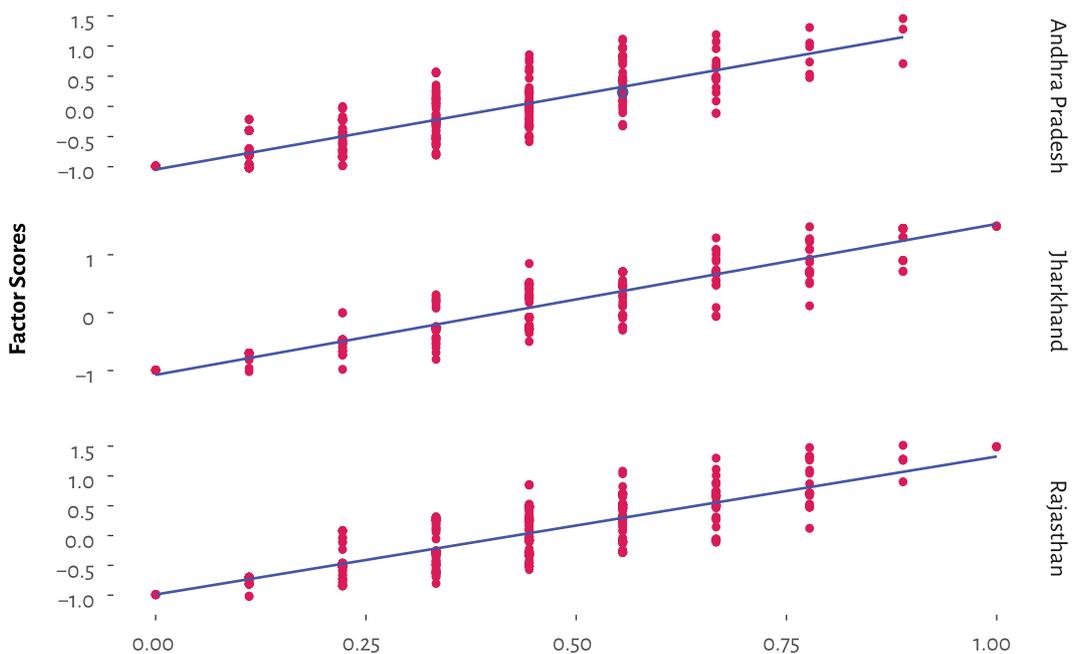
As is evident from Figure A.2.1(g) people with low simple average hardship scores tend to have low confirmatory factor scores and those with high simple average hardship scores have high factor scores.

A statistical test of correlation between the simple average reported hardship scores and the confirmatory factor scores is presented in Table A.2.1(h). Column 2 gives the non-parametric rank correlation between the two variables and within parenthesis we show the results of the test of association between the two variables. Column 3 gives the classical Pearson's product moment correlation between the two variables and the parenthesis gives the p value of the test of association between the two variables. The null hypothesis in each of these tests is that the two variables are uncorrelated. From the incredibly low p values (much less than 10^{-16}) we can safely conclude that the two variables are highly correlated. Indeed, what this actionably means for us is that the simple average reported hardship scores are a very good proxy for using the confirmatory factor scores. Column 4 gives a 95 percent confidence interval for the product moment correlation between these two variables. Theoretically, Kendall's Tau will always be smaller than the classical Pearson's product moment correlation.

Table A.2.1(h): *Correlation between Simple Average Reported Hardship and Confirmatory Factor Scores*	**State**	**Kendall's Tau Between Simple Average Reported Hardship and Confirmatory Factor Scores (p value)**	**Pearson's Correlation Between Simple Average Reported Hardship and Confirmatory Factor Scores (p value)**	**95 percent Confidence Interval for the Pearson's correlation coefficient**
	Andhra Pradesh	0.69 (p value < 2.2e-16)	0.84 (p value < 2.2e-16)	(0.80,0.87)
	Jharkhand	0.80 (p value < 2.2e-16)	0.91 (p value < 2.2e-16)	(0.89,0.93)
	Rajasthan	0.66 (p value < 5.4e-16)	0.81 (p value < 2.2e-16)	(0.78,0.84)

We performed each of the above steps for CSP/BC users as well. Instead of going through the details again, we present below some key summaries from the exploratory and confirmatory factor analysis models for CSP/BC users.

The Kaiser-Meyer-Olkin (KMO) factor adequacy for CSP/BC hardship variables is 0.51. The parallel analysis scree plots suggested a 3 factor model. Table A.2.1(i) gives the factor model adequacy and diagnostics for the CSP/BC users.

Table A.2.1(i):	Model Selection Criteria	Output
Fitted model diagnostics for CSP/BC users	The root mean square of the residuals (RMSR)	0.04
	Tucker Lewis Index of factoring reliability	0.862
	RMSEA index	0.139

The numbers in Table A.2.1(i) suggest that the estimated factor analysis model for CSP/BC users is adequate but not as resounding as the one for banks. The three factors cumulatively explain about 53.5 percent of the total variance. Similar to the bank variables, factor scores of individuals based on the fitted 3 factor model were created. A visual representation of the validity of using the simple average reported hardship scores is depicted in Figure A.2.1(j). The upper panel in Figure A.2.1(j) shows the distribution of simple average hardship scores for each state and the lower panel shows the distribution of the factor scores for each state. As is visually evident from this figure, the distribution of factor scores across states, from a relative positional perspective is very similar to that obtained using simple average. The range of values for simple average is between 0 and 1 while the factor scores can theoretically take any real value.

Figure A.2.1(j):

*Comparison of Simple Average Reported Hardships with Factor Scores for CSP/BC users*
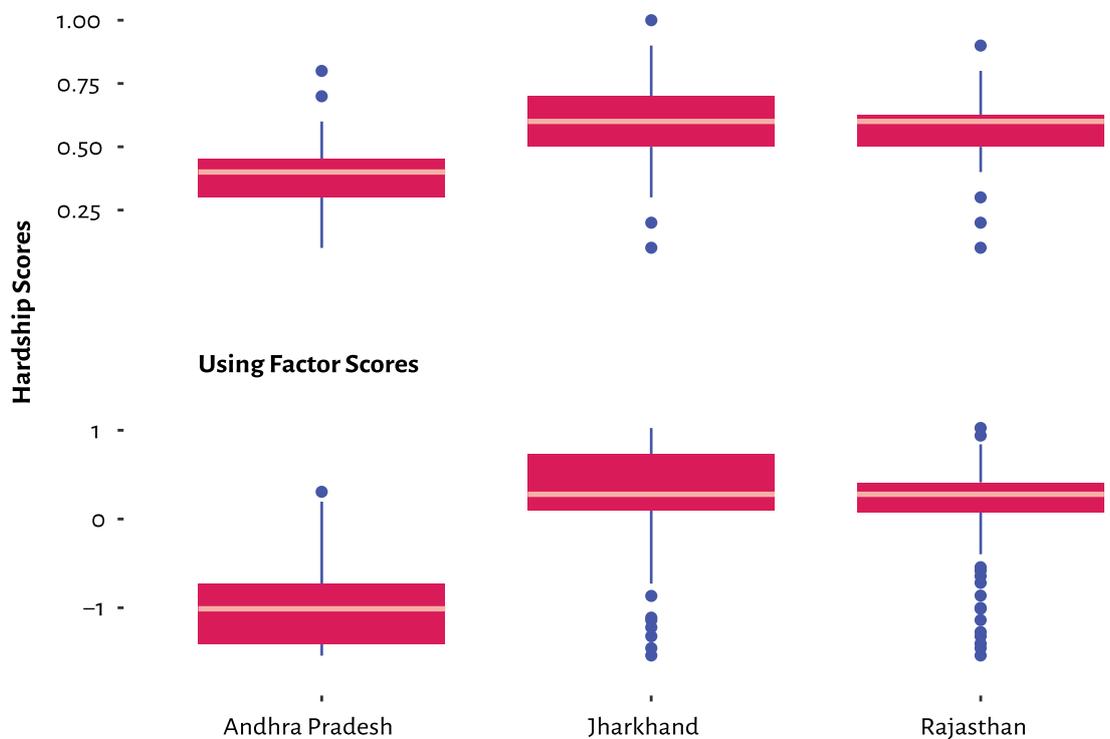
Table A.2.1(k) presents the results of the test of independence between the simple average reported hardship score and the corresponding net hardship confirmatory factor scores for CSP/BC users. We could still rely on the simple average scores. The p-values, given in parenthesis, are much lower than standard thresholds of 0.01. We can therefore infer that there is a high degree of association between the reported hardship scores and the confirmatory factor scores for CSP/BC users across the states.

Table A.2.1(k): *Correlation tests between simple average reported scores and the factor scores based on the 3 factor model for CSP/BC users*

State	Kendall's Tau Between Simple Average Reported Hardship and Confirmatory Factor Scores for CSP/BC Users (p value)	Pearson's Correlation Between Simple Average Reported Hardship and Confirmatory Factor Scores for CSP/BC Users (p value)	95 percent Confidence Interval for the Pearson's correlation coefficient
Andhra Pradesh	0.35 (p value < 1.8e-07)	0.42 (p value < 8.2e-07)	(0.27,0.55)
Jharkhand	0.60 (p value < 2.2e-16)	0.75 (p value < 2.2e-16)	(0.70,0.79)
Rajasthan	0.57 (p value < 2.2e-16)	0.81 (p value < 2.2e-16)	(0.76,0.85)

Based on these analyses, we can conclude that our choice of using simple reported hardship scores for bank users and CSP/BC users are statistically valid and robust.

A.2.1 Multiple Factor Analysis (MFA)

Confirmatory factor analysis discussed in the previous subsection adequately justified using a simple average of some variables to arrive at hardship scores. We explored another method called Multiple Factor Analysis (MFA) to assess the adequacy of using simple average. Using CFA worked very well for users of banks, we found that MFA was able to capture the underlying variability structure of CSPs better.

MFA, developed by Escofier and Pages (1994) is useful in analysing relationships in situations when there is a natural grouping of variables into distinct categories. For example, to assess hardships of users of BCs or CSPs, there were two questions checking for biometric related problems, three questions concerning getting receipts for transactions, three different questions concerning the cost incurred for transactions and two other questions concerning difficulties about being able to update passbooks and queues at the CSP. Each group of variables supply a different kind of information on each individual and it is instructive to understand the similarities and differences between groups from an individual's perspective. MFA studies the relationships between individuals based on a set of grouped variables and studies the relationships between variables based on the responses.

In situations where there are many questions pertaining to one category and fewer questions in another category, a general factor analysis tends to bias the category with more questions. MFA addresses this problem by balancing various categories by normalising the contribution of each category's variability to the total variability. It can therefore be thought of as a weighted Principal Components Analysis. In this method, the same weights are used for all variables within a category so that the category structure is preserved. Mathematically, this is achieved by setting the variance of the principal axis of each group to 1.

Having created 4 natural groups -- biometric, receipt, cost, other -- we created the key dimensions of variability of the respondents followed by a score for each respondent in each dimension. The dimensions are linear combinations of the groups of variables. The coordinates of the observations, respondents in our case, on the components (or dimensions) are the multiple factor scores. Two individuals 'close to each other' in the map of the principal dimensions are considered to be exhibiting a similar profile. Consider Figure A.2.2(a).

Figure A.2.2(a):

Individuals Contributing to the Dominant Dimensions
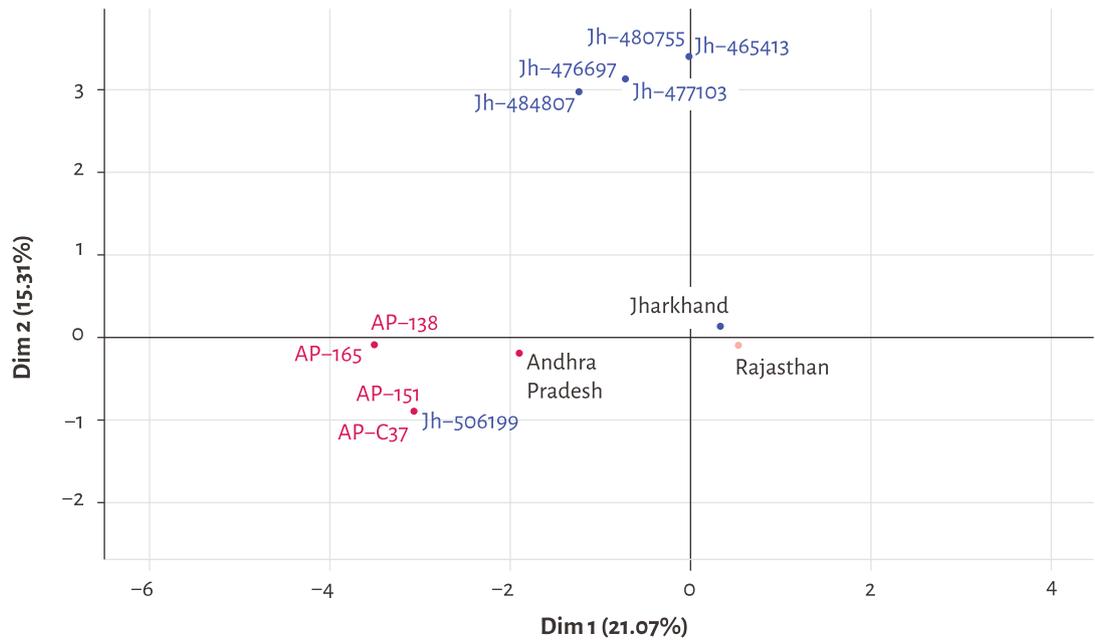
Dim 1, on the x-axis, is the first principal dimension: a linear combination of the variables that capture the maximal variability. Dim 2, on the y-axis, is another linear combination of the variables that capture the second highest variability. Observe the cluster of individuals from Jharkhand (in blue) along the vertical line at 0 and observe four individuals from Andhra Pradesh (in red) along the horizontal line at 0. MFA identifies the respondents in blue clusters as similar and the respondents in the red cluster as similar. Let's look at their hardship responses to assess their similarity.

We see from the data that the three individuals from JH (blue cluster) represented in Figure A.2.2(a) faced hardship in at least 7 out of 9 questions. However, the individuals from AP (red cluster) faced hardship only in the questions pertaining to biometric issues and hence they are 'close' to each other in the above figure. MFA helps us identify such relationships and assigns scores to individuals based on their responses. MFA helps us identify such relationships and assigns scores to individuals based on their responses.

MFA scores of each individual from each dimension were then combined to create a single hardship score for each individual.

The first principal dimension obtained by doing MFA is the variable that maximises the connection between each group. The second dimension is obtained, orthogonal to the first, after accounting for all the information used to calculate the first dimension. Subsequent dimensions are found in this manner.

Suppose v1 denotes the first principal dimension then a measure called the *projected inertia* of all the variables of the jth group denoted by $L_g(K_j, v_1)$ that lies between 0 and 1 is maximised. This can be thought of as equivalent of R² used in standard linear regressions. When L_g is 0, it implies that all the variables in the jth group are uncorrelated with the first principal dimension and when L_g is 1 then the first principal dimension v1 is the same as the first principal component of the jth group. For two groups of variables, we can use the L_g measure to construct a correlation-type measure called RV to see how close two groups are. RV will lie between 0 and 1. For our case, we can construct, for example, such a measure based on respondents facing hardship due to biometric issues and say hardship due to cost factors. If RV between two groups is close to 0 then we can say that the hardship faced by respondents of one group are not necessarily the same respondents facing hardship in another group.

Table A.2.2(b) gives a normalised RV measure between the groups. What we can say is that the variables due to the biometric issues give a more multidimensional description of the hardship as the L_g values are highest for that group among all the groups.

RV Matrix: Between groups Association

Table A.2.2(b):		Biometric	Receipt	Cost	Other	MFA
RV Matrix for	**Biometric**	1.000	0.042	0.017	0.043	0.041
Between Group	**Receipt**	0.042	1.000	0.076	0.037	0.081
Association	**Cost**	0.017	0.076	1.000	0.016	0.747
	Other	0.043	0.037	0.016	1.000	0.677
	MFA	0.041	0.081	0.747	0.677	1.000

We can see that the numerical measure of association between groups is quite low. None of them exceed 0.10. What this means is that the same respondents are not, on average, going through all forms of hardships. So, a set of respondents while facing biometric issues are not necessarily the same set of people subject to other forms of hardships and a set of respondents facing cost related problems are not necessarily incurring receipt related problems.

The last row and last column of the above RV matrix gives the MFA configuration. Based on the coordinates of individuals on the dimensions, RV for MFA gives an 'average' RV value for the constructed MFA. The hardship due to cost and the 'other' category are closest to the mean MFA configuration as the RV between MFA and cost is the highest, around 0.747.
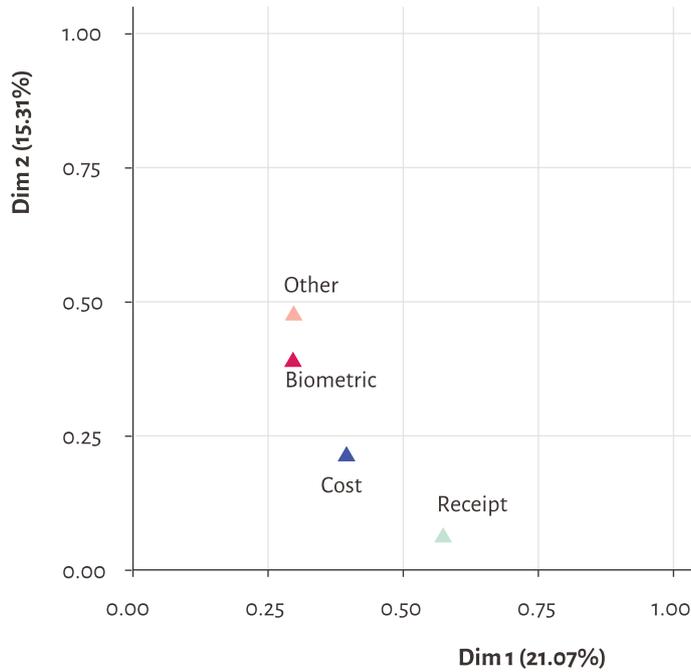
From Figure A.2.2(c) on Groups Representation we see that the main drivers of hardship in the first dimension were lack of provisions of receipts, while the drivers of hardship in the second dimension were biometric related issues and other passbook related matters. Through this we were able to identify and compute the MFA-based hardship scores of individuals in each of three dimensions and then we combined the MFA-based hardship scores of the three dimensions to get a single MFA-based hardship score. Figure A.2.2(d) demonstrates the single MFA-based hardship score by combining the hardship scores across the dimensions.

Figure

A.2.2(d):

MFA based

hardship scores

for the three

states
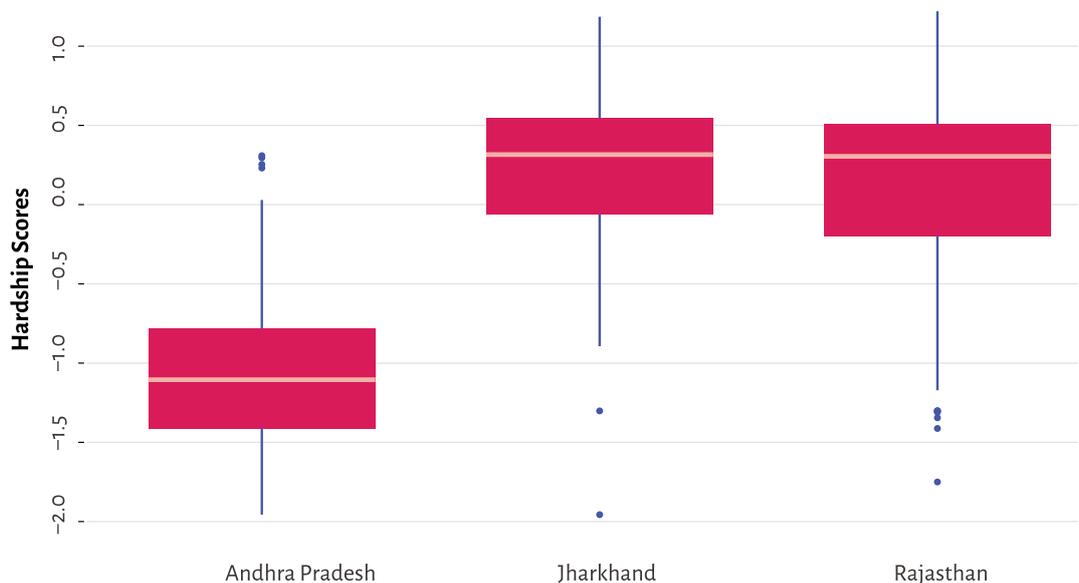
Figure A.2.2(e) reproduces the simple average reported hardship score for respondents who use the CSP/BC for their transactions.

Figure A.2.2(e): *Simple Average Hardship Score for CSP/BC users*
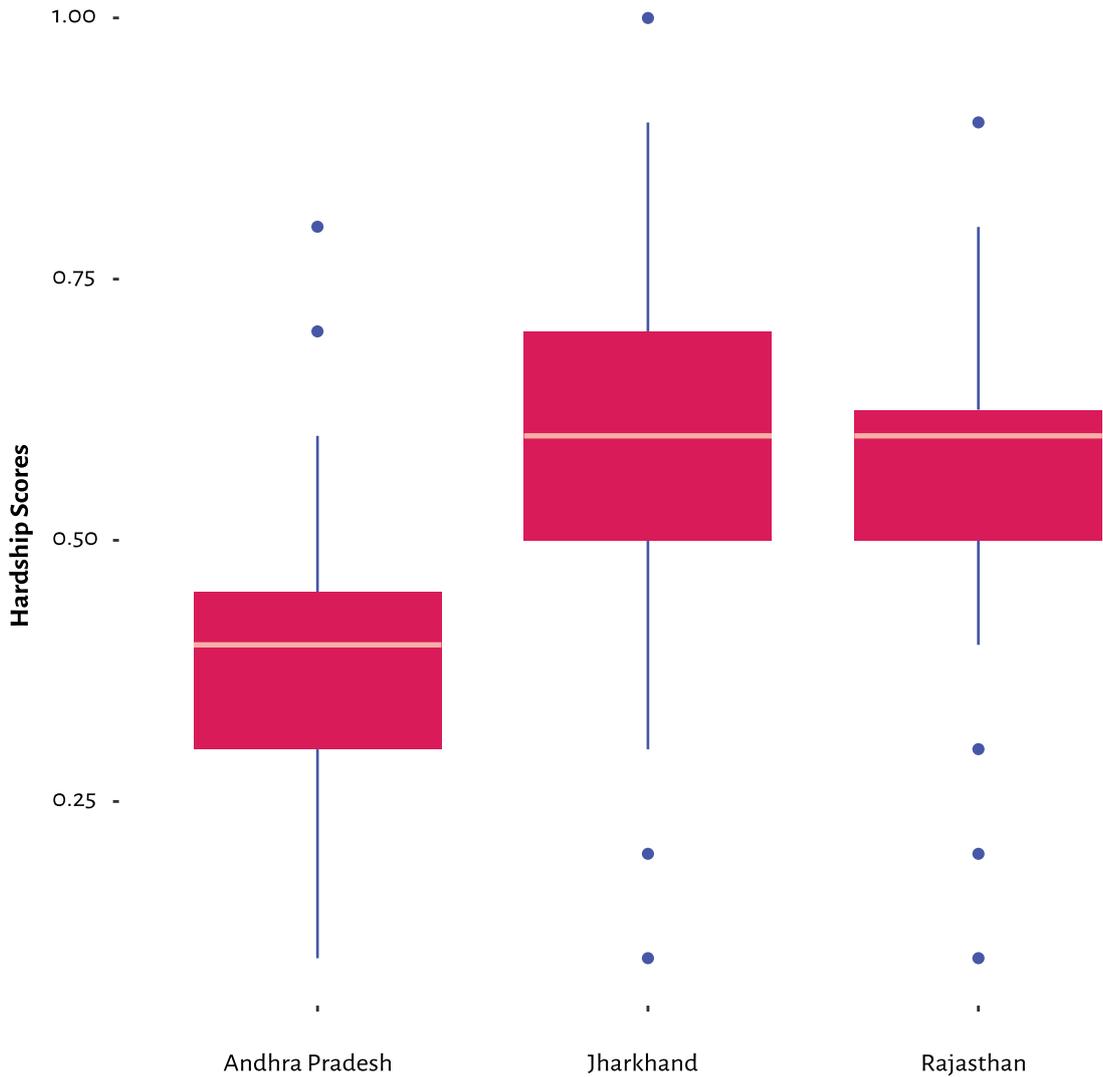
As can be easily gleaned from Figures A.2.2(d) and A.2.2(e), the distribution of MFA based hardship scores of individuals is very similar to the distribution of the simple average based hardship scores of individuals. For further robustness checks, we tested whether the rank correlation between the simple average scores and the MFA is zero and the statistical test of zero correlation was rejected at 1 % significance level indicating that the simple average score can be used as a proxy for the MFA scores. AP fares low on hardship in most of the categories and also overall.

Annexure[10]

Know Your Rights (KYR) for Bank Account Holders

1. When you open a bank account, the bank must give you a passbook.

2. You can request your passbook to be updated at the bank at any time for free.

3. If you wish, you can request sms services from the bank, so that you are informed by sms of any transaction in your account; however, banks charge small fees for sms services.

4. When you open a bank account or when your account type is changed, the following information must be clearly communicated to you in writing;

   a. The type of bank account you have (eg: zero balance account, basic savings bank deposit account, savings account)

   b. The provisions of maintaining such an account such as minimum balance, limits on withdrawal amounts, maximum deposit amounts, if any.

5. A bank branch cannot refuse to let you withdraw money from your account, even if there are business correspondent (BC) facilities in the area.

6. There should be no limit on the number of transactions you can do in a month through a bank branch.

7. A bank cannot close or freeze your account without informing you in writing. In case an account is closed or frozen, the mechanism to reopen it or unfreeze it must be specified in writing at the time of closing it or freezing it.

8. A bank cannot change the type of your account without your written consent.

9. A bank can link your account with Aadhaar only with your written consent in the local language.

10. A bank cannot draw on your general account balance to recover any debts that you may owe to the bank.

11. Nobody has any right to demand details of your bank account over the phone.

12. If for any transaction you get an OTP on your phone, make sure not to share your OTP with any person, even a bank official.

13. A bank official must provide you assistance if you have any difficulties related to bank transactions.

Endnotes

1. In Maneka Gandhi v. Union of India ((1978) SCC (1) 248) the Supreme Court held that 'The right to live includes the right to live with human dignity and all that goes along with it...and also the right to carry on functions and activities as constitute the bare minimum expression of human self.'

2. In Olga Tellis v. Bombay Municipal Corporation ((1985) SCC (3) 545)) the Supreme Court held that 'An equally important facet of the right to life is the right to livelihood because no person can live without the means of livelihood.;

3. ACH - Automated Clearing House for electronic funds transfers through account; NACH - National ACH;

4. Swaraj Abhiyan vs Union of India (2018) WRIT PETITION(CIVIL) NO. 857 OF 2015 (https://main.sci.gov.in/supremecourt/2015/41648/41648_2015_Judgement_18-May-2018.pdf)

5. AP was not part of the states analysed as AP uses a different MIS.

6. https://www.npci.org.in/product-overview/aeps-product-overview

7. https://www.thehindu.com/news/cities/Hyderabad/andhra-pradesh-ahead-of-other-states-has-an-aadhaar-in-enrolment/article4721515.ece

8. https://nrega.nic.in/netnrega/writereaddata/Circulars/1948Social_Audit_.pdf

9. https://www.r-project.org/

10. With inputs from Prof. Jean Drèze and Prof. Sudha Narayanan

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