

ENHANCING WOMEN'S ECONOMIC EMPOWERMENT THROUGH DIGITAL CASH TRANSFERS

**AN ANALYSIS OF THE DIGITIZE-DIRECT-
DESIGN CRITERIA APPLIED TO THE NATIONAL
RURAL EMPLOYMENT GUARANTEE SCHEME IN
BIHAR, INDIA**

**SIMONE SCHANER
UNIVERSITY OF SOUTHERN CALIFORNIA**

**CHARITY TROYER MOORE
EVIDENCE FOR POLICY DESIGN, HARVARD**

January 15, 2019



HARVARD Kennedy School

Evidence for Policy Design

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ACRONYM GUIDE

APBS	Aadhaar Payments Bridge Systems
ATM	Automated Teller Machine
BC	Business Correspondent
BPL	Below Poverty Line
BPO	Block Program Officer
CFT	Cluster Facilitation Team
CLF	Cluster Level Federation
CSC	Common Service Centre
CSP	Customer Service Point
DBT	Direct Benefit Transfer
DDC	Deputy Development Commissioner
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojna
FII	Financial Inclusion Insights
FSP	Financial Service Points
FTO	Funds Transfer Order
GDP	Gross Domestic Product
GoB	Government of Bihar
GP	Gram Panchayat
GRM	Grievance Redressal Mechanism
GRS	Gram Rozgar Sevak
IAY	Indira Aawas Yojna
KYC	Know Your Customer
LIFE-MGNREGA	Livelihoods in Full Employment under MGNREGA
MBGB	Madhya Bihar Grameen Bank
MIS	Management Information System
MoRD	Ministry of Rural Development (Government of India)
NeFMS	National Electronic Funds Management System
NFHS	National Family Health Survey
NIC	National Informatics Center
NPCI	National Payments Corporation of India
NREGA	National Rural Employment Guarantee Act (a.k.a. MGNREGA - Mahatma Gandhi National Rural Employment Guarantee Act)

NREGS	National Rural Employment Guarantee Scheme (a.k.a. MGNREGS - Mahatma Gandhi National Rural Employment Guarantee Scheme)
NSS	National Sample Survey
PAN	Permanent Account Number
PFMS	Public Financial Management System
PMAY	Pradhan Mantri Awas Yojna
PMJDY	Pradhan Mantri Jan Dhan Yojna
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PO	Program Officer
PoS	Point of Service
PRS	Panchayat Rozgar Sevak
RBI	Reserve Bank of India
RDD	Rural Development Department (Government of Bihar)
SBI	State Bank of India
SEC	Socio-economic Caste
SHG	Self Help Group
VMC	Vigilance Monitoring Cell
VMS	Vigilance Monitoring System
VO	Village Level Organisation

1. INTRODUCTION

1.1 CONTEXT AND BACKGROUND

India's story over the past ten years has been one of promising growth. Yet a continued, concerning undercurrent of this story has been the extent to which some people and places are being left behind. For example, the GDP per capita of the state we report on here, Bihar, is closer to that of a low-income country in Sub-Saharan Africa than it is to many of India's more prosperous states. When last calculated (2011), Bihar's Human Development Index was on par with Myanmar's, and the second lowest of all major Indian states (Suryanarayana et al. 2011). Although Bihar has made significant progress on many fronts over the past ten years, ongoing political turmoil and governance challenges plague the state.

The extent to which women continue to fare poorly in Bihar, and India more broadly, is particularly concerning. In some ways, women are gaining ground: key indicators like education levels have increased, and total fertility has declined. But other variables linked to women's empowerment, gender-based violence, and economic activity suggest that growth alone cannot eliminate long-standing, deeply-entrenched gender inequities. Indeed, if gains from growth disproportionately accrue to men, there is a risk that Indian women will be further marginalized as their country develops.

Fortunately, the Indian government has developed a comprehensive system of safety net programs aimed to address ongoing poverty and marginalization. These programs overwhelmingly seek to deliver any cash-linked benefits directly into the bank accounts of beneficiaries. This approach presents an important opportunity for women, in particular, to directly gain access to transfers that may otherwise have been directed to males in their households.

With 434 schemes and programs already onboarded to this platform by the time of writing¹, the conversion of social protection benefits to so-called Direct Benefits Transfers (DBTs) paid into individual bank accounts remains an important priority of the Government of India. But this onboarding is just the beginning – many programs have difficulty delivering transfers in time, to the right individuals, in a fair and responsive manner. As the DBT transition continues, policy makers have implemented a range of reforms designed to make programs more equitable, efficient, and gender sensitive. The call to reform has been particularly pronounced for some of India's largest safety net

¹ According to the DBT Mission website (<https://dbtbharat.gov.in/scheme/schemelist>), as of January 7, 2019.

programs, notably the Mahatma Gandhi National Rural Employment Guarantee Scheme (NREGS), the scheme of focus in this report.

GAUGING DIGITAL FINANCIAL SERVICES FOR WOMEN'S ECONOMIC EMPOWERMENT: THE D3 CRITERIA

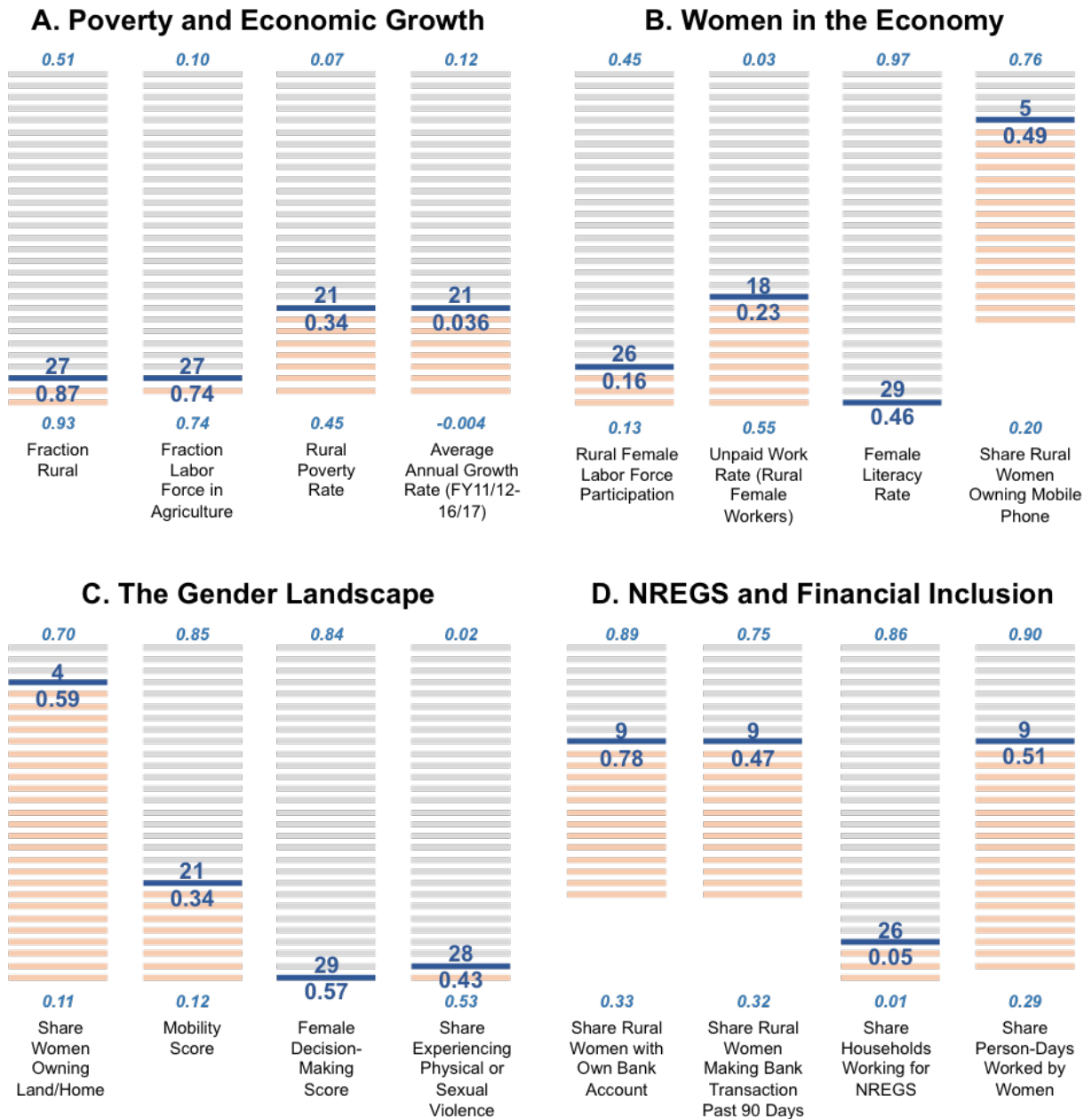
What fundamentals are necessary to ensure safety net programs elevate the status of Bihari women? The Gates Foundation's D3 criteria posit that for DBTs to effectively empower women, they must transfer funds *directly* to women's own accounts, rather than into a joint account (Field et al. 2016). Further, these payments should be *digitized* to reach women quickly and securely. Finally, programs that aim to benefit women must be *designed* and implemented with a gender-intentional lens.

Here, we report on the results from a recent landscaping exercise that identifies the constraints to effectively serving Bihari women through NREGS, India's largest safety net program for rural households. The report is structured in line with the D3 criteria and focuses on identifying both constraints to women's empowerment through NREGS, as well as the extent to which reform opportunities are possible. One key aim of this report is to pinpoint high-potential-return areas for reform. In the next phase of our work, we intend to partner with the state to formulate policy solutions to address these "opportunity areas", with the ultimate goal of improving NREGS implementation and accelerating women's socioeconomic empowerment.

Before describing how Bihar fares on the D3 criteria, we provide background information to situate the state within the broader Indian context. To do this, we rely on a series of graphs that highlight Bihar's absolute performance and its ranking relative to other Indian states.² In Figure 1 on the following page, each horizontal bar represents a state, with the lowest ranked state (the state with the least desirable outcome) at the bottom, and the highest ranked state at the top. We highlight Bihar, along with its rank and value for each indicator, in navy blue. For context, we also display indicator values for the highest and lowest ranked state.

² We exclude all union territories from the graphs. There are currently 29 Indian states, but some graphs have a smaller number of bars due to missing data – the notes of Figure 1 provide additional detail.

Figure 1. Bihar at a Glance



Notes: Fraction rural, rural female labor force participation, female unpaid work rate, female literacy rate, share women owning land/a home, the mobility score, the female decision-making score, and the share of women experiencing physical or sexual violence are calculated from the 2016 National Family Health Survey. All but fraction rural are calculated among women aged 15-49 (fraction rural is among all individuals). The fraction labor force in agriculture is from the 2011 Census. The rural poverty rate is from the Reserve Bank of India's Handbook of Statistics on Indian Economy and is current as of 2011-2012. The average annual growth rate is from the Ministry of Statistics and Program Implementation's "State Domestic Product and Other Aggregates, 2011-2012 Series" release. The share of women owning a mobile phone, the share of rural women with a bank account, and the share of rural women making a bank transaction in the past 90 days are from the 2017 FII. Series from this dataset only have 22 observations because the survey was not conducted in all states. The share of households working for NREGS is from the 2015-2016 Labour Department Employment-Unemployment Survey. The share of person-days worked by women is from the NREGS MIS, Table R5.1.5 Employment Generated During The Financial Year 2018-2019.

POVERTY AND ECONOMIC GROWTH

Panel A of Figure 1 shows that Bihar's economy has yet to transition out of agriculture: 87% of Bihar's residents live in rural areas (higher than in any state besides Himachal Pradesh and Assam), and 74% work in agriculture. High participation in agriculture is accompanied by relatively high poverty rates – the Reserve Bank of India reported that in 2011, more than one in three of Bihar's 104 million citizens lived in poverty (RBI 2018).

Despite some recent upticks in economic growth, Bihar has struggled to increase per capita income as other states have. In constant terms, net state domestic product from 2011 through 2018 only grew 3.6% per year, ranking Bihar 21 out of 28 states with available growth data. Per capita annual income was approximately \$598 in FY 2016-17.³ Unsurprisingly, the combination of low incomes and lack of economic opportunities have resulted in high, often temporary, out-migration from Bihar (Datta 2016). Fortunately, and in spite of ongoing poverty and lack of economic development, the past ten years in Bihar have brought improvements in security and governance that lay important groundwork for future growth.

WOMEN IN THE ECONOMY

In a country already well-known for its poor outcomes for women – India ranks 108 out of 144 countries in the World Economic Forum's Gender Equality index – Bihar stands out as a particularly poor performer. Panel B of Figure 1 shows that Bihar's female literacy rate in the 2011 Census stood at 46%, which ranks rank Bihari women last among major Indian states.

On economic terms, rural female labor force participation stands at 14.2% among women aged 15 and older according to the 2015-2016 Labour Department Unemployment Survey. This number tracks well with the NFHS, which estimates that 16% of rural Bihari women aged 15-49 performed paid work in the past year – Panel B of Figure 1 shows that this ranks Bihar ahead of just 3 other states. While rural Bihari women are some of the least likely to work for pay, a substantial fraction of those who do work (23%) perform unpaid work (e.g. for a household business). Thus, when women in Bihar work, they are disproportionately likely to see that work go unrecognized by financial compensation.

Despite this low level of economic engagement and Bihar's low income per capita, the last bar in Panel B of Figure 1 shows that rural Bihari women fare well in terms of mobile

³ Bihar's per capita income as reported for FY2016-17 in Bihar's 2017-2018 Economic Survey was Rs. 38,546; applying the average exchange rate over that fiscal year of 64.47 results in \$598.

phone ownership: in the 2017 Financial Inclusion Insights (FII) Survey, 49% of women reported owning a phone, which places the state fifth among the 22 states where the FII surveys rural populations.⁴ This is a bright spot, as phones hold the potential to connect otherwise isolated women to information and markets.

THE GENDER LANDSCAPE

While most women in Bihar do not work for pay, they do score well relative to women in other states with respect to asset ownership. Specifically, Panel C of Figure 1 reports that 59% of women reported either individually or jointly owning a house or land in the NFHS, which ranks Bihar fourth among all states. Of course, *de jure* asset ownership is only meaningful insofar as women have *de facto* power over their assets. Unfortunately, other statistics suggest that asset ownership fails to translate into meaningful socioeconomic autonomy.

First, Bihari women self-report that they have the least decision-making power of women in any state. To construct a measure of self-reported decision-making power, we used the NFHS to record whether women aged 15-49 report that they have some say (either individually or jointly) in decisions related to their own healthcare, major household purchases, visits to their family or relatives, and whether women have any money they can decide how to use on their own. The average woman in Bihar reports that she has some say or autonomy in just over half of these scenarios. This ranks Bihar's women last among the states, in stark contrast to top-ranked Goa and Sikkim, where the average woman has autonomy 84% of the time.

Second, Bihar ranks next to last on the proportion of women reporting physical or sexual violence in the same survey, with 43% of women in the state reporting exposure to violence. Finally, we also consider how women fare in terms of physical mobility, since many Indian women are only permitted to go outside the home or village with male supervision. We used the NFHS to calculate the share of women aged 15-49 who report they can go to the local market, the health center, *and* outside the village on their own. According to this definition, just 34% of Bihari women report they are mobile, placing them in the bottom third of all states.

WOMEN'S FINANCIAL INCLUSION

⁴ There are no rural dwellers surveyed in Goa and Meghalaya. Further, note that FII weights are constructed to ensure estimates are representative at the national, but not the state level. We still present FII estimates for Bihar since the survey offers some of the most up-to-date and most extensive measures of financial inclusion in India, but we do view the estimates with a degree of caution.

The government's massive financial inclusion program, Pradhan Mantri Jan Dhan Yojana (PMJDY), has been a major impetus to increase account ownership in Bihar. Panel D of Figure 1 shows that according to FII data, 78% of women in rural Bihar had their own bank account in 2017, a figure comparable to wealthier states, like Maharashtra (74%) and Andhra Pradesh (87%). This represents impressive growth relative to the recent past: for comparison, 62% of rural Bihari women reported owning an individual bank account in the 2016 wave of the same survey.

Of course, financial inclusion is much more than account ownership, and PMJDY has been dogged by concerns about account dormancy since its inception.⁵ In the 2017 FII 47% of rural Bihari women reported making a bank transaction (regardless of whether or not they themselves owned an account), which puts Bihar in the middle of the pack relative to other states. (Sixty percent of women with their own account reported transacting in the past 90 days). Given the state's low level of per-capita income, limited female labor force participation and autonomy, and large rural population, we view these numbers as promising, and indicative of good progress towards women's financial inclusion in recent years. That said, there is still ample room to improve relative to top-ranked states like Chhattisgarh, where 89% of women have accounts and Tamil Nadu, where 75% of women have gone to the bank in the past three months.

NREGS

The above statistics suggest the opportunity to connect Bihari women to economic activities and the concomitant benefits they confer are high. An obvious platform to leverage is that of NREGS, a program designed in part to appeal to women. The Mahatma Gandhi National Rural Employment Guarantee Act (from here onward, NREGA) was established in 2005 through an act that mandates that the Indian government provide up to 100 days of guaranteed work to households in a given year, provided those households want to work. Implemented through the Mahatma Gandhi National Rural Employment Guarantee Scheme, referred to here as NREGS, the program has extensive reach: in the fiscal year (FY) 2017-18⁶, 51.2 million households across the country were listed as working for NREGS at a cost of \$9.8 billion⁷ dollars.

⁵ Accounts go dormant if they are not used for a sufficient amount of time. After 12 months, bank accounts are classified as inactive; after 24 months, they become dormant. Dormant accounts require paperwork to reactivate, which may be confusing to low-literacy account holders. Similarly, small accounts get frozen after one year if they are provisionally opened without proof of identity and proof of identity is not furnished within the year.

⁶ India's fiscal year runs from April 1 through March 31.

⁷ Using an exchange rate of 65.0746 INR to one US dollar, the average on March 31, 2018. The total expenditure for FY'17-18 was Rs. 63,995.93 crore, where 1 crore = 10 million.

The program is administered centrally by India's Ministry of Rural Development (MoRD) and by the state-level Rural Development Department (RDD) in Bihar. Given its extensive reach and female-friendly features – notably the provision of work close to women's homes, gender parity in pay, a quota requiring one-third of workers to be female, and guidelines requiring that women should be paid wages directly into their own bank accounts – NREGS presents a significant opportunity to more effectively engage women in the formal financial system while increasing their labor force participation.

Administrative data suggest that NREGS is relatively attractive to women in Bihar, where at the time of writing 51% of reported person-days for the program were worked by females in the current fiscal year (2018-2019). This ranks Bihar 9th out of 28 states with reported person-days this fiscal year. While this number is heartening in light of Bihari women's broader labor force participation rate, it remains low in absolute terms compared to states like Kerala or Tamil Nadu, where nearly all NREGS person-days are worked by women. Moreover, one major challenge for NREGS in Bihar is that overall participation is low: just 5.3% of households participated in the scheme in the past year, according to the most recent survey (conducted in 2015-2016) by India's Labour Department, which ranks Bihar 26th of 29 states.

The low level of household participation reflects the fact that NREGS implementation remains a major concern in Bihar. Many poor states – including Bihar – have typically been poor performers, both in terms of field implementation and program participation (Sukhtankar 2017). Earlier studies in Bihar have documented low levels of program participation, high degrees of rationing (cases where individuals wish to work but are not provided work), and lagging female participation (Dutta et al. 2014) – features that we still found to be problems in our recent fieldwork.

1.2 METHODOLOGY

The rest of this report leverages a variety of information and data sources to assess the extent to which NREGS in Bihar meets the D3 criteria. By triangulating information, we aim to paint a holistic view of banking access and NREGS activity in the state. To that end, our approach combines the following:

- Analysis of administrative program data
- Analysis of secondary survey data that sheds light on financial inclusion, women's wellbeing, and NREGS participation, some of which is summarized above
- A survey of relevant program documentation, policy reports, and academic research

- Qualitative interviews with NREGS program officials at varying levels of authority, including key actors at the state, district, block, and gram panchayat (GP) levels⁸
- Qualitative interviews with other key stakeholders, including financial services providers and other organizations engaged in women’s financial inclusion in Bihar
- Qualitative interviews with actual and potential program participants of both genders

SAMPLING FOR QUALITATIVE RESEARCH

To better understand how NREGS implementation works on the ground, our team conducted a rapid set of qualitative interviews, with the aim of visiting a variety of locations that would help paint a picture of the full spectrum of NREGS implementation across the state.

To do this, we first stratified districts by the level of female participation in NREGS (measured as the number of person-days worked by women in FY 2017-2018 in relation to the female rural population, according to the 2011 Census) and an indicator of financial inclusion (measured by the share of households with a bank account in the 2015-2016 NFHS) – see Figures 2 and 3, below. For female participation, we created three “bins” of districts: low (NREGS female person-days: rural female population $<.75$), medium (0.75-

Figure 2. Percent of Households in Bihar with a Bank Account

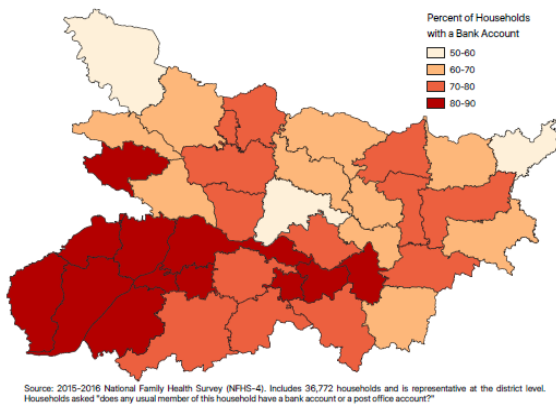
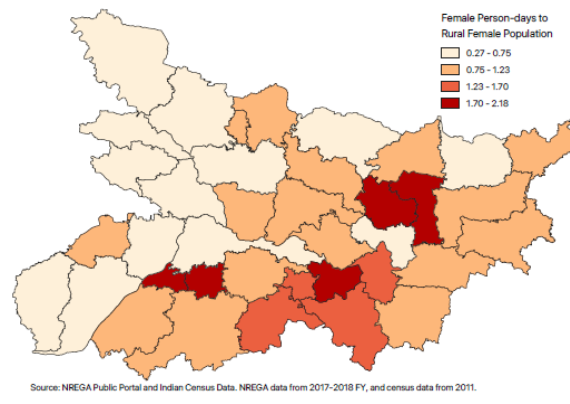


Figure 3. Ratio of NREGA Person-Days Worked by Females to Rural Population



1.7), and high (>1.7). For financial inclusion, we created two bins: low ($<70\%$ households banked) and high (70% or more of household banked). Together, this created 6 different female participation and financial inclusion “bins” of districts.

⁸ In India, there are 5 levels of government administration: central, state, district, block and gram panchayat (also known as GP).

We then selected six districts, one in each of the bins: Muzzafarpur (low female participation, high financial inclusion), Madhubani (low female participation, low financial inclusion), Saharsa (high female participation, low financial inclusion), Madhepura (high female participation, high financial inclusion), Purnea (medium female participation, high financial inclusion) and Katihar (medium female participation, low financial inclusion), as summarized by Figure 4, above.

Figure 4. Six Sample Districts

		Bank Account Penetration	
		Low	High
NREGS women's participation	High	Saharsa	Madhepura
	Medium	Katihar	Purnia
	Low	Madhubani	Mazaffarpur

Further, we also visited 3 additional districts – Nalanda, Gaya, and Nawada in southern Bihar – as these three districts are home to Cluster Facilitation Team (CFT) blocks, which provide additional support to NREGS implementation, to better understand how these areas function.⁹

Figure 5, right, situates each sample district within the state.

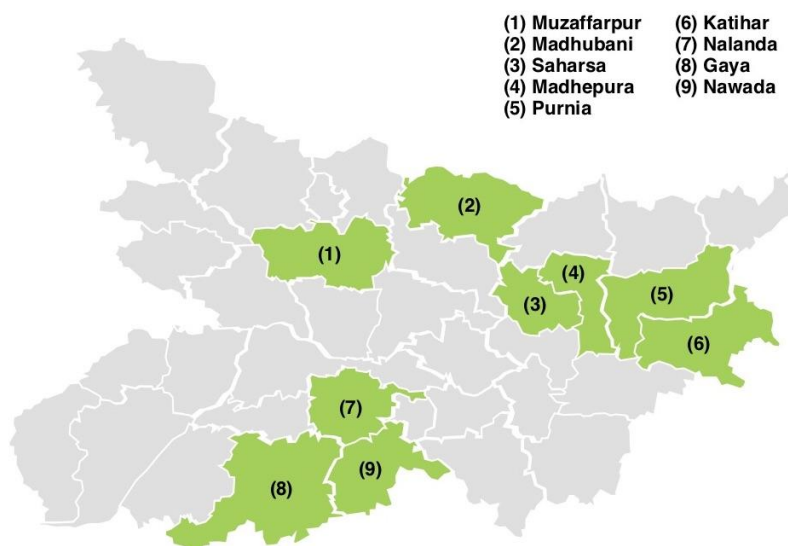


Figure 5. Map of Bihar (sampled districts highlighted)

In each of the nine districts, we selected two blocks: in districts with a cluster facilitation team (CFT) block, we visited the CFT block and one randomly selected non-CFT block. In districts with no CFT blocks, such as Saharsa and Madhepura, we visited two randomly selected blocks.¹⁰ We

stratified by CFT status based on the understanding that CFT blocks may differ from non-CFT blocks along a number of important dimensions: on one hand, these blocks provide enhanced support both to self-help groups (SHGs) and for women's engagement with NREGS, which could in turn impact women's comfort with the formal financial system. On

⁹ These blocks receive funding to dedicate additional personnel to support women's activities in JEEViKA, the state's self-help group (SHG)-focused program. Some of the activities undertaken by CFT personnel tie into NREGS and are described throughout this document.

¹⁰ Due to time constraints in the first wave of scoping, we selected non-CFT blocks in Muzzafarpur and Madhubani districts using a purposive approach that took logistical consideration and CFT status into account.

the other hand, states are meant to select some of their most underdeveloped blocks for CFT activity. See Figure 6, below, for a map of blocks we visited for qualitative fieldwork.

From within sampled blocks, we selected GPs to visit based on where the NREGS management information system (MIS), a part of the program's custom software called NREGASoft, indicated that women had been paid for NREGS work within the last 3 months. We typically visited 1 GP per block, and on rare occasions visited 2 GPs, only if it was needed to ensure interviews with all relevant stakeholders were conducted (see below for a complete list of stakeholders). To facilitate identifying recent workers, we compiled a list of names of individuals who had recently received wage payments from the MIS before entering each GP.

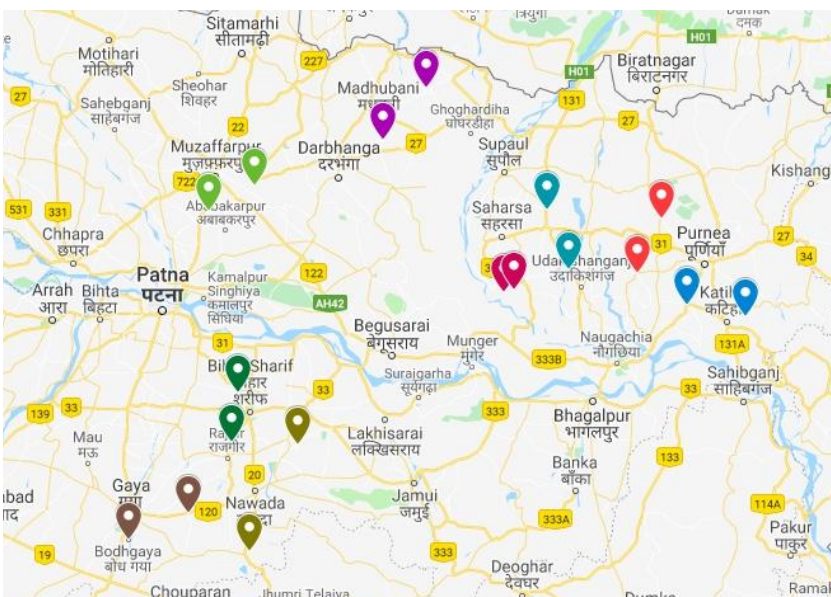


Figure 6. Blocks Sampled

STAKEHOLDER INTERVIEWS

Within each GP, we aimed to interview the following stakeholders:

- Female NREGS workers and non-workers who were part of an SHG
- Female NREGS workers and non-workers who were not part of an SHG
- Male NREGS workers and non-workers
- CFT staff (in CFT blocks only)
- Financial access point staff and affiliated workers – here we visited both bank branches and local banking kiosks, called customer service points (CSPs), and primarily spoke with bank managers and bank mitras (female assistants), where available
- Local GP leaders, namely sarpanches/mukhiyas

Throughout the duration of the qualitative scoping exercise, we conducted the following interviews:

- Individual interviews and focus groups with 84 rural women
- Individual interviews and focus groups with 20 rural men
- Interviews with 8 GP elected leaders (known as mukhiyas/sarpanches)

- Interviews with 4 state-level NREGS officials at the Rural Development Department in Patna
- Interviews with 11 high-level financial service providers (FSP) stakeholders, including leadership of banks and payments banks
- Interviews with 17 lower-level FSP stakeholders, including customer service point/CSP and common service center/CSC¹¹ operators, bank mitras, and bank branch managers
- Interviews with 5 JEEViKA¹² state and district-level officials
- Interviews with 2 cluster facilitation teams (approximately 15 staff)

The remainder of this document presents our key insights, organized by the D3 criteria.

¹¹ Common Service Centres, also known as CSCs, provide remote and rural areas of India access to a variety of public services. Supported under the government's Digital India Programme, CSCs are sometimes combined with CSPs, allowing customers to conduct banking activities alongside other types of transactions, such as requesting a land title or registering a marriage.

¹² JEEViKA is a program supported by the Government of Bihar focusing on social and economic empowerment of the rural poor in Bihar.

2. D3 ANALYSIS

2.1 CORE SYSTEM ENABLERS

PUBLIC FINANCIAL MANAGEMENT SYSTEM AND NREGS

CURRENT STATE OF PUBLIC FINANCIAL MANAGEMENT SYSTEM (PFMS)

Currently, the PFMS used for NREGS is functional and has a robust infrastructure supporting it, but there is room to improve the speed, predictability, and transparency in payments. Although considerable attention has recently been directed towards NREGS wage payment issues by the central and state governments, ongoing challenges continue to plague the program's operations, such as lack of predictable financing from the central government, needless administrative complexities, lack of data on important components of the payment process, and ongoing challenges with payment delays, particularly for payments linked to material for works undertaken. Our review of the PFMS interface indicates that complications in data entry and overall system rigidity make dealing with exceptions difficult for administrators to handle. Moreover, as we discuss later, challenges with the existing payment system may contribute to misuse of wage payments at the local level. Before providing more detail on these issues, we first review how payments are made under the current system.

PROCESS FOR WAGE PAYMENTS

Under the current NREGS payment system, materials payments can make up 40% of the total budget, whereas wage payments comprise 60% of the overall budget. All costs are covered by the central government, with the exception of 25% of the materials-related payments, which states fund. The idea behind this rule is to ensure workfare projects are labor-, rather than capital-, intensive, thus maximizing potential local employment opportunities they provide.

The process to make wage payments involves many sub-steps and signatories at different administrative levels, and certain details, such as account verification, occur quite late within the payment process. Although this system was put in place to minimize leakage from the system, a streamlined PFMS with early verification and fewer signatories could streamline the process for all stakeholders.

A detailed understanding of the wage payment process is key to understanding the challenges for NREGS within India's PFMS. The wage payment system is closely linked to the administrative hierarchy. At the district and lower levels of the hierarchy, there are

multiple individuals with indirect and direct responsibility for NREGS implementation in Bihar, described here in brief following the Figure 7, below:

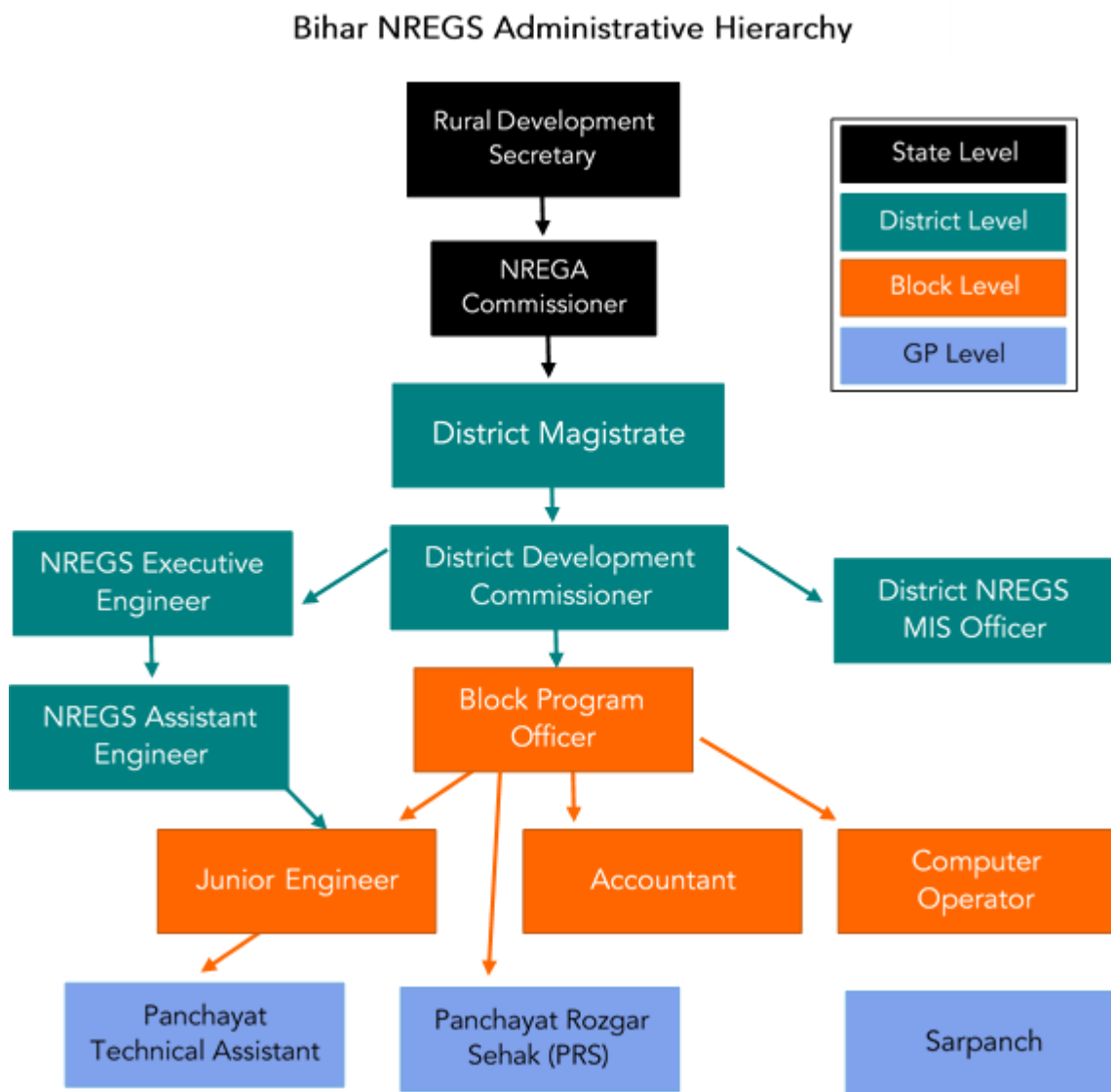


Figure 7. NREGS Administrative Hierarchy in Bihar

District Level Officials:

- **Deputy Development Commissioner (DDC):** Working under the district head, known as the District Magistrate, DDCs primarily belong to the Bihar Administrative Service (BAS) senior state cadre for civil servants, or the elite Indian Administrative Service (IAS). DDCs are the administrative heads of all schemes implemented by the RDD in their districts and hold significant responsibility for NREGS implementation.
- **Executive Engineer and Assistant Engineers:** The Executive Engineer is the technical head of the district for NREGS. S/he is responsible for measurement and

verification of progress completed on NREGS works, and oversees Assistant Engineers, who are in turn in charge of approximately 4-5 blocks.

- **District NREGS MIS Officer:** The MIS Officer provides the DDC and district leadership with MIS reports and other IT-related details on NREGS. The MIS officer sometimes also helps the block officials in entering and updating data on the NREGS MIS.

Block Level Officials:

- **Block Program Officer (BPO):** BPOs implement and oversee NREGS within their blocks; they are not responsible for implementing any other programs. They report directly to the DDC.
- **Block Accountant:** Block Accountants are responsible for cross-checking wage payment requests by verifying information and calculations from worksite completion reports and worker attendance data, known as muster rolls. They finalize these details on a “Fund Transfer Order” (FTO), which serves as the official request to make payments to workers.
- **Junior Engineers:** Junior Engineers visit NREGS worksites and take measurements of progress on works and completed works. They also provide input to workers and GP-level officials to address incomplete or unsatisfactory work, based on their measurements.
- **Computer Operator:** Block-level Computer Operators manage IT-related work for NREGS at the block, including entering Aadhaar numbers and bank account details into NREGASoft, generating muster rolls, and providing block officials with reports pulled from NREGASoft.

Gram Panchayat Level Officials:

- **Panchayat Rozgar Sevak (PRS):** The PRS is the primary official tasked with implementing NREGS at the local level. PRSes register citizens’ requests for work (known as “demand”); issue muster rolls to formally initiate a workspell; inform potential workers of work opportunities; oversee ongoing works; geotag works as they progress; and input worker attendance into muster rolls (typically through visiting the block office to access a computer).
- **Sarpanch/Mukhiya:** Although not officially supported through NREGS, the elected head of the Gram Panchayat, known as a sarpanch or mukhiya, plays an important role in NREGS implementation at the local level. They help determine who in the community can work for NREGS, and they often coordinate with the PRS to facilitate work and payments.

Currently, the wage payment process is as follows:

Step 1: e-Muster Roll Generation and Attendance. The e-muster roll serves as the official attendance record for all NREGS projects. In advance of the issuance of an e-muster roll and before a NREGS project takes place, the PRS and mukhiya must plan

and secure supplies for the project and identify interested workers. The PRS lists the names of willing workers (who must already have job cards – which confirm households' enrollment in the scheme – and registered bank accounts) on a new e-muster roll in NREGASoft. According to state officials, the e-muster roll is typically issued on the date work begins or a few days thereafter.

The e-muster roll automatically “closes” 14 days after it is issued. After the muster roll closes, the Panchayat Rozgar Sevak (PRS) populates work attendance data for pre-designated workers in NREGASoft. Attendance is usually entered after progress at a worksite has been measured by a Junior Engineer, a member of local block staff. Step 1 is supposed to be completed (i.e. attendance should be inputted) within 2 days of the e-muster roll closure, or T+2 days in program terminology, where “T” refers to the date the muster roll closes.

Here, it is important to note that officials could manipulate on-time payment rates by issuing e-muster rolls after a work project has already started, for example, by letting the initial e-muster expire with zero attendance and issuing a follow-up e-muster at a later date. The fact that worker names cannot be added to e-musters after they have been issued creates another incentive to issue late muster rolls, since interested workers may request work after a project has already started.

Step 2: Measurement Book (MB): In principle, a Junior Engineer measures the work completed once attendance data is submitted; then that progress on work is used to calculate wages owed to workers. This is to ensure that the work has been completed according to the project mandate, and also to measure worksite progress if the work was not finished (e.g., a cattle shed has only been partially built). Step 2 is supposed to be completed within T+5 days.

In reality, however, Step 2 is often done before attendance is input in Step 1. Since the PRS is not physically present at the worksite each day work is taking place, s/he must rely on workers to report attendance. By having the Junior Engineer verify worksite progress, the PRS can make an informed estimate as to whether workers accurately reported their attendance and avoid needing to amend attendance data after a work is measured.

Step 3: Wage List Generation. Once the e-muster roll is submitted and work has been measured, either the PRS (if the GP has a computer and functional Internet) or the Block Computer Operator, with input from the PRS, generates a wage list with workers' names and payment amounts. Step 3 is to be completed within T+6 days.

Step 4: Wage List Sign-Off and Submission. Immediately after generating the Wage List, the PRS/Block Computer Operator sends it to the Block Accountant through the NREGA MIS.

Step 5: FTO Generation. The Block Accountant verifies the wage list, accepts or rejects it, and accordingly issues a “Fund Transfer Order” (FTO) from the NREGA MIS. The FTO serves as the official request for the government to make payments to the workers.

Step 6: First Signature on FTO. The Block Accountant reviews the FTO, provides a first digital signature, and uses the NREGA MIS to send the FTO to the Program Officer for the second signature. Step 6 is to be completed by T+7 days.

Step 7: Second Signature on FTO. The block-level NREGS Program Officer (PO) reviews and provides a second signature to confirm the FTO request. This step marks the completion of what program officials call “Stage 1” of the payments process, and is supposed to be completed in T+8 days.

Step 8: Central Government Receives FTO and Uses PFMS to Send a Sanction Order. Once the central government receives the signed FTOs, the Programme Division (PD) of MoRD creates a sanction order that payment be made from the PFMS.

Step 9: Central PFMS Sends Funds Release Order to Each State’s Sponsor Bank Account. The PFMS issues a release order to the central government’s NREGS account, which orders the requisite funds be transferred to the state’s sponsor bank account. It also sends a file to the state notifying it that the approved funds will be credited to the state account. The information sent to the state provides worker details and is summarized at the bank level so the state can make lump-sum transfers to workers’ banks and validate account details.

Step 10: State Initiates Account Verification and Individual Payment Requests. For payments routed through the Aadhaar Payments Bridge System (APBS), the state sponsor bank then pings the National Payments Corporation of India (NPCI) with a payment request to confirm details associated with a workers’ accounts are correct. If the worker’s account has not been onboarded onto this platform, the state instead queries the worker’s bank directly.

Step 11: For APBS, NPCI verifies payments that should be sent in lump sum to workers’ banks / Payment request is passed along to workers’ banks. Note that payments may be rejected here, e.g. if payment details are incorrect.

Step 12: Workers’ banks process and credit individual amounts. For non-APBS payments, payments may be rejected here, e.g. if payment details are incorrect.

Step 13: Workers’ banks send response file to state account.

Step 14: State account submits response file to PFMS, noting which payments have been processed and which rejected.

Step 15: PFMS Sends Response File to MoRD and Results are Posted Online.

The benchmark duration for steps 8 through 15 is 24 hours, requiring extremely responsive coordination across both the government and banks.

See Figure 8, below, which illustrates the steps in the payment process for Bihar NREGS:

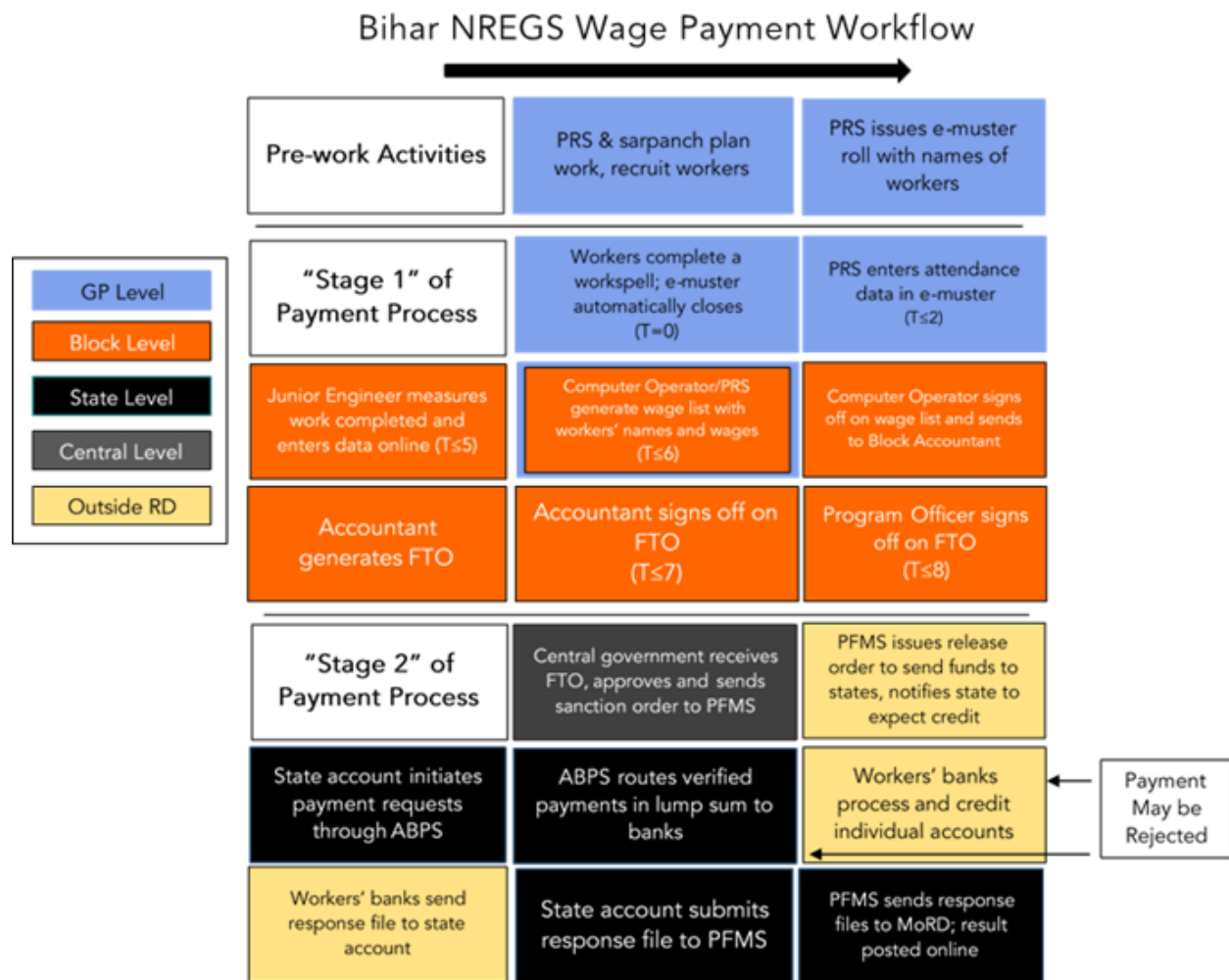
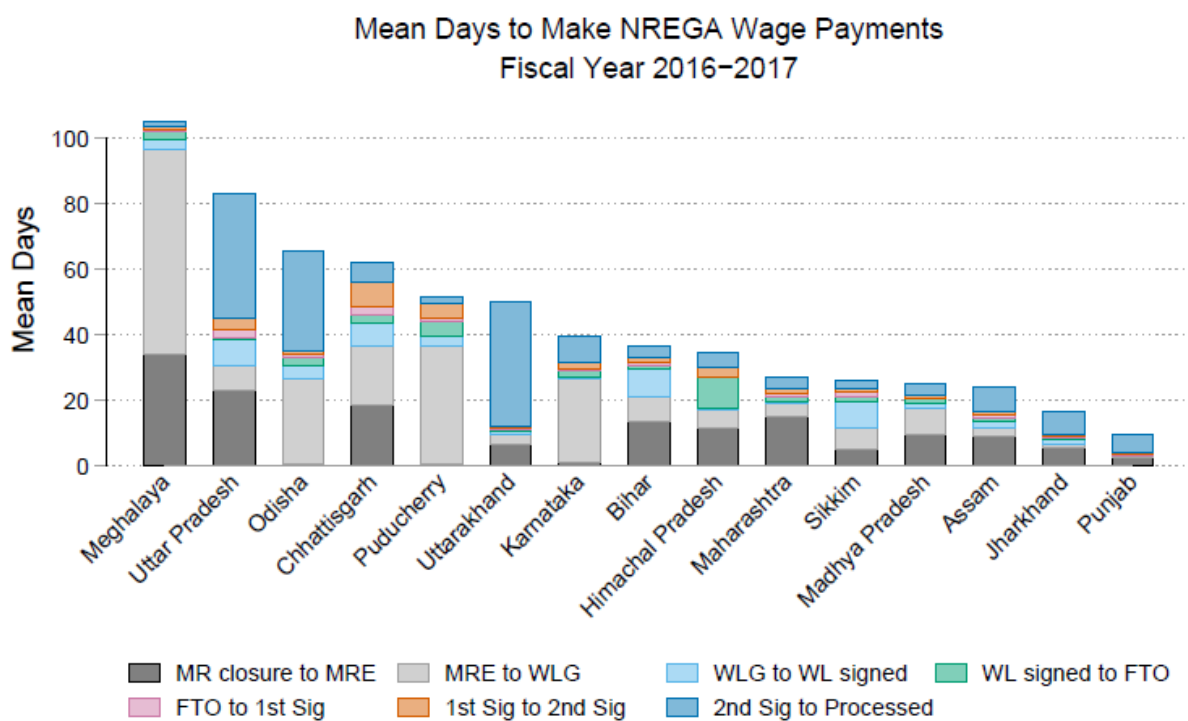


Figure 8. NREGS Wage Payment Workflow in Bihar

PAYMENT DELAYS

Payment delays have been a major focus in Bihar and other states, in part due to recent media attention and investigation by the Supreme Court into cases of wage payment delays.¹³ Workers have a right to payment within 15 days of completing a workspell (i.e. within 15 days of the e-muster roll closing) under current NREGS rules. The most recent detailed data we have on Bihar payments (including sub-steps, as shown in Figure 8, on the previous page) is from the 2016-2017 fiscal year. These data show that workers in Bihar received their wages an average of **40 days** after muster roll closure. Despite these significant delays, Bihar fares in the middle of the pack compared to other states (see Figure 9, below). Encouragingly, more recent data suggest delays that are captured in the digital data flow are on the decline.



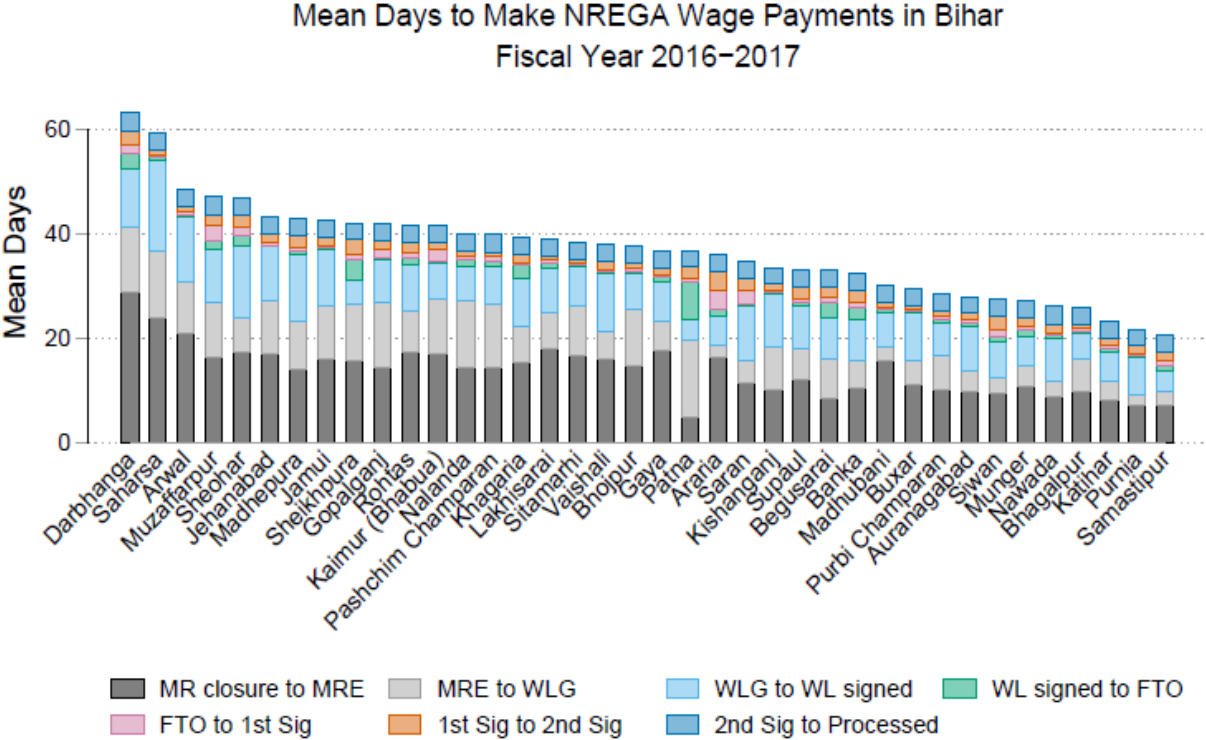
Source: NREGA administrative data for fiscal year '16-'17. MR = muster roll, MRE = MR entry, WL = wage list, WLG = WL generated, FTO = Funds Transfer Order, Sig = Signature.

Figure 9. Mean Days to Make NREGA Wage Payments (2016-2017)

¹³ While other DBT programs struggle to enroll and/or pay beneficiaries on time – see, e.g. Priya (2018) for maternity benefits and Jain et al. (2018) for LPG subsidies – delays appear to be a particularly salient and important problem in NREGS, where timely payment is essential for helping households smooth shocks but complex administrative and payments processes create wide scope for delays.

Time to payment for Bihar districts for the same period suggests districts, on average, paid wages to workers in anywhere between **20 to 60 days**. In Figure 10 (next page), the different colors in the bars highlight the duration of each payment sub-step that is digitally captured. These data suggest that the earliest steps, which require in-field coordination (as described on pages 18-20), take a relatively long time in Bihar.

Note, however, that these data do not fully capture the time to payment to a NREGS worker’s account, as they only cover “stage 1” of the payment process.



Source: NREGA administrative data for fiscal year '16-'17. MR = muster roll, MRE = MR entry, WL = wage list, WLG = WL generated, FTO = Funds Transfer Order, Sig = Signature.

Figure 10. Breakdown of Mean Days to Make NREGA Wage Payments, by Bihar District

The delays leading up to signing of the FTO (“Stage 1” delays) are considered to be under the state’s control, whereas “Stage 2”, which begins after the FTO has been signed off at the state level, is out of the state’s control. State-level policymakers we spoke with expressed they had limited visibility regarding the drivers of Stage 2 delays, and our scoping suggests that Stage 2 delays continue to be a problem.

One important factor here is funding shortfalls. Under the new National Electronic Funds Management System, NeFMS, wage payments are held in an account with the central government and transferred to workers through an intermediary bank account at the state level (the state sponsor bank). RDD officials have noted that the state faces funding

crunches on a regular basis that lead to Stage 2 delays. Specifically, when Bihar's wage payment allocation at the national level is exhausted, pending wage payments are halted. Officials report it takes up to three months for payments to resume again, as this only happens when the federal government adjusts the allotments through an additional budget sanction.

A final source of delay occurs once wages reach individual workers' banks, after money has passed through the state-level intermediary account. At this point, the payments still need to be processed by the workers' banks, and state-level policy makers believe these payments are not always processed in a timely manner (SLBC 2018). Unfortunately, there is no systematic data on delays at this point, making it difficult to quantify the problem's scope and magnitude.

AADHAAR-LINKING AND THE WAGE PAYMENT PROCESS

A major factor that both facilitates and complicates wage payments is Aadhaar-linking. Aadhaar, India's unique identification mechanism, has been rolled out across the country nearly universally since its launch in 2009. A major goal of Aadhaar was to streamline payments individuals received from the government while cutting down on fraud and corruption by ensuring payments were linked to a single biometrically-verified identity.

Within the current NeFMS, there are two ways workers can receive wage payments: through bank account numbers or through "Aadhaar linking". Traditionally, workers were linked to their payments through their bank account number, which was recorded in NREGASoft. However, in recent years the central government has made a push towards so-called "Aadhaar-based payments", where workers' payments are linked through their Aadhaar number.

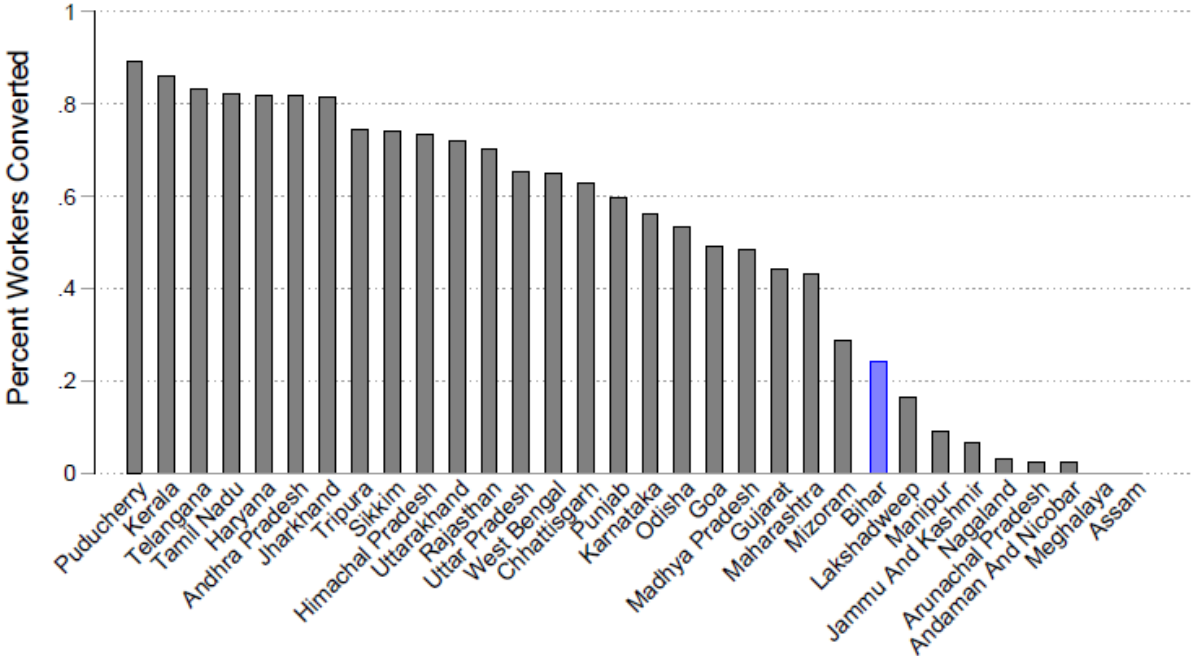
The new Aadhaar based workflow is enabled by the Aadhaar Payment Bridge System (APBS), a secure system that banks use to link Aadhaar numbers to individual bank account numbers. This system allows the government to make payments without holding individual bank account details in its numerous DBT program databases, which is attractive from a database management and security perspective. Instead, programs simply record beneficiaries' Aadhaar numbers. To make payments, DBT programs then connect to APBS to request a certain amount be transferred to the account linked to a given Aadhaar number.

One major potential issue with the APBS is that if someone opens a new bank account and subsequently links that account to their Aadhaar number, the APBS automatically

updates to that new account and transfers all future DBTs there.¹⁴ This practice can generate confusion if individuals who open a new account do not know about this policy.¹⁵ It also limits flexibility in account ownership, since payments from multiple DBT programs can only go into one individual bank account.

More recent controversies surrounding data security and unintended consequences of Aadhaar-linked errors resulted in a recent ruling by the Supreme Court, which states that the government cannot make it mandatory for individuals to link their Aadhaar number to bank accounts to receive government-initiated payments (Singh Chima 2018). While Bihar state officials were previously working towards transitioning all workers to the APBS, the state currently has one of the lowest Aadhaar-linking rates in the country, as shown by Figure 11, below. While 60% of “active” workers have been transitioned to the APBS nationwide (where “active” worker refers to an individual who has worked in the past three complete fiscal years or the current fiscal year), just 23% of active workers in Bihar have been converted to APBS. In light of the recent ruling, the State does not currently require workers to utilize Aadhaar-linked bank accounts. However, the State still

Figure 11. Percentage of Workers Converted to ABPS



Source: NREGA MIS Data: Table R1.1.6

¹⁴ “FAQ: AEPS-Customers.” National Payments Corporation of India (NPCI), <https://www.npci.org.in/faq-type/aeaps-customers>. Accessed January 3, 2019.

¹⁵ For media accounts, see Saleem (2018), India Today Tech (2018), and ET Online (2018).

encourages workers to link their accounts to Aadhaar, since they prefer the streamlined APBS platform to make payments¹⁶.

For more information on how the NREGS payment process has evolved over time, see Appendix: Evolution of NREGS and its Payment Processes.

FINANCIAL INCLUSION POLICY AND REGULATION

ACCOUNT CHOICE AND ACCESSIBILITY

In terms of account choice, the initiative Pradhan Mantri Jan Dhan Yojana (PMJDY) has gone a long way towards ensuring that individuals have access to low-cost basic bank accounts with some benefits. This is reflected in Figure 1 (page 6), which shows that 78 percent of rural Bihari women have their own account.

As mentioned in the previous section, one concern is that funds are sent to the worker's most recently Aadhaar-linked account under APBS. However, in the 2017 FII, just 3% of rural Bihari women who have at least one bank account report having more than one account in their name. Ownership of other accounts, like payments bank accounts (<0.01%) and post office accounts (0.3%), is exceedingly rare. This, coupled with Bihar's relatively low Aadhaar linking rate and indefinite pause on transitioning workers to the APBS, indicates that APBS is unlikely to create confusion (at least for rural women) for the immediate future.

KYC AND EASE OF SIGN UP PROCESS

Under Know Your Customer (KYC) requirements in India, the regulations banks must follow when opening new accounts for customers are low-income friendly. The nature of KYC regulations is intentional: the Reserve Bank of India (RBI) made important modifications to KYC norms in advance of PMJDY, reducing the number of documents required to open an account.¹⁷ After the reform, a single document with photograph, such as an Aadhaar card or an NREGS job card, could serve as proof of identity and address. RBI also introduced a 'grace period' policy that allows individuals to open certain accounts before submitting these documents. Individuals are able to open 'small accounts' at banks with just a photograph and a signature or thumb print collected in the presence of bank

¹⁶ Per conversation with Alok Kumar (Program Executive overseeing Timely Payment), interviewed by Geet Chawla and Vyana McIntyre, Patna, India, December 20, 2018.

¹⁷ For documentation in news reports and the RBI guidelines see Shetty (2014), Mondal (2014), RBI (2016), and Balaji 2017).

staff. Small accounts have limits on deposits, withdrawals, and balances, but also have low fees and are well suited to low-income beneficiaries of programs like NREGS. Individuals must provide full KYC documentation within 12 months; otherwise the account will be closed.

More recently, KYC norms have been in flux. In April 2018 RBI amended these guidelines to effectively make Aadhaar mandatory for KYC processing, however the September 2018 Supreme Court ruling made the mandatory use of Aadhaar unconstitutional (Shetty 2018; Singh Chima 2018). According to media reports, banks are currently awaiting further guidance from RBI regarding KYC provisions and regulations, with current Aadhaar policies varying from bank to bank (Pani 2018).

SECURITY AND DATA PRIVACY PROVISIONS IN PLACE

In an effort to protect privacy, the central government's MoRD has scaled back the amount of personal information available on the public-facing NREGS portal.¹⁸ On the banking side, accounts opened through local banking kiosks called customer service points (CSPs) are typically biometrically authenticated in an effort to reduce bank fraud and unauthorized withdrawals.¹⁹ While we have encountered reports of local officials undermining this system (e.g. a CSP operator or GP official scanning one of his fingerprints in place of a NREGS worker's fingerprint), it is not clear how widespread this type of fraud is. Given the ongoing uncertainty in the aftermath of the recent Supreme Court Aadhaar ruling, security and data privacy provisions relevant to financial inclusion and the DBT payment architecture may continue to evolve.

NETWORK RELIABILITY AND INFRASTRUCTURE

MOBILE AND INTERNET NETWORK COVERAGE

In general, our research suggests that internet and mobile connectivity are not a top-priority barrier to women's access to NREGS in Bihar.

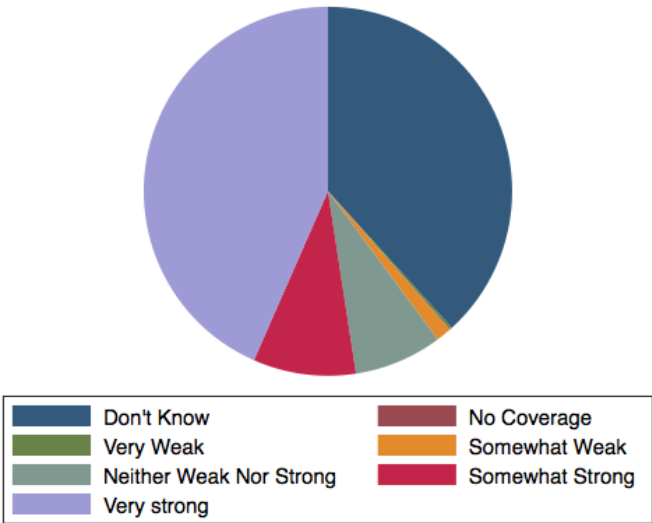
¹⁸ Details like bank account numbers used to be posted on the website, but are no longer available. Other personal information, like job card numbers and the list of individuals on a given job card, as well as individual work histories under NREGS, remain publicly available. Here, the program must tread a line between transparency and protecting privacy.

¹⁹ Biometric authentication is typically not required when transacting at formal bank branches and ATMs – however CSPs have a much larger footprint relative to these other outlets in rural areas.

To give a sense of connectivity quality, we use the 2017 Financial Inclusion Insights (FII) survey, which asks individuals to rate coverage quality of 14 different mobile networks. By limiting our sample to rural individuals in Bihar who own a phone (and therefore presumably have a clear way to assess coverage quality), we are able to begin painting a picture of network connectivity (see Figure 12, below).

While a remarkably high 38% of phone owners report that they don't know the quality of any provider's signal, those who do report this information are relatively satisfied, with 43% of respondents reporting a very strong signal and another 9% of respondents reporting a somewhat strong signal. One worry is that individuals without network coverage will not own phones, biasing reports of network quality upwards. While this is undoubtedly a concern, note that 90% of rural households report owning a phone in the 2017 FII – this suggests that scope for this bias is limited.

It is worth noting, however, that the FII does not ask respondents to assess the strength of higher-speed data networks, which are critical for financial service providers (FSPs) and other actors using mobile hotspots. Indeed, our qualitative work suggests that Internet and mobile networks appear to be a bigger constraint for government and FSP operations. At the local level, the state of the mobile network is of paramount importance, as both government workers and financial service-affiliated workers rely on mobile “hotspot” connections to access the internet.



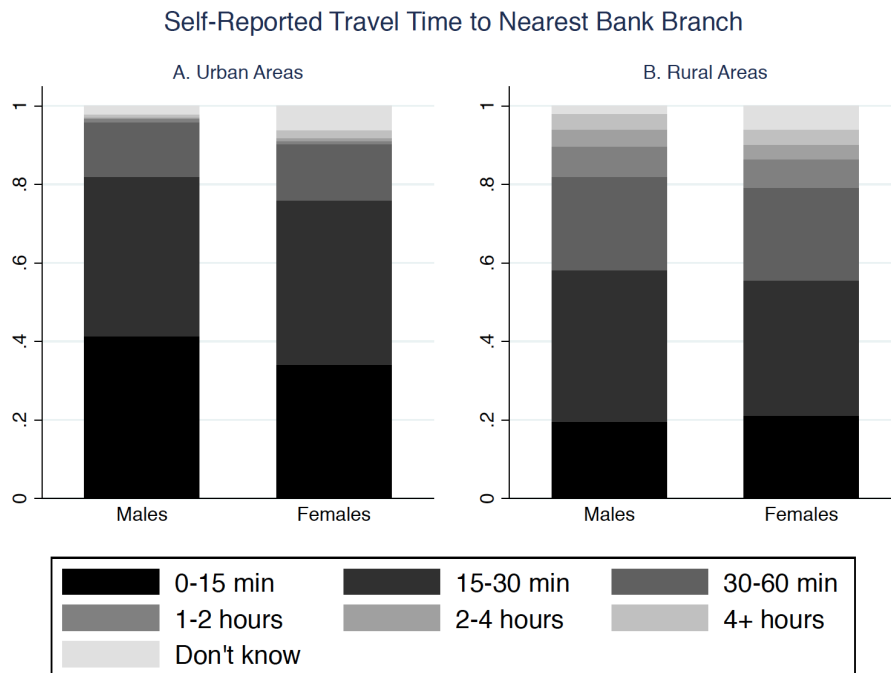
Source: 2017 FII.

Figure 12. Self-Reported Mobile Coverage Quality Among Rural Phone Owners

According to RDD officials, NREGS staff in block offices often need to access large files over the Internet and can find connectivity to be a challenge. Further, findings from our fieldwork point to server quality as a potential stumbling block for CSPs. The banking server for CSPs is specially-designed for CSPs and is different from the banking server of a normal bank branch. Since all CSP banking transactions depend on this server, its failure creates major disruptions for CSP account holders. In our scoping work, CSPs reported that this happens roughly once a week.

PAYMENT SYSTEMS INFRASTRUCURE

India has an impressive payments infrastructure in place, including deep penetration of local access points, though gaps still exist. According to the 2017 FII survey, just short of 50% of individuals in rural areas report that it would take them 30 minutes or less to travel to the nearest bank branch, while 80% report a travel time of one hour or less (See Panel B of Figure 13).



Source: 2017 FII Survey.

Figure 13. Self-Reported Travel Time to Nearest Bank Branch (Urban vs. Rural) Comparing Panels A and B of the figure make it clear that access is much better in urban areas, where roughly 80% of individuals can access a bank in 30 minutes or less.

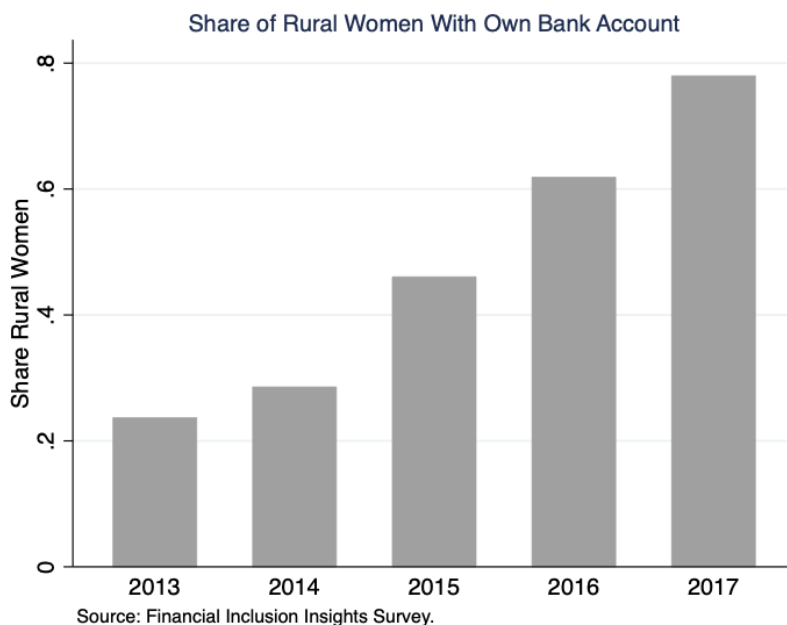


Figure 14. Share of Rural Women with Their Own Bank Account

Importantly, the Indian government is committed to financial inclusion across the socioeconomic spectrum, most obviously through PMJDY and through the approval of several payment banks licenses that will allow non-traditional operators to undertake select financial transactions.²⁰ While payment banks have yet to make major headway in rural areas, the effects of PMJDY are readily apparent when examining time trends in female

²⁰ Reserve Bank of India (RBI). *Guidelines for Licensing of "Payments Banks"*. November 27, 2014.

account ownership. Figure 14 graphs the share of rural Bihari women who report owning their own bank account between 2013 and 2017. The trajectory is remarkable: while just 24% of women had their own account in 2013, nearly 80% reported owning an account in 2017.

More recently, in 2017 the RBI mandated that 25% of new banking outlets opened by commercial banks must be in unbanked rural locations (IANS 2017, RBI 2017). We expect this mandate will support India's continued upward trajectory in terms of access to basic banking infrastructure. Here, it is critical for banks, the government, and regulators to commit to ensuring both access and *quality*, since this can be an important stumbling block once an outlet is in place.

INTEROPERABILITY

Interoperability is one of several factors that influence service quality. Here, India has taken some promising steps, but more needs to be done. Our fieldwork indicates that individuals are able to access their accounts across the network of their 'home bank', however cross-bank access is more constrained. Debit cards, such as the RuPay debit card associated with PMJDY accounts²¹, can be used at ATMs and point of service (PoS) machines throughout India. However, non-ATM / PoS inter-bank withdrawals and deposits cannot be made from bank branches. More broadly, while a 2012 RBI ruling technically permits cross-bank transfers, they are difficult to conduct in practice. Additional cooperation across banks, and a commitment to installing the necessary infrastructure to enable cross-bank transactions (e.g. MicroATMs that support these transactions) is needed to make further progress in this domain.

ID SYSTEMS TO FACILITATE PROGRAM MANAGEMENT AND PAYMENTS

As mentioned earlier, the role of Aadhaar in the DBT system is in flux. The latest NREGS operational guidelines offer conflicting advice regarding Aadhaar linking: while the guidelines state that it is mandatory for NREGS workers to register with Aadhaar, it is not mandatory to have one's Aadhaar number seeded in NREGASoft, which enables APBS. Nevertheless, the Aadhaar-based system is at the forefront of identification systems and will likely continue as the primary identification system for the foreseeable future in India.

MOBILE PHONE NETWORKS AND PENETRATION

According to the 2017 FII, 90% of rural Indian households have a mobile phone. However, rates of ownership (and use) are substantially higher among men as compared to women,

²¹ According to PMJDY's online dashboard, 84% of all (rural and urban) PMJDY beneficiaries were issued a RuPay card.

with 73% and 38% of rural men and women (aged 15 and over) respectively reporting that they personally own a phone. Bihar has a comparable rate of household access but somewhat better gender parity: while 70% of adult men own a phone, 49% of adult women own a phone, placing Bihar above the national average.

Also, as previously discussed in the “Mobile and Internet Network Coverage” section, mobile networks appear to be adequate: we found this both in our fieldwork, which corroborates evidence from the 2017 FII, where rural individuals who were able to report on network connectivity reported having access to fairly strong signals. As previously noted, this does not, however, tell us whether high speed data networks (e.g. 3G and higher) adequately cover rural areas.

2.2 DIGITIZE

RELIABILITY

PAYMENT TIMING & DELAYS

As previously discussed in the “Payment Delays” section (see page 21), wage payment delays are a key challenge for NREGS. Moreover, progress on delays is mixed. While Bihar, and India as a whole, have made Stage 1 delays a priority to good effect, Stage 2 delays continue to be a problem – and the official payment data may not fully capture the time to payment from a worker’s perspective.²²

Although delayed payment reports are available on the NREGS website, only Stage 1 delays are included in these reports. Official statistics suggest 59% of payments were delayed in FY 2017-2018 in Bihar.²³ There was tremendous variability across districts however, with the rate of on-time payments ranging from 0% (Purbi Champaran) to 93% (Buxar). Previously, FTOs sent from the state to the center within 15 days of muster roll closure were considered ‘on time’. However, according to the new guidelines, FTOs should now be sent from the State to the center within 8 days to be considered on time.²⁴ RDD officials reported the state currently issues 37% of FTOs within the allowed timeline for Stage 1 payments (within 8 days of the muster roll closing); 88% of FTOs are issued in under 15 days, substantially better than in previous fiscal years.²⁵ Importantly, this statistic does not tell us the actual time to pay workers, which is necessarily longer.

One important limitation of the official on-time payment measure is that it does not track the full time to payment. As Narayanan et al. (2017) and Narayanan et al. (2018) document, delays beyond the well-tracked Stage 1 component of the payment process are substantial. In contrast to official statistics from MoRD, Narayanan et al. (2018) calculate that 20% of payments in Bihar were completed in 15 days in the first two

²² Recall that Stage 1 is the time from e-muster closure to when the funds transfer order is sent to the central government – this is the part of the payments process the state has control over. Stage 2 starts at the end of Stage 1 and lasts until the worker receives his or her wages.

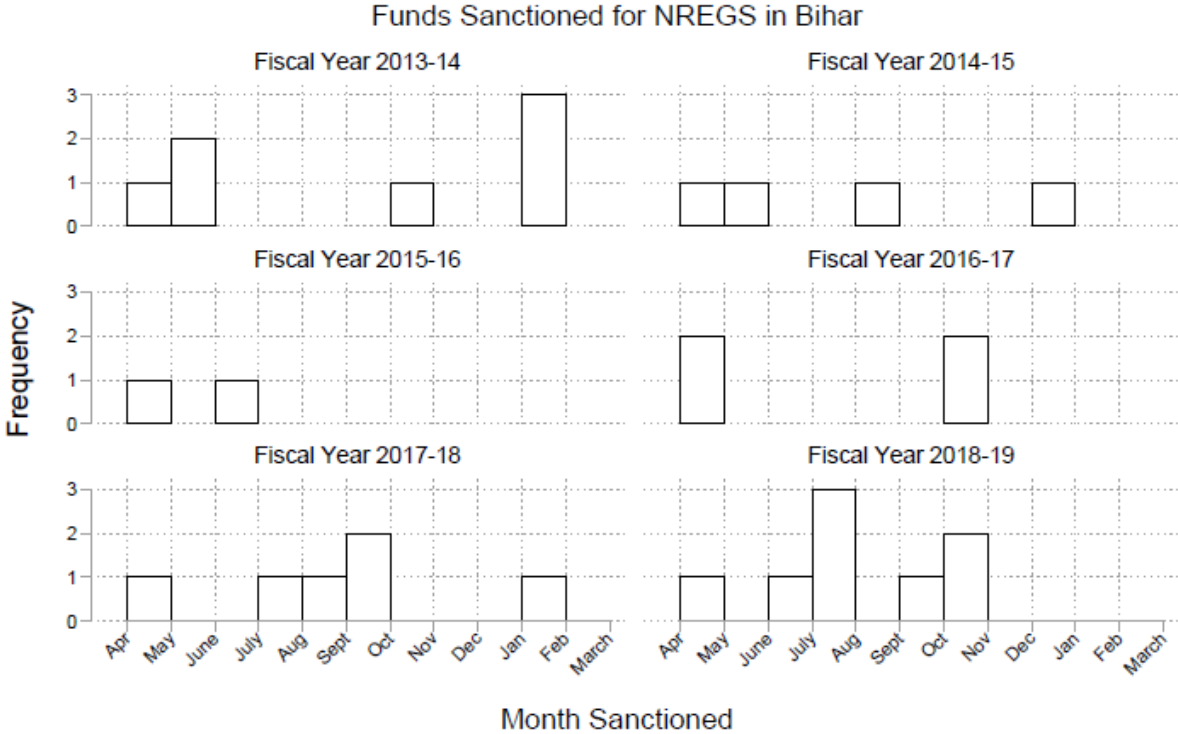
²³ Government of India: Ministry of Rural Development MIS. *R14.4 Status of Timely Payment Monitoring System (2017-2018)*. http://mnregaweb4.nic.in/netnrega/Paymentstatus.aspx?lflag=eng&fin_year=2017-2018&source=national&labels=labels&Digest=cT/J7ChEq5LOfEr0AmsuAQ. Accessed December 15, 2018.

²⁴ Mr. C.P. Khanduja (Director, MGNREGS, RDD, Government of Bihar) and Rajendra Pathak (State Program Officer, RDD, Government of Bihar), interviewed by Charity Troyer Moore, Geet Chawla, and Vyana McIntyre, Patna, India, November 20, 2018.

²⁵ Government of India: Ministry of Rural Development MIS. *R14.4 Status of Timely Payment Monitoring System (2018-2019)*. http://mnregaweb4.nic.in/netnrega/Paymentstatus.aspx?lflag=eng&fin_year=2018-2019&source=national&labels=labels&Digest=2sK2jsi9G7FHeqD/Cv4G1Q. Accessed December 15, 2018.

quarters of fiscal year 2017-2018. Another 26% of payments had FTOs issued within 15 days, but payments were not made within 15 days. The remaining 54% of payments did not even have an FTO issued in 15 days. In light of this, the central government should be more accountable for Stage 2 delays and the state government should have more visibility into Stage 2 delays, particularly as presented on the MIS.

After allegations in 2017 that delays in the Stage 2 component of payments were under-reported by the MoRD, the Ministry of Finance’s Department of Expenditure reviewed the delays, and agreed with these reports. While the Department of Expenditure crafted some recommendations to address payment delays associated with funding shortfalls from the central government, media reports indicate they have not been taken up (The Wire 2017). Critically, the transition to NeFMS actually empowers the centre to withhold wages (if a state has overrun its NREGS budget, for example) or reject FTOs. Specifically, prior to NeFMS, states could easily make wage payments out of their own funds while awaiting “top-up” funds from the central government. This is more difficult to do under NeFMS, where wage payments are channeled directly from the central government to workers (Newslick Report 2018).



Source: NREGS Sanction Data, compiled by authors from sanction letters on NREGA MIS

Figure 15. Funds Sanctioned for NREGA in Bihar

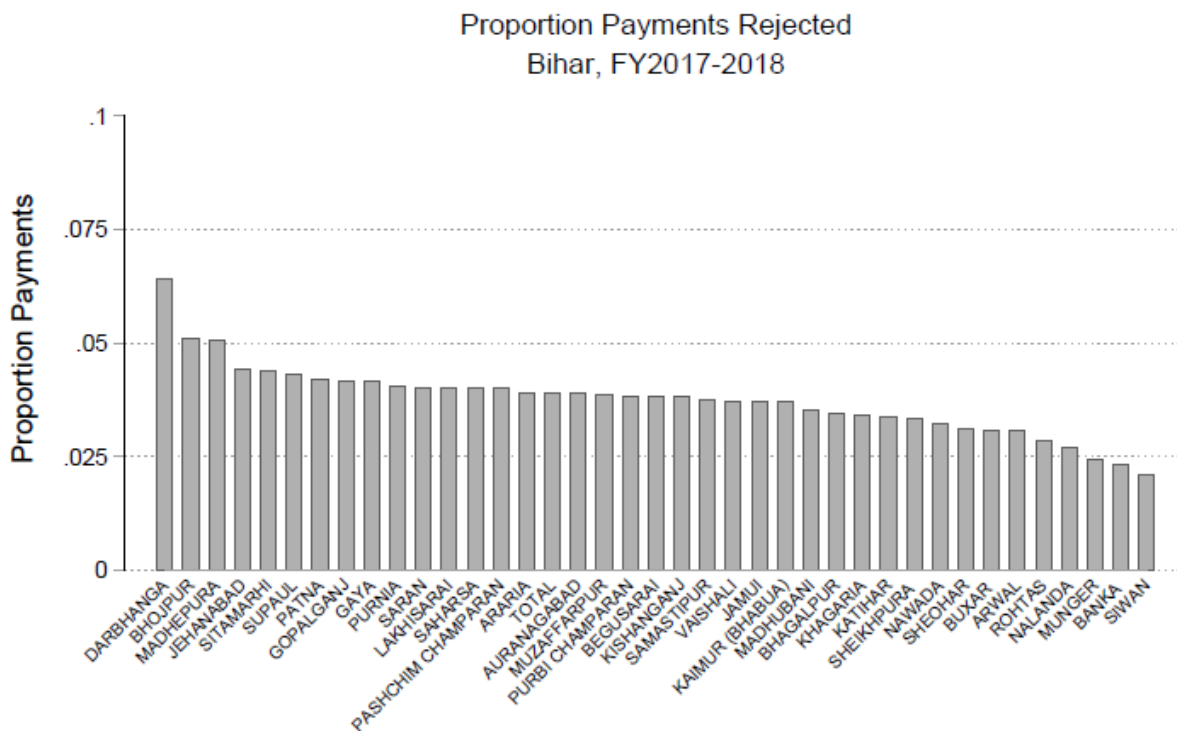
Administrative data on the frequency of “sanction orders” issuing additional funds be given to NREGS in Bihar suggests the scheme has grown increasingly shorter on cash, which in turn suggests an elevated risk of Stage 2 delays: Figure 15, above, plots the number of times sanctions orders were made for Bihar, by month, for each fiscal year

from 2013-14 onward. The relatively frequent sanctions for Bihar throughout the 2017-18 and 2018-19 (to date) fiscal years suggests the state’s concerns about running short of funds, and then waiting to receive funds to pay pending bills, has been a particularly relevant one over the past two years.

REJECTED PAYMENTS & TRANSITION TO AADHAAR-LINKING

Another major concern officials frequently raise with the current system is the rate of rejected payments, especially with the transition to Aadhaar-based payments. For accounts that are Aadhaar-linked, the Aadhaar number is the bridge that connects a NREGS worker’s job card to their bank account. The concern here is that if this link breaks – for example, due to data entry errors – then payments will be rejected after an FTO is issued. For those not linked to Aadhaar, payments can still be rejected for a variety of reasons.

Dealing with a rejected payment is likely difficult for any NREGS worker, who must work with a local official to address the cause of the delay. Given some women’s mobility constraints and local norms that make interactions with males more difficult, it is likely that both finding out about, and addressing, a rejected payment may be more onerous for women than for men, particularly if rectifying the rejection requires coordination with multiple officials.



Source: NREGA MIS Table 8.1.1

Figure 16. Proportion of Payments Rejected, by Bihar District (2017-2018)

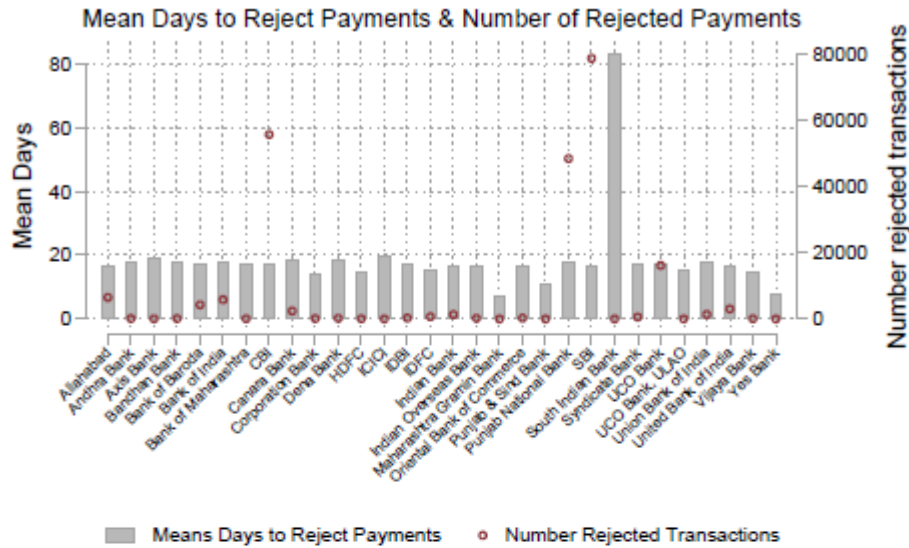


Figure 17. Mean Days to Reject Payments & Number of Rejected Payments

Although rejected payments are frequently mentioned as a problem that can delay payments, our review of NREGS administrative data suggests that while a large number of transactions are rejected (226,757 so far in the current fiscal year to date), the relative proportion of all transactions is relatively small: 3.9% of all transactions for Bihar for the 2017-2018 fiscal year, and 3.4% for the current fiscal year to date. Figure 16 (previous page) suggests that while some districts have higher rejection rates than others, rejections are not necessarily concentrated in a few select localities. The corresponding figures for the current fiscal year to date is quite similar.

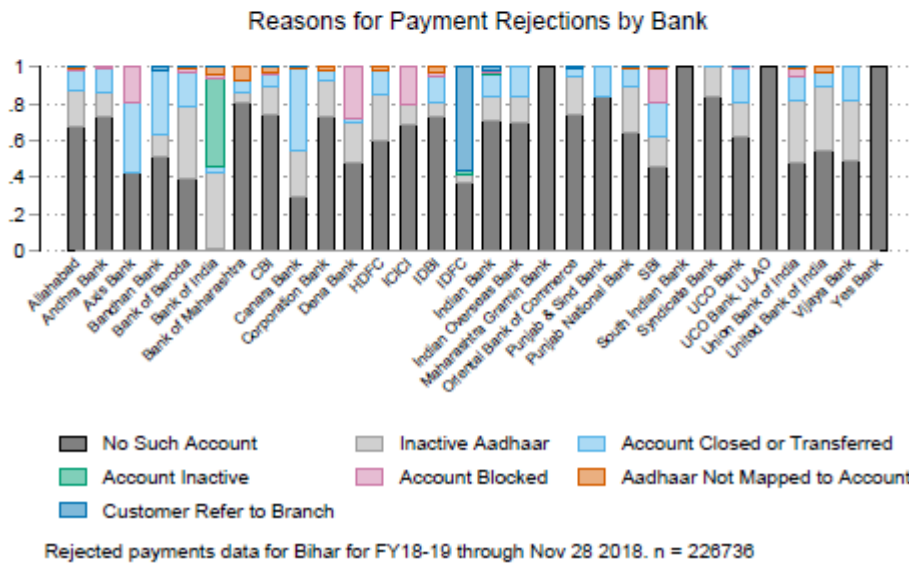


Figure 17. Breakdown of Reasons for Payment Rejections by Bank

There is more variation across both districts (not shown here) and banks for the reasons they reject transactions, numbers of transactions rejected, and time taken to reject transactions. Figure 17, above, analyzes administrative data we scraped from NREGASoft for the 2017-2018 fiscal year through November 28, 2018. The bars in the top figure show that, outside of the very delayed South Indian Bank, banks take an average of 10 to 20 days to reject a transaction after the transaction is submitted for processing. This in itself is a long time to wait given the expected processing timeline for

Stage 2 of payments is 1 day. The markers in that same figure plot the corresponding number of transactions rejected over the same time period, and suggest that the banks with relatively higher numbers of rejected payments tend to reject payments within a period in line with most other banks.

Figure 18, on the previous page, provides more information on the reasons that payments are rejected by banks. It suggests account entry errors, described as “No Such Account”, are the leading cause of delays for most banks, although there is substantial variation in the relatively frequency of rejection reasons across banks. Other common reasons for rejections include inactive Aadhaar numbers, and closed or transferred accounts. Of the banks with the most rejections (SBI, CBI and Punjab National Bank, commonly present in rural Bihar), SBI also rejects a substantial proportion of payments by noting the account is blocked.

Anecdotally, there is also concern about the Aadhaar transition increasing the rate of diverted payments (Dreze 2018). This may occur because: (a) workers are paid into newly linked accounts and are not aware the linked account has changed, (b) accounts are linked to the wrong Aadhaar number and payments go to the wrong individual due to data entry errors, or (c) payments are sent into “dormant” accounts that workers cannot access.²⁶ Given Bihari women’s low levels of literacy and social exclusion, they may be particularly poorly-positioned to navigate these challenges.

PAYMENT / TRANSFER AMOUNT

At the time of writing, the official NREGS wage in Bihar is Rs. 177 per day.²⁷ The national government covers Rs. 168 per day of the NREGS wage, while the state contributes an additional Rs. 9 per day. If a household were to work the maximum entitlement allotted in a given year, it would earn Rs. 16,800 (\$238).²⁸ By way of comparison, the inflation-adjusted rural poverty line for Bihar is roughly Rs. 15,585 per person per year.²⁹ Thus NREGS represents a substantial transfer assuming: (1) households can actually receive work when they need it, and (2) workers receive the wages due to them.³⁰

²⁶ After 24 months of no user-driven transactions, accounts are classified as “dormant” and require an in-person trip to the bank, identity verification, and paperwork to reactivate.

²⁷ The wage rate may not reflect what workers are ultimately paid each day, since actual wages depend on the Junior Engineers’ measurement of work progress.

²⁸ This uses the exchange rate of Rs. 70.46 per USD, posted on January 10, 2019.

²⁹ To calculate this, we adjust the 2011-2012 suggested rural poverty line for Bihar in the Rangarajan report to the planning commission of India (Rs 971.28) for inflation from Jan 2011 to Jan 2018.

³⁰ In practice, workers sometimes report receiving wages lower than the specified rate, and sometimes significantly higher than the daily wage rate. These deviations likely reflect local-level deviation from official rules (to pay higher than normal wages in an effort to attract workers), corruption (when local

Note that the official NREGS wage is lower than the official state minimum wage (Rs. 254 at the time of writing).³¹ While low wages are one way of ensuring that only the neediest ‘self-select’ into the program, wages that are too low may discourage work and contribute to certain forms of corruption. It is also important to keep in mind that official minimum wages may not be relevant for many potential NREGS beneficiaries, who – if they work in the private sector – do so as casual farm laborers where wages are set by local markets, rather than official wages. In our qualitative interviews, women reported that the casual agricultural wage was Rs. 100-150, while men reported earning wages around Rs. 200-300. Taken against this metric, the official NREGS wage is not terribly far off the market wage and presents an especially attractive opportunity for women. Incentives for men to participate are weaker.

“DEMAND” DRIVEN?

In principle, NREGS is meant to be demand-driven, meaning individuals can request work when they need it (typically in the lean agricultural season). Insights from our scoping work suggest that this is not the case on the ground: most women we spoke with had never requested NREGS work and did not know how to request work if they wanted it. Further, work demand processes are such that rural Biharis must make the request through their local elected sarpanch or the PRS. The few women we met who had requested work (with support from Cluster Facilitation Team officials, more below) found their requests unmet or extremely delayed. At odds with the spirit of the act underpinning NREGS, the program seems more supply driven, in that GP-level leadership, sometimes in conjunction with local contractors, determine when projects will take place and who will do the work. Inasmuch as women are less closely linked to GP leaders, who are largely male, these access issues are likely to be exacerbated.

NETWORK RELIABILITY

Many rural men and women hold accounts at CSPs. CSPs are overseen by Business Correspondent (BC) companies, which contract with brick-and-mortar banks to set up kiosks in a given area with limited banking access points in the name of the larger bank. According to the latest data from Bihar’s State Level Bankers’ Committee, there are 17,141 CSPs in Bihar, compared to 7,059 bank branches (of which just 3,551 are located

officials take a cut of money from workers, either with or without the workers’ knowledge), and/or differences in progress on work as measured by local officials.

³¹ Department of Labour. *Notification: Schedule-II*. Patna: Government of Bihar. March 28, 2018. <http://labour.bih.nic.in/Files/Circulars/CN-01-28-03-2018.pdf>. Accessed December 15, 2018.

in rural areas) and 6,676 ATM machines (of which 1,498 are rural).³² Thus, CSPs are a critical part of the rural banking infrastructure.

The great advantage of CSPs is that they are located close to villagers' homes: according to 2017 FII data, 57% of rural individuals report that a banking outlet is located within 1 kilometer of their home, while 80% report there is a banking outlet within 5 kilometers of their home.

There are several important factors impacting the reliability of the banking network, and particularly CSPs. They include:

- *Reliability of the CSP operator him/herself*: Most CSPs are staffed by a single person, and if this person is absent, the CSP is closed. In our qualitative interviews, several informants have also flagged CSP trustworthiness as an issue. The problem of CSP misbehavior (e.g. demanding fees to perform transactions that are meant to be free) has also been flagged by the State Level Bankers' Committee (SLBC 2018).
- *Reliability of the cellular network* that supports the CSP's PoS machines. Roughly half of the CSP operators we interviewed mentioned network reliability constraints, which are sometimes so severe they cause CSP operators to temporarily close or relocate their operation. Please refer to the "Mobile and Internet Network Coverage" of the Core System Enablers section for additional detail on this issue.
- *Liquidity management* to ensure individuals can withdraw cash. We did not find this to be an issue in the field.
- *Reliability of broader banking network/servers*: Issues with banking servers was flagged by several stakeholders throughout our qualitative interviews.

Here, our findings are broadly consistent with a detailed review by MicroSave and the Small Industries Development Bank of India (Microsave and SIDBI 2014). This report contains a number of well thought-out recommendations for how to strengthen the CSP model in Bihar, including ensuring agents' commission structures are sustainable, standardizing client and CSP protection systems, and improving operational and monitoring systems. Moreover, ongoing efforts by the Reserve Bank of India and the Indian Banks' Association to develop a CSP registry and standardized certification program for CSPs should improve the quality of CSPs (RBI 2017; RBI 2018b).

³² Current as of September 30, 2018. CSP details retrieved from <http://slbcbihar.com/banking-outlet-bcs.aspx>, branch and ATM details retrieved from <http://slbcbihar.com/BranchNetwork.htm>. Accessed January 14, 2019.

SYSTEM RELIABILITY

As previously noted, NREGS payment delays and funds flow are an important challenge for Bihar, and India as a whole. These issues, including factors driving payment delays and mis-routing of payments e.g. due to Aadhaar linkage, have been discussed at length earlier in the report (see Core System Enablers: Aadhaar-Linking and the Wage Payment Process).

Another major challenge is that the software systems supporting NREGS and its payment architecture are complex and rapidly changing. Overhauling standard operating procedures every year or two can make it difficult for local-level staff to keep up, as they often have limited human capital, training, and bandwidth. Transitions to new systems can also introduce new problems, such as confusion regarding rejected payments (and more broadly, where payments are directed) during the transition to Aadhaar based payments. In sum, increased transparency, accountability, and simplicity are needed to improve the systems supporting NREGS.

COMMUNICATION RELIABILITY

Communication is a major pain point for the program, particularly in light of the rapid evolution of the rules and regulations regarding payments mentioned above. Furthermore, our research suggests that quality of communication deteriorates as one moves down the levels from state to district to block to GP to worker.

Consider, for example, the case of the transition to Aadhaar-based payments: official guidelines state that Aadhaar seeding is *not* mandatory to receive benefits, and that each potential worker should have the process explained to them. Only after filling out and signing a consent form is linking to Aadhaar to take place. In contrast to official rules, our conversations with local-level (e.g. block and below) NREGS officials suggest that officials think seeding *is* mandatory. Beyond this, anecdotal reports suggest that many individuals were seeded without their knowledge and without providing informed consent, and that workers do not understand what account wages will be paid into (Dreze 2018).

More broadly, a clear takeaway from our qualitative interviews is that potential NREGS workers have very poor information about the program – especially women. This issue arises at every level: from how to request work, how work is distributed to potential workers in the village (particularly as the stigma against women working in some communities has led sarpanches not to hire women), to entitlements at the worksite, to wages and payments, to grievance redressal.

In many ways, NREGS is a very transparent program: its website contains individual-level payment records, scores of performance reports, and archives of program

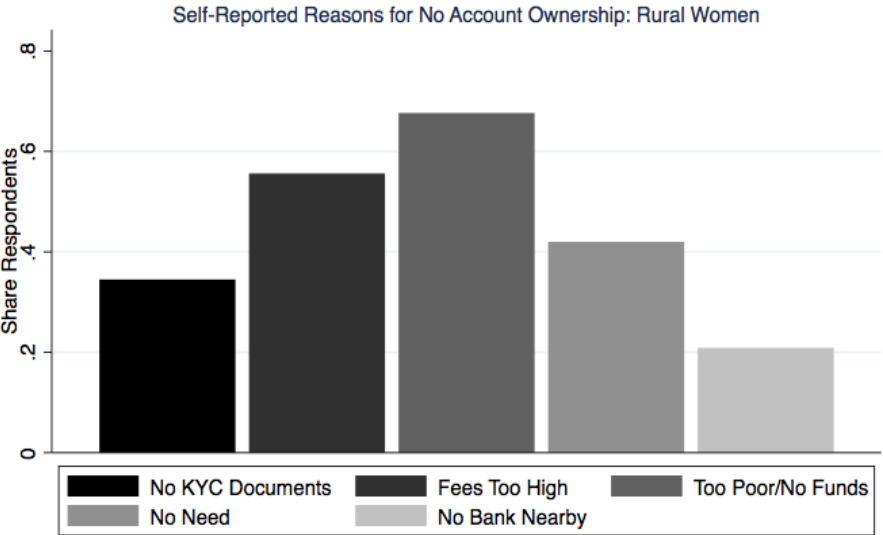
documentation. But this information is typically not accessible to workers who live in rural areas with limited internet connectivity, literacy, and awareness that it exists.

Key information is not simply difficult for workers to access – it is also difficult for government officials. Simply reducing the time and effort it takes to access some of the data stored in NREGASoft can have high-returns. The PayDash app, created by some members of this research team with the MoRD, pulls and repackages NREGS administrative data to provide officers with real-time details on payment processing and delays in locations for which they are responsible. An ongoing randomized control trial in Madhya Pradesh and Jharkhand finds that simply providing this information in a readily accessible and actionable format has reduced the time it takes to complete initial field and block-based payment steps by nearly 30%³³ for districts with high payment delays at the outset of the study. Officers achieve these gains through accessing the app for just a few minutes a month, suggesting there are significant efficiency gains to be achieved through better leveraging the rich data captured by NREGS workers on a daily basis (Dodge et al. 2018).

ACCESSIBILITY

OVERVIEW

As mentioned earlier, Bihar has made great strides in terms of banking women in recent years. Still, 21% of rural Bihari women lacked an individual or joint bank account according to the 2017 FII. Figure 19, right, analyzes self-reported reasons for no bank account ownership among rural women in Bihar in the same survey. Here, we see



Source: 2017 FII.

Figure 18. Reasons for No Account Ownership (Rural Women)

³³ Of the mean time it takes in control areas for the same steps.

that perceived lack of income and high fees are the most common responses. The latter is somewhat surprising, given that PMJDY accounts are not supposed to have any fees. Similarly, 34% of women cite lack of identifying/KYC documents as a constraint, despite the fact that 96% of rural women have an Aadhaar card, which offers sufficient documentation to open a basic account. These responses could reflect the fact that the financial services landscape has changed rapidly in India over the past few years, and marginalized women may be slow to learn of improvements in the product space or changes in regulatory requirements.³⁴

ACCESS TO DISTRIBUTION POINTS AND FINANCIAL SERVICE PROVIDERS (FSPs)

As discussed earlier (under “Core System Enablers: Financial Inclusion Policy and Regulation”), India performs relatively well here, given its massive financial inclusion efforts. It is therefore unsurprising that bank proximity is the least-cited reason for not opening an account.

Despite this, there are still ways access can be improved: in scoping interviews, many individuals complained about long lines at bank branches, mentioning that going to the bank was often a half or full day affair, particularly when travel was required. There are also gender-specific challenges: as Figure 1 makes clear, Bihar has one of the lowest female literacy rates in India, with just 46% of women aged 15-49 able to read and write according to the 2015-2016 NFHS; beyond this, women also often face mobility restrictions.

In addition to this, banks are typically male-dominated spaces, which are perceived as unwelcoming to women, and women often do not have full autonomy over how to operate their accounts: in the 2017 FII, 30% of banked rural women stated that their family members are “very involved” in the operation of their account, with another 32% reporting family members are “somewhat involved”.

Importantly, the Bihar Rural Livelihoods Project (locally known as JEEViKA) is operating two promising initiatives to address these issues.³⁵ The first is the bank mitra program (“mitra” translates to “friend” in English). The mitras are educated local women who provide assistance – reading forms, filling out forms, and assisting with transactions – for

³⁴ This could also reflect CSP misbehavior, e.g. requesting payment for services that are meant to be free. See “Core System Enablers: Payment Systems Infrastructure” for a discussion of this issue.

³⁵ JEEViKA’s aim is to promote social and economic development in rural Bihar. The cornerstone of the JEEViKA approach lies in the organization and support of women’s self help groups (SHGs), which are connected to banks, save as a group, and become eligible for loans to support income generating activities. The SHG is meant to be a conduit for a wide range of other services, including skills training, information provision, and community advocacy.

other women visiting the bank. They prioritize supporting transactions related to SHGs at banking points, although qualitative work suggests they are willing to assist non-SHG members as time allows. JEEViKA currently supports approximately 2,500 bank mitras working across Bihar.

JEEViKA is also training “bank sakhis”, who are essentially female CSP operators. These women work at a higher level than the mitras and are responsible for operating local CSPs. There are currently around 300 bank sakhis in Bihar, and JEEViKA aims to have 400 sakhis by the end of March 2019 (the end of the current fiscal year)³⁶.

CAN BENEFICIARY NOMINATE PROXY?

In India, only authorized users can access a bank account, which makes nominating a proxy difficult. One way workers can nominate a proxy is to designate a joint account to receive NREGS payments, but this strategy would not fall in line with the government’s support for making payments into individual, rather than joint, accounts in NREGS. The research our team undertook in northern Madhya Pradesh suggests this policy benefits women in a variety of ways (Field et al. 2016).

PRODUCT AFFORDABILITY

India scores highly here: as mentioned above, all Indians should be able to access low-cost “small” bank accounts that have no deposit or withdrawal fees, no maintenance fees, and no minimum balances (the aforementioned PMJDY accounts fall in this class). These accounts also have simplified KYC requirements (for more details see “Core System Enablers: Financial Inclusion Policy and Regulation”).

TIME AND TRANSPORT

Given its CSP network, India scores relatively well here (recall Figure 13 on page 28), though there is room for improvement. There are two areas to focus on: (1) reducing congestion at heavily-trafficked banking outlets, and (2) growing the CSP network to reduce travel/transport costs for women who live in remote areas. It bears mentioning that our fieldwork uncovered multiple instances where CSPs were located in very close proximity to bank branches, sometimes in the same village – a finding that runs counter to the main aim of the CSP model, which is to expand the banking network. Although banks typically mandate where a CSP can be located, and how far away they must be from a branch, given that CSPs are directly managed by Business Correspondents (BCs)

³⁶ Personal communication with Mr. Mukesh, Program Coordinator - Financial Inclusion, JEEViKA. 9th January, 2019

and not the banks themselves, these rules may not always be enforced, or operators may work around loopholes.

In the future, rural citizens' access to banking networks may be less reliant on CSPs. The government's recent approvals of licenses for payment banks will increase access to local cash-out points that can be used to access DBTs – however, it is not yet clear how successful this business model will be or how widely payments banks will scale, especially in rural areas.³⁷

FLEXIBILITY

TIMING OF PAYMENT ADAPTING TO HOUSEHOLD NEEDS

In principle, NREGS is well designed in this regard: work is meant to be demand-driven, meaning that women and their families can request work when they need it. Further, wage payments are supposed to be delivered within 15 days of completing a workspell, meaning that funds should arrive in time to address many immediate economic needs. As described above, the program fails to live up to both these promises. The first issue is that work schedules rarely respond directly to beneficiary requests. Works are, however, most common in the lean season when other agricultural work opportunities are limited. The second issue is timeliness of payments, which has already been discussed in detail. A related challenge is that delays make payments *unpredictable*, which makes it even more difficult for beneficiaries to rely on NREGS to smooth unexpected economic shocks.

CAN WOMEN WITHDRAW FUNDS WHEN THEY LIKE?

Wage payments are sent to fully functional bank or post office accounts. Thus, women typically have a great deal of flexibility with respect to when they withdraw payments. The main issues related to control instead relate to (a) account dormancy rules that shut off access to accounts, (b) difficulty navigating the banking process, and (c) deviation from official payment protocols (e.g. if women are paid in cash this criterion is moot). These issues have already been discussed earlier in this report (see section Reliability, page 31).

PAYMENTS ARE PRIVATE, FUNDS ARE SAFE FROM EXPROPRIATION

³⁷ Payment banks are a new class of bank in India, first licensed by the Reserve Bank of India in 2015. Payment banks can accept deposits (up to a per-customer ceiling), issue ATM cards, facilitate bill payments, and offer web- and mobile-banking. They cannot, however, offer lines of credit. The vision for payment banks is that they will operate a large network of small branches/kiosks.

In principle, the program scores highly here, given that payments are made directly into bank accounts, many of which are biometrically authenticated. However, our field work has identified cases of important privacy and security violations. In some cases, local leaders will take a portion (or all) of NREGS payments out of beneficiary accounts *with* beneficiary knowledge. This typically happens in the case of what we call “ghost workers”: individuals who live in the village and have a job card, but did not work for a given NREGS project despite being recorded as working. When the wage payment arrives in the worker’s account, leaders ask the worker to withdraw it and offer a small kickback to the worker (such as Rs. 100). We encountered reports of this happening in 6 of the villages where we conducted interviews with women for our qualitative research.

In other cases, CSPs may coordinate with local leadership to divert funds from accounts, unbeknownst to the beneficiary. We heard reports of CSP operators scanning their own fingerprint (or the fingerprint of a local leader) when opening bank accounts, which allows them to access the account without customer knowledge or consent. It bears noting that this expropriation largely appears to happen in *ghost worker* cases. Expropriation of *actual workers’ wages* is much rarer (we did not encounter any reports of this happening during our fieldwork) – subject to the caveat that actual workers sometimes reported being paid in cash and receiving a different wage than the official NREGS wage.

Unfortunately, it is difficult to assess the extent of these sorts of privacy and security violations, as we are not aware of any systematic data on this issue (indeed, such data would be difficult to collect), and, as we will discuss later in this report, grievance redressal mechanisms are not reliable or widely used.

PAYMENT PROVIDERS, ACCESS POINTS, AND PRODUCTS

NREGS permits payment into a savings account held at either a bank or post office, and in theory, individuals are free to choose the type of account and banking provider that best meet their needs. In practice, however, individuals in rural areas – especially mobility-constrained women – may have access to a limited number of local banks and/or CSPs. Fortunately, all banks offer low-cost accounts suitable for the NREGS worker population.

Individuals can also receive NREGS wages in payment bank accounts. Although payment banks’ current footprint in Bihar is limited – less than one tenth of one percent of rural individuals report having a payments bank account in the 2017 FII – there is potential for payment banks to make important headway in improving local-level access to financial services. For example, IndiaPost has plans to link with kirana shops (small neighborhood ‘general stores’) to provide services and increase its footprint. As payment banks have struggled to grow since their launch in 2015 (Anand 2018), impact here will depend critically on the extent to which they scale aggressively in rural areas. Identifying vendors

who can offer banking services as a value-add on top of an existing business could be a promising model for building out coverage in sparsely populated, low-volume areas.

Another important question is whether individuals can access their accounts at outlets apart from their 'home' outlet. As discussed earlier (see the Interoperability section), India has made some good progress here, though cross-bank interoperability could be improved.

PRIVACY AND SECURITY

FRAUD MONITORING AND PROTECTION

For additional detail on fraud monitoring and protections as it related to bank accounts, please refer to “Financial Inclusion Policy and Regulation: Security and Data Privacy Provisions in Place”, page 26. Apart from the topics discussed therein, one major issue is fraud within the program itself. Leakage within NREGS has been widely discussed and was one of the main motivating factors behind the transition to DBT (PTI 2016; Niyogi 2017; Raghavan 2016). Currently there are a number of provisions in place to combat fraud according to official program rules. Specifically:

- **Independent Social Audits** are supposed to be conducted in 50% of the gram panchayats in a state each year. Trained teams are supposed to conduct these audits by reviewing progress on past works, and verifying worker participation and attendance, according to a pre-specified set of rules and standards. Social audit results are to be written up in the local language and posted on the gram panchayat notice board, so that community members can review the results.

In practice, this process appears to be essentially defunct: at the time of writing there is no social audit governing body in place in Bihar. The state social audit team currently consists of three people – one State Resource Person and two District Resource Persons. According to the NREGA MIS, just 40 of Bihar’s 8,529 GPs were scheduled to be audited and only one was actually audited in the 2017-2018 fiscal year.

Things look better in the current fiscal year compared to the last: 266 GP audits are scheduled, and 220 GPs have already been audited at least once. This performance, while an improvement, pales in comparison to other states like Tamil

Nadu, where all but 1 of their 12,524 GPs have had a social audit this fiscal year.³⁸ Bihar does have ambitions to increase its use of social audits: RDD officials report wanting to conduct social audits in 1,000 more GPs by the end of the 2018-2019 fiscal year; and audits in 4,000 GPs in the upcoming fiscal year (2019-2020).³⁹

- **Concurrent Social Audits** are also meant to be done for each NREGS project. These audits are led by community members, including Self-Help Groups, a village monitoring committee composed of 5 NREGS workers, and other village organizations. Official rules specify that women and marginalized groups should be included on the village monitoring committee. These reports are meant to be sent to the NREGS Programme Officer.
- Each state is also supposed to establish a **three-tiered vigilance monitoring system** (VMS) composed of a State Vigilance Cell, District Vigilance Cells (headed by a district-level officer and supported by an engineer and auditor), and GP-level Vigilance Monitoring Committees (VMCs). Members of the VMCs should include women and marginalized groups, who are elected by the Gram Sabha (a community-wide meeting that serves as a governance forum). These organizations are meant to actively inspect program operation, report irregularities, and ensure violations are punished.

While these policies are well thought out on paper, they fail to live up to their promise in practice. Indeed, our impression from fieldwork and meetings with NREGS officials is that the policies do not receive much support and are not well implemented at the ground level (if they are implemented at all).

We have reason to believe that fraud within NREGS is widespread in Bihar. First, MIS statistics suggest that 1,272,422 women were provided employment in the 2017-2018 fiscal year – equivalent to 2.9% of the female rural population per the 2011 Census. The corresponding figure including men works out to 2.9% of all rural individuals in Bihar. By contrast, just 0.31% of rural women reported they received NREGS benefits in the 2016 FII.⁴⁰ The figure for rural men was 0.26%. It is possible that some of this gap is driven by the FII undercounting NREGS workers – we therefore do not feel comfortable using this

³⁸ NREGS MIS Table R 9.1.2. Available at <http://mnregaweb4.nic.in/netnrega/MISreport4.aspx>. Accessed January 9, 2019.

³⁹ Personal Interview with State Resource Person, Social Audit Division, Government of Bihar, on 7th January, 2019

⁴⁰ We compare the 2016 FII data to this year in the MIS data because most of the 2017-2017 fiscal year took place in the 2017 calendar year.

gap as an “official” measure of leakage.⁴¹ However, it strongly suggests that corruption – e.g. in the form of listing ghost workers on muster rolls – is a major problem.

Our field visits further support this hypothesis. We entered each village with a list of women who had been listed as recently working for NREGS per the MIS. We also visited three GPs where NREGS work was ongoing or had just finished. Despite our efforts to find women listed on the muster rolls and confirm that they worked, we found it extremely difficult to locate them. We also had a great deal of difficulty finding recent workers through word-of-mouth. Instead, we heard widespread reports of local leaders using outside contract labor to create program assets.

Some of the fraud associated with NREGS in Bihar likely reflects challenges with the program design that tie the hands of administrators to implement in ways that suit their communities. As an example, local officials face pressure to generate work-days under the program each year. Depending on the location and time of year, NREGS wage rates may be lower than many workers’ reservation wages. To recruit workers, officials may decide to pay workers two days’ wages for one day of work. (Recall that in the areas we visited, men are typically paid between Rs. 200-300 per day of agricultural work; thus, a premium above the NREGS wage rate of Rs. 177 may be needed to attract men to work for NREGS. Women are paid between Rs. 100-150, however they face a stigma against leaving the home to work.)

Alongside this, local leaders may pay workers in cash to help them avoid having to deal with payment delays, a strategy that can increase workers’ interest in working, particular for those who would like to be paid quickly. These types of arrangements were regularly mentioned in qualitative interviews and suggest that design features of NREGS lead to incentives to break program rules to increase its viability as a rural workfare program and help officials achieve NREGS targets they are under great pressure to meet. It is worth noting that we found cases of workers receiving both more *and* less than the official NREGS wage when getting paid in cash: women reported receiving anywhere between Rs. 75 to 275 cash per day when they worked for NREGS, whereas men received between Rs. 200-300 cash per day. Underpaying for work appears via cash payments appears to be a particular concern for female workers, who are more marginalized and are often perceived as being less productive. Note, however, that these reports of cash payments typically took place several years in the past – this practice may be on the decline as the DBT transition taken hold.

⁴¹The FII first asks respondents “do you get income from government programs” and then asks if NREGS is one of those programs. This could lead to undercounting if respondents need to be probed on NREGS or colloquial names for the program to remember work spells. The 2015-2016 Labour Department Employment-Unemployment survey reports that 5.3% of Bihari households reported working for NREGS in the past year. While this number is not directly comparable to the individual-level numbers from the FII, it does suggest that undercounting in the FII may be an important issue.

A related challenge is that of materials payments: GP leadership must secure materials for works *before* materials payments are transferred. These materials payments can be extremely delayed, and unlike wage payments, there are no timeliness targets (or reporting) for capital and materials. This creates perverse incentives: for example, GP leadership could resort to over-reporting the number of workers so they can pay contractors with wage payments, which arrive in a more timely fashion.

ACCOUNTABILITY

The large accountability gap in Bihar manifests in various ways and results in women being poorly informed about most aspects of NREGS. For example, our qualitative work suggests most women are not aware of their rights/entitlements, do not know how to request work, are not aware of grievance redressal mechanisms (which appear to be largely inoperative), and often depend on others for help navigating the banking system. More generally, both potential and actual workers find it quite difficult to hold local-level implementers, especially at the GP-level, accountable, evidenced by the many NREGS-related complaints we heard from potential workers over the course of our qualitative research.

These findings are echoed by Dutta et al. (2014), who report on the results of a survey of 3,000 households in 150 villages across Bihar in 2009 and 2010 – suggesting not much has improved over the years. Their survey was designed to be representative of the entire state. The authors find that while most individuals know that NREGS exists, knowledge of program entitlements (such as 100 days of work, access to an unemployment allowance if work is requested but not provided and so on) is low, particularly among women. For example, while 24% of surveyed men knew contractors were not allowed to provide labor, just 11% of women were aware of this rule.

Despite this, one bright spot is the growing role of JEEViKA Self-Help Groups (SHGs) in NREGS. According to the 2017 FII survey, roughly 22% of rural women are a member of an SHG⁴², and JEEViKA has ambitions to reach 55% of rural women (12 million individuals) by 2019 (PCI 2018). SHGs are promising for several reasons. First, they expose women to the financial system, since the SHG opens a group savings account, receives and manages loans from the government, and provides loans to its members. Second, JEEViKA recruits SHG members for bank sakhi and bank mitra positions, which

⁴² The FII survey does not specifically ask about SHGs by name. We proxy membership with an individual's report of whether she has ever used a formal saving/lending group for financial activity and whether she reports belonging to any informal societies or group savings schemes. Earlier estimates just used the first question to approximate SHG membership – this yielded estimates just under 10%.

strengthens women's linkages to the financial services sector while employing select SHG members. Third, in roughly 25 pilot blocks, JEEViKA is working together with Cluster Facilitation Teams (CFTs) to improve NREGS implementation (we discuss CFT activities in detail later in the report).

PROGRAM AWARENESS AND RECOURSE

AWARENESS

Currently, there is very poor awareness at the field level regarding payments and grievance redressal. In terms of grievance redressal, the gap is two-fold: while official program rules have clear provisions for grievance redressal at multiple levels and touchpoints, implementation in the field appears to be weak (see the next sub-section for additional detail). There are no large-scale awareness raising efforts going on in Bihar at this time. Given this, it's not surprising that women are poorly informed of their rights and available means of recourse. For additional detail on these issues, please refer to commentary under Communication (p. 38), Fraud Monitoring and Protection (p. 44), and Accountability (previous page).

ACCOUNTABILITY, ROLES AND RESPONSIBILITIES IN THE GRIEVANCE REDRESSAL MECHANISM

In theory, NREGS offers a range of grievance redressal mechanisms (GRMs) to beneficiaries: in fact, the 19th entitlement under the act includes the right to time-bound redress of grievances.⁴³ According to the latest master circular, which outlines the most up-to-date NREGS implementation protocol, GRMs exist at various levels and, in principle, are meant to operate in the following ways:

- Grievances can be registered at the GP, block, or district level. When an individual registers a grievance they should receive a dated acknowledgement of their submission. They should also have the option to register their complaints either in writing or by telephone help line. All grievances are to be recorded in the complaint register maintained at the gram panchayat (GP), which is one of seven registers mandated by program rules.
- At the GP level, Gram Rozgar Diwas (monthly meetings organized at the ward level to register demand and raise program awareness) should be held, in part for

⁴³ Gujarat Rural Development Department and India Ministry of Rural Development. "Master Circular - A Guide for Programme Implementation RY 2018-2019." pg 57. Ahmedabad: Government of Gujarat. <http://ruraldev.gujarat.gov.in/writereaddata/images/pdf/master-circular-2018-19.pdf>. Accessed December 15, 2018.

grievance redressal. Key local leadership including mukhiyas and the PRS should attend these meetings.

- Individuals lodging a grievance have a right to grievance redressal within 15 days of registration.
- For complaints received at the national level that result in an official inquiry, state funding may be disrupted depending on the outcome of the inquiry.
- Grievances identified during social audits should be formally registered with the respective Block Program Officer during Gram Sabhas.

Official program guidelines name specific individuals tasked with grievance redressal:

- At the block level, the **Block Program Officer** is responsible for registering and addressing grievances.
- At the district level, there should be an **Ombudsman** responsible for receiving grievances. The **District Development Commissioner** (DDC) is also charged with addressing grievances.

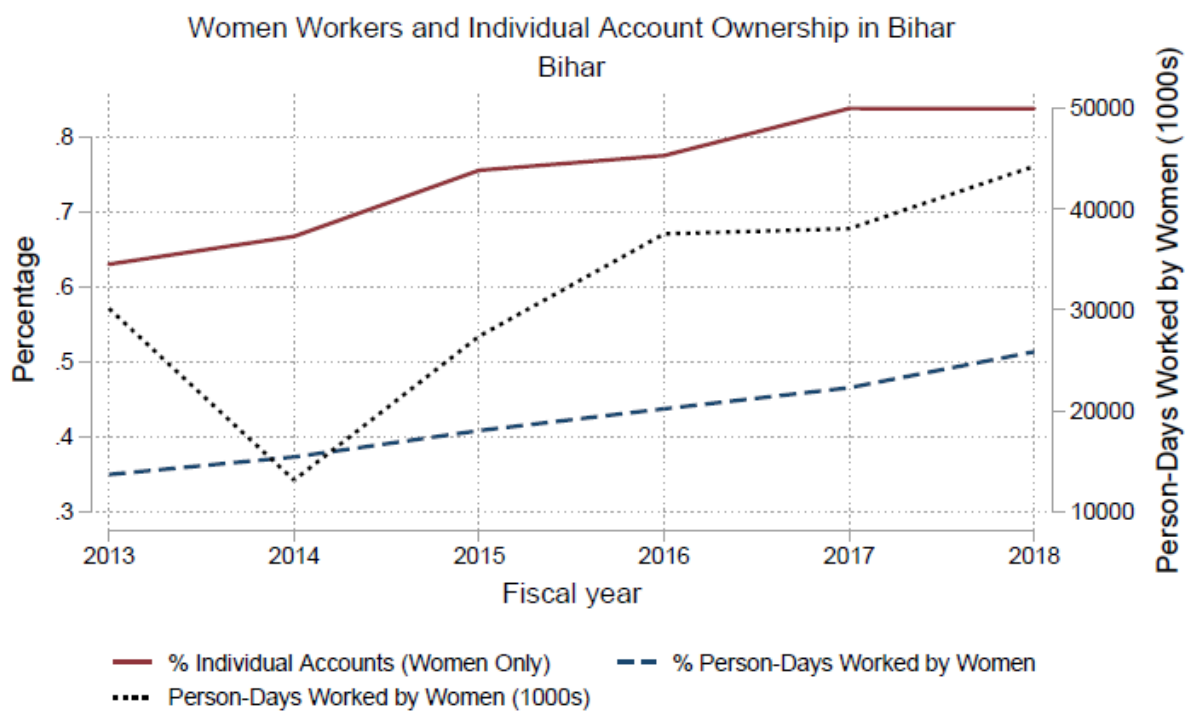
There are also guidelines for how grievances should be documented and addressed, although the guidelines are vague as to the specific process flow.

Here, like many aspects of NREGS' implementation in Bihar, a significant gap exists between official policy and actual implementation. In practice, our field interviews easily identified individuals with grievances – however, most people had not lodged complaints, or had raised the issue with local leadership to no avail. There appears to be a general sense that the mukhiya/sarpanch is the person meant to handle grievances, but individuals are not optimistic that complaining at this level will lead to a redressal of issues.

2.3 DIRECT

Under NREGS, all official wage payments are directed to worker-owned bank accounts. As previously articulated in the sections on ‘Account Choice and Accessibility’ (p. 25) and ‘Security and Data Privacy Provisions in Place’ (p. 26), there are a menu of accounts suitable for and available to women in rural areas.

Bihar has made good progress ensuring that payments are linked to women’s own accounts (as opposed to an account held jointly by the women and e.g. a spouse). The figure below highlights that female NREGS workers in Bihar have been increasingly paid into individual bank accounts over the past several years: the proportion of female workers paid into individual accounts has increased from 63% in the 2013-2014 fiscal year to 84% in the current fiscal year. This increased tracks with a similar one in the proportion of person-days worked by women in Bihar. While this increase in individual account ownership is positive, not much progress has been made over the current fiscal year, suggesting another push toward individual accounts may be useful.



Source: NREGA MIS Data, Table R1.2.9 for Account Information, Public Data Portal for Person-Days Worked by Women

Figure 19. Women Workers and Individual Account Ownership in Bihar

As discussed earlier, and in line with much our discussion throughout this report, there are deviations from the individual payments rule in practice: we have identified cases of cash payments in the field that are undertaken on an informal basis. Further, although

women have control over and direct access to their bank accounts, their limited human capital and mobility constraints can curtail the amount of control they have in practice, leaving them vulnerable to exploitation. (Recall that 62% of women in the 2017 FII report that family members are “very” or “somewhat” involved in the operation of women’s accounts).

2.4 DESIGN

COVERAGE

APPROPRIATE COVERAGE: VALIDATED TARGETING CRITERIA

NREGS applies a “self-selection” targeting philosophy, since all rural households are eligible to opt into up to 100 days of paid labor per year. The rationale here is that individuals with the greatest need will be most willing to work for the low wages NREGS pays. Many studies of NREGS focus on beneficiary participation and job availability (Bhatia et al. 2016), and the consensus here is that self-selection works, in that lower income, more marginalized groups are more likely to work for the program (Joshi et al. 2017). Gender norms can compound self-selection to the point that it may be detrimental, however. For example, in many areas we visited (and throughout India and rural Bihar), there is a stigma against women leaving the home and working. As a result, women who work for NREGS are often lower on the caste hierarchy or are in particularly difficult financial situations. One clear concern here is the extent to which the program excludes low-income women, particularly gender conservative households.

That said, according to administrative data, Bihar has improved in terms of female participation. For the 2018-2019 fiscal year, 51% of person-days worked in Bihar have been completed by women, which is just short of the national average of 53%. By way of comparison, female participation in FY 2014-2015 was 37% against a national average of 55%.⁴⁴

COMMUNITY PARTICIPATION IN TARGETING, VALIDATION & EVALUATION

On paper, the program scores highly here (see details on social audits on p. 44). However, in practice, there appears to be limited community ownership of the program. Instead, the program is very much driven by village elites, particularly the sarpanch/mukhiya, other informal leaders, and those with links to those with power.

WHY ELIGIBLE WOMEN ARE NOT PARTICIPATING

In general, we have found good concordance between reasons for female non-participation cited by policy makers, bureaucrats, and potential workers themselves. Perhaps unsurprisingly, JEEViKA officials and SHG leaders have mentioned that women

⁴⁴ MIS Tables R5.1.5 Employment Generated During The Financial Year 2018-2019 and R5.1.5 Employment Generated During The Financial Year 2014-2015. Available from <http://mnregaweb4.nic.in/netnrega/MISreport4.aspx>. Accessed January 10, 2019.

prefer to generate income through other means, notably those associated with the SHG. Both men and women sometimes mention that women should not be out working or prefer not to work, and some highlight the nature of manual labor on worksites as a deterrent. Many individuals in field visits commented on the low wages NREGS pays, and government officials also note this wage reduces requests for work.

Another common explanation relates less to preferences and more to awareness and opportunities: our field visits suggest local officials (typically the sarpanch/mukhiya) do not provide opportunities for women to work. And as already mentioned, women typically do not know how to register requests for work under NREGS. Even when they request work, it often takes a long time to arrive, if it arrives at all.

It is also important to note that interventions that simply address information gaps may not be enough to improve participation: Dutta et al. (2014) identify similar issues with NREGS access in Bihar and report on the results of a randomized controlled trial designed to increase NREGS knowledge among both men and women. While the information campaign successfully increased knowledge about rights and entitlements, including the right to request work, the authors found no overall impact on program participation, days worked, or wages received. In contrast, recent research on *functional* reforms to NREGS, e.g. by transitioning to biometrically authenticated digital payments (Muralidharan et al. 2016) or ensuring women's wages are paid into their own account instead of a family member's account (Field et al. 2016) finds that reforms can meaningfully impact NREGS participation.

ELIGIBILITY RULES DON'T CREATE PERVERSE INCENTIVES

Workers' entitlement to work under NREGS is at the household level and limits households to 100 days of work each year, spread across all household members. If households prioritize men's work over women's, this could in theory constrain women's access to work under NREGS. On the other hand, NREGS' low wage rates likely make the program appealing as a means of work for female household members, since the NREGS wage often exceeds the wage for casual female labor but not male casual labor – although the low wage rate and potential payment delays may deter households and women from work altogether.

OTHER PROGRAMS AVAILABLE TO ELIGIBLE WOMEN

Policy makers overseeing NREGS are cognizant of the broader social protection landscape and there have been some efforts to capitalize on interlinkages and synergies across programs serving the rural poor. For example, NREGS 'convergence' initiatives aim to link NREGS workers with other government programs and initiatives focused on infrastructure, livelihoods, and economic development. One example is leveraging NREGS to help female farmers identified under sustainable agriculture

programs to build and utilize new agricultural assets. We discuss convergence initiatives in more detail in the forthcoming “Complementary Services and Linkages” section on page 57.

3-5 YEAR / MEDIUM TERM FINANCING PLAN

As highlighted above, the terms of the NREGA require the government to provide financing to meet the demands of every rural household, regardless of income level, for up to 100 days each year. Yet there is no medium-term financing plan for NREGS, in that the central government’s budget allocations are finalized by the Ministry of Finance each year. The popular narrative around this financing, particularly in recent years, is that it is inadequate and continues to decline relative to the potential program budget, despite growing in absolute value in the past few years (Kulkarni 2018). Many attribute this lack of support to comments by Prime Minister Modi early in his tenure (which he later walked back) that suggested he was unsupportive of NREGS (Roy 2015). In general, India’s currently ruling Bharatiya Janata Party (BJP) is thought to be less supportive of NREGS than the Indian National Congress, which was in power when the National Rural Employment Guarantee Act (NREGA) was enacted. In principle, states could increase the amount of financing to NREGS to top up shortfalls in central government funding, but the extent to which they do that is limited and varies across states.

MoRD sets each state’s labor budget based, in part, on the result of a state-wide planning process, when GPs develop an annual action plan, which is submitted to blocks. GP plans are aggregated into block-wide plans, which are submitted to districts and inform district-wide plans, which are submitted to the state. Funds based on these estimates are then supposed to be released to states in two tranches in each fiscal year.

FINANCING GAPS & ON-TIME BUDGET ALLOCATION

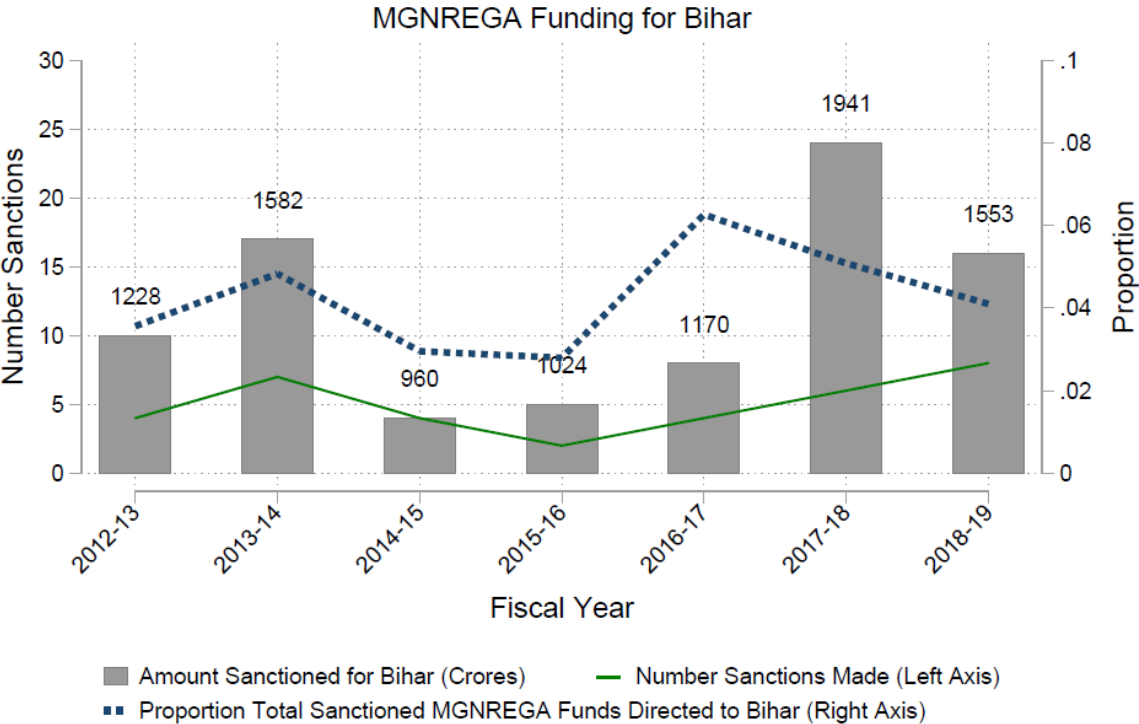
In recent years, NREGS has been beset by funding shortfalls: at the national level, budgeted amounts have fallen short of actual expenditures in the past three full fiscal years. Given the nature of the entitlement under NREGA, this creates a cycle where the central government “tops up” overdrawn state budgets mid-year, which – as we have discussed earlier – drives payment delays. These shortfalls are consequential: under-budgeting was so extreme in the 2017-2018 fiscal year that 80% of the initial central government sanction was spent in the first four months of the year (The Wire Staff, 2017).

Figure 21 on the following page illustrates Bihar’s recent funding history. The bars show the total amount budgeted for Bihar in crores of Indian Rupees.⁴⁵ Alongside this, we graph

⁴⁵ One crore is equal to 10,000,000. Thus Rs. 1 crore is equal to \$141,925 at an exchange rate of Rs 70.46 per USD (the exchange rate on January 10, 2019).

the number of “sanctions” or budget allotments made to Bihar over the course of the year – this likely correlates with more delays given current payment processes. We also graph the share of total budgeted funds directed to Bihar, which hovers around 4-6% between 2012 and 2018. This represents a relative under-allocation of funds, given that in 2011-2012 Bihar was home to 11% of all rural dwellers in India, and 15% of the rural poor (Government of India Planning Commission 2013). It likely reflects the fact that more funds are directed to some of the NREGS “star implementers” – higher-income states like Andhra Pradesh and Tamil Nadu (Sukhtankar 2017).

A major concern is that even as sanctioned amounts have risen from 2014 to 2018, so have the number of sanctions, with Bihar receiving 6 transfers from the center in the last completed fiscal year and 8 in fiscal year 2018-2019, with four months still to go at the time of writing.



Source: NREGA Sanction Data

Figure 20. Bihar NREGS Funding

ADEQUATE TRANSFER SIZE

See section Reliability (beginning on p. 31) for a discussion of Bihar’s NREGS wage (Rs. 177/day) and how it relates to the poverty line, official non-NREGS minimum wages, and actual casual wages observed in rural areas. Our overall assessment is that the NREGS

entitlement can be meaningful for out-of-work households and especially women, *provided beneficiaries have the opportunity to work a meaningful number of days and receive their wages on time.*

BENEFITS INDEXED TO INFLATION & TRANSFER AMOUNT

The NREGS wage rates are linked to the Consumer Price Index for agricultural laborers for each state, which incorporates food, clothing and housing-related expenses. In Spring 2018 it was reported that the MoRD requested that the Ministry of Finance switch to a different price index (the Rural Consumer Price Index), which could allow more significant increases in NREGS wages, but to the best of our knowledge this change has not been implemented (Ghildiyal 2018; Mohanty 2018).

TIMING AND FREQUENCY OF TRANSFERS MEET PROGRAM OBJECTIVES

In theory, workers should be able request work when they need it and receive payments in a predictable, timely manner. This would allow them to use NREGS to smooth their income and consumption. Our report has already discussed how this ideal breaks down on the ground. More broadly, our field work suggests that NREGS falls short of its worker “demand-driven” ideal; instead, potential workers wait for a local leader to tell them about upcoming work (making NREGS “supply-driven” in practice). Multiple respondents reported being eager to participate in NREGS work but not knowing of any available to them. We did encounter one bright spot: women in one CFT block who worked closely with a Community Mobilizer were aware they could request work, and had requested work in the past. Yet even these women noted that it takes a long time to actually obtain work after requesting it.

EXIT CRITERIA, ELIGIBILITY DURATION APPROPRIATE, MEET PROGRAM OBJECTIVES

In principle, all rural households are eligible for 100 days of paid work. Moreover, states or the central government can sanction additional days of potential work for households, particularly in times of drought or rural distress. Despite that, recent data from household surveys show that Bihar’s NREGS participation rate is low and declining, which may suggest *de facto* exclusion. Specifically, the 2009-2010 National Sample Survey (NSS) estimated that 9.9% of rural households in Bihar worked for NREGS in the past year (Dutta et al. 2014). Just 6 years later, the Labour Department Unemployment Survey estimated that household participation was down to 5.3%.

While NREGS does not have exit criteria, self-selection in targeting means that a well-functioning program should only attract the worst-off households for participation, as

previously described in the “Appropriate Coverage: Validated Targeting Criteria” section, p. 52.

More recently, the government has prioritized so-called “convergence” activities in NREGS, such as investing in local plantations or linking young potential workers to training to help them enter into semi-skilled work, rather than continuing to engage in unskilled labor (see “Complementary Services and Linkages”, below, for more detail). The extent to which these practices occur vary across the country, but Bihar has focused in particular on investing in plantation activities that could help women earn more income and thereby “graduate” from the program.

COMPLEMENTARY SERVICES AND LINKAGES

INTEGRATED SOCIAL REGISTRY, LINKAGES TO COMPLEMENTARY PROGRAMS, AND LINKAGES TO LIVELIHOOD OPPORTUNITIES

NREGS workers are often identified by their Aadhaar or socioeconomic caste (SEC)⁴⁶ numbers in their job cards, and SEC numbers are linked to their below poverty line (BPL) status, so linkages across social programs – particularly development-oriented ones – is feasible (though not straightforward given the incomplete state of Aadhaar seeding, in addition to data entry errors and inconsistencies across programmatic databases for non-Aadhaar-based identification).

At various points over the duration of NREGS, the state has undertaken convergence activities to integrate NREGS and programs like Pradhan Mantri Awas Yojana (PMAY) (to help households build better homes) and Swachh Bharat Abhiyan (to fund and facilitate latrine construction), but these integrations are not permanent features of NREGS. Currently, Bihar is not conducting any systemic, state-wide efforts to link NREGS workers to complementary programs and services on an ongoing basis. In contrast, the Bihar RDD has made more concerted efforts to link women to JEEViKA, rather than other government programs, as described in more detail in the section Linkages to Livelihood Opportunities, below.

The primary way in which NREGS activities can be linked to livelihood opportunities occurs through government officials, typically at the GP level, who identify the list (“shelf”) of works to undertake in their jurisdiction. The 2018-19 NREGS guidelines suggest that district administrators should prioritize funding for works that support agriculture,

⁴⁶ The SEC number is based on a census conducted by the government intended to identify poor households.

livelihood-related works, natural resource conservation, and other high-priority government schemes. These guidelines also highlight the government's current emphasis on water conservation and harvesting and suggests that NREGS should specifically work with the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Integrated Watershed Management Programme (IWMP) and Command Area and Water Manager (CAD&WM) to improve local water management, but exact mechanisms for coordination across programs are not prescribed. Local administrators are also guided to work with district and block-level officials, as well as civil society groups, to leverage linkages, and GP decisions should prioritize watershed and water management works with high potential impact to communities in their GP.

One program that illustrates the government's interest in connecting NREGS workers to income generating opportunities is the Project LIFE-MGNREGA program, short for Project Livelihoods in Full Employment under MGNREGA. Initiated in 2015-16, the now-defunct program was built to link NREGS workers to programs that suited their interest and capabilities to help them to graduate from NREGS. Three training tracks were envisioned: NREGS was to send workers interested in wage employment to the Deen Dayal Upadhyaya Grameen Kaushalya Yojana, a job-linked skills (vocational) training initiative implemented through MoRD's National Rural Livelihood Mission. NREGS was supposed to direct those interested in self-employment and entrepreneurship to MoRD's district Rural Self-Employment Training Institute, where successful candidates can receive loans after completing training. Those interested in livelihoods opportunities could be sent to JEEViKA-linked livelihoods training.⁴⁷

MECHANISMS PROMOTING ASSET ACCUMULATION AND INVESTMENT

In principle, NREGS directly supports investment and asset accumulation by building productive assets. Many of these are communal (e.g. a road) while others are private (e.g. a home built under NREGS-Pradhan Mantri Awas Yojana (PMAY) convergence). Bihar's NREGS investments in assets such as plantations, roads, latrines, cattle sheds, housing, and ponds (one of the most frequently mentioned activities in our fieldwork) can help increase agricultural productivity and catalyze further economic growth, provided the assets are of sufficiently high quality.

LINKAGES TO COMMUNITY-LEVEL PROGRAMS

The clearest, most woman-centered community-level linkage in NREGS is its linkage to SHGs in JEEVIKA. According to official rules, SHGs should play multiple roles in NREGS: they should support local work registration days ("Gram Rozgar Diwas"). They should be

⁴⁷ Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY). *About Us*. Ministry of Rural Development. <http://ddugky.gov.in/content/about-us>. Accessed December 15, 2018

involved in planning work activities, participate in local Vigilance Monitoring Committees, help SHG members obtain job cards and register demand for work. They are supposed to discuss NREGS implementation in their regular meetings and encourage SHG representatives to attend local community meetings (the Gram Sabha). Finally, they are encouraged to organize women's "Labour Groups" who can come together across multiple SHGs in a community and jointly register a request to work under NREGS and address grievances.

SHGs are also supposed to receive benefits through NREGS: the government said that preference should be given to SHG members to serve as worksite mates and members of the community social audit teams.⁴⁸ Finally, approved NREGS works include those that support livelihood activities of SHGs.

In practice, we rarely saw SHG women engaged in these activities in our field visits. The exception occurred during visits to some of the Cluster Facilitation Team (CFT) blocks we sampled. In these blocks, Cluster Facilitation Teams are made up of staff from JEEViKA and dedicated CFT staff – all of whom work together to coordinate various aspects of the NREGS program. In our qualitative research, the most promising environment we saw was in a CFT block where CFT officials facilitated and supported collective action for women to demand work from local leaders. However, the extent to which CFT blocks supported these processes was inconsistent and varied from block to block.

The 2018-2019 NREGS Master Circular stipulates that CFTs should be civil society or community based organization-led teams of at least three individuals who are tasked with strengthening NREGS implementation in their block. CFTs should have expertise in agriculture, livelihoods, community mobilization, and should be able to assess NREGS worksites. CFT-affiliated officials work alongside NREGS and JEEViKA-affiliated officials in the block to support NREGS mobilization and monitoring; implementation of NREGS is still under the authority of the usual officials. A summary of the individuals we met affiliated with CFT teams in the field can be found in the table on the next page.

Key staff include NREGS Consultants and a Community Mobilizer and Natural Resource Manager. The Community Mobilizer seems particularly important to women's NREGS access: in our visit to the CFT block of Nalanda, the Community Mobilizer described a door-to-door campaign he undertook to increase women's awareness of NREGS, and he said he issues job cards and copies of work demand requests. Other JEEViKA staff described their support for financial inclusion efforts (bank mitras and bank sakhis, in particular) that may facilitate women's access to their NREGS wages. The JEEViKA team

⁴⁸ A mate is a NREGS worker assigned to oversee proper implementation of the work. S/he is also responsible for worker turnout, filing attendance, and making sure the work is completed on time.

had also helped women in SHGs form labor groups to request work in groups and address grievances.

	Structure of CFT Team	Main Responsibilities
Block Level (JEEViKA Staff)	Block Program Manager	Monitoring and evaluating performance of village level staff
Village Level (CFT Staff)	Community Mobilizers	Including more below poverty line (BPL) people by forming new labor groups in villages
	Technical Experts	Verifying records and documents maintained by Panchayat level officials
	CFT Consultants	Resolving workers' grievances and following up for the same with RDD officials.

That said, the extent to which CFT and non-CFT blocks differed was dependent on the block. CFT blocks appeared to have stronger and more formalized processes for collective action, particularly for demanding work from local leaders. For example, Community Mobilizers are meant to help register demands for work and work with local leadership to ensure these demands are met. However, the extent to which Community Mobilizers (a) actually do this work and (b) are successful in getting work for those who demanded it, varied significantly across CFT blocks. Apart from Community Mobilizers, the CFTs also comprise of Technical Experts and CFT Consultants at the village level. Consultants' role can vary from generating new labor groups in a village to solving worker complaints, while a Technical Expert is primarily involved in scrutiny related activities. These activities may include verifying the names of workers in the muster rolls, making sure attendance is taken on time, verifying workers' bank account details on the MIS, making sure the workers are not underpaid or over-worked. The village level team directly reports to the Block Program Manager (BPM) of JEEViKA.

JEEViKA also appoints a Cluster Level Federation (CLF) to work directly with the CFT. A CLF is a network of 15-20 Village Level Organisations (VO), which are in turn groups of 12-15 SHGs from a particular village. JEEViKA leadership believes that these links between SHGs and NREGS officials has led to increased female engagement in NREGS work.

When assessing the promise of SHGs and the JEEViKA-CFT model, it is important to keep in mind the profile of women who join SHGs. Figure 22, right, illustrates highly varied participation rates by age: young women are almost never members of SHGs; in fact, JEEViKA does not allow unmarried women to join SHGs. Membership peaks among women aged 30-34 (with over 30% of rural women in this age group enrolled), and is lower at higher ages. Strategies focused solely on

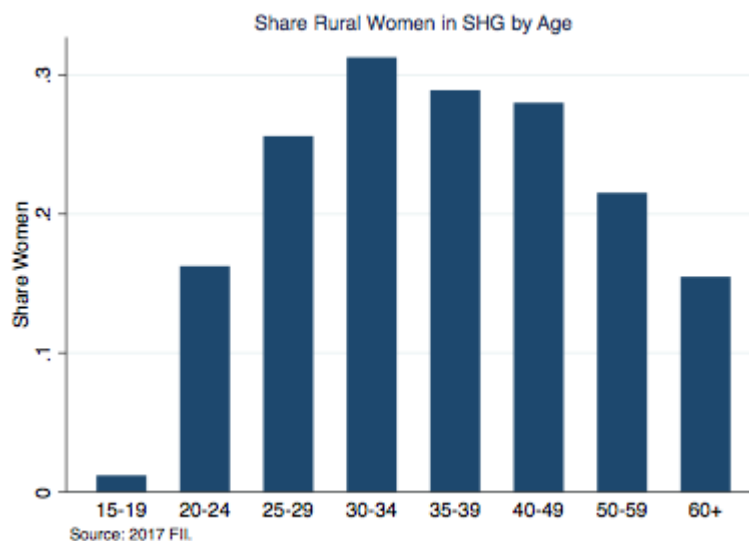


Figure 21. Share Rural Women in SHG by Age

SHGs may overlook younger and older women – or women who are relatively more socially excluded – all of whom may stand to benefit from gaining access to NREGS work.

Another important consideration is ability to scale: Bihar has 534 blocks, but there are only 25 CFT blocks at this time. Thus the CFT model would have to scale substantially to reach the entire state. Given that implementation of the CFT model already appears to be heterogeneous, scaling would require a careful assessment of budgetary and human capital needs, and a continued commitment to monitoring and evaluation.

In our interviews with CFT members, they noted that the teams face major challenges in working with the RDD officials at the block and panchayat level. Since the issuance of muster rolls, allocation of works, filing attendance, and making payments to workers completely depends on RDD officials, much of the CFTs’ time is spent following up with RDD officials in order to make sure they are allocating work as demanded by the workers, and making payments on time.

DO COMMUNITY-LEVEL LINKS STRENGTHEN ECONOMIC DEVELOPMENT

The linkages described above do strengthen economic development *when they are implemented well*. For example, in the 25 pilot CFT blocks where JEEViKA officials support women’s access to NREGS, women can also take advantage of financial inclusion-focused initiatives by JEEViKA that could improve women’s access to NREGS payments, via their bank mitra and bank sakhi programs. Other initiatives previously mentioned focused on increasing accountability in NREGS, primarily in demand/registration for work and grievance redressal, also may be important to improving

NREGS' functionality and increasing potential benefits to potential workers. One challenge here is that most blocks do not have JEEViKA-NREGS convergence ongoing, and in those areas we saw little in the way of community links to amplify the impact of NREGS.

MITIGATION OF ADVERSE EFFECTS

EFFICIENCY OF APPLICATION AND ONBOARDING

Overall, the NREGS application and onboarding process is not particularly onerous, but ongoing challenges to access persist. Most households already have job cards, which are required to work, and most women have bank accounts, as described earlier. In practice, however, we encountered a number of households in the field who reported their job cards were expired or held by a local official, a potential risk factor for corruption. Similarly, there is a risk that the earlier-discussed changes in regulations around Aadhaar have resulted in confusion on the ground – e.g. if workers erroneously think they must link their Aadhaar numbers to their bank accounts and seed this information in the NREGS MIS prior to receiving any payments. And while the government has held camps to facilitate onboarding to the Aadhaar Payment Bridge System, those who do not yet have an Aadhaar-linked bank account seeded to the NREGS MIS must now conduct the linking and seeding with their bank and government on a one-off basis (if they choose to do so). It is unclear how difficult this process is in practice.

Workers also expressed reticence to request work given concerns local leaders may request bribes in exchange for work, provide work they did not want to complete, or not provide work at all, suggesting they perceive significant barriers to beginning work under NREGS. Such barriers could, of course, be relatively more difficult to surmount for Bihari women.

COUNTER-PRODUCTIVE CONDITIONALITIES

There are technically not conditionalities for NREGS participation, provided individuals are willing to work. In this sense, NREGS does not reach the universe of all potential women since those unable to work (due to disability, old age, etc.) may need some form of a safety net not available under NREGS. However, the government's vast network of safety net schemes is intended to address vulnerabilities of non-workers.

A bigger concern is that NREGS overlooks marginalized women who are able-bodied but unable to work e.g. due to social norms that restrict women's activities outside the home. One way to address this concern would be to put increased emphasis on selecting works that offer more "female-friendly" jobs. (E.g. some types of project may require more hard labor than others. The location of the worksite within the GP may also be an important

consideration for some women). Indeed, there is potential for NREGS to have a positive impact on the lives of such women provided the program is able to draw them into the labor force (Field et al. 2016).

BURDENS TO WOMEN OR REINFORCEMENT OF NEGATIVE GENDER STEREOTYPES

Program rules explicitly encourage female participation, including a gender quota and mandated pay parity, a key feature that may attract women to work for NREGS. Other design features explicitly try to appeal to the practical constraints that may keep women from working: work is provided in local villages, and childcare facilities are supposed to be made available if enough workers need them.

Given the manual nature of NREGS work, some households mentioned that the only households that would send women for NREGS work are those that are extremely poor and could not afford to do otherwise. While this doesn't necessarily reinforce a negative gender stereotype, it highlights how existing stereotypes constrain women's participation in the program.

Finally, our conversations with workers and potential workers highlighted that those controlling the program in practice – PRSes, sarpanches, mukhiyas, block-level officials, and their networks of local contractors – are overwhelmingly male. The one (marginal) exception we have seen to this rule is in the CFT block we visited in Nalanda district, where local SHG leaders played an important role in organizing female workers and addressing grievances. Yet even these women were working closely with male JEEViKA block staff to achieve these ends. To the extent that women must work through, and are at the mercy of, male power brokers to access work, payments, and address problems, NREGS *in practice* may do little to challenge gender stereotypes.

2.5 CONSIDERATIONS FOR WORKFARE

GENDER-SENSITIVE DESIGN

QUOTAS FOR WOMEN

NREGA mandates that at least one third of workers are women, and 2018-2019 guidelines require at least 50% of worksite ‘mates’, who help fill forms, measure works, and update job cards at worksites, be women.⁴⁹ As discussed earlier, in Bihar 51% of reported person-days were completed by women in FY 2017-2018. One caveat here is that these are *reported* person-days – what happens on the field may be different. However, based on self-reported FII data, women appear to participate in the program at roughly the same rate as men.

MALE CAPTURE OF WORK

As discussed above, the household-level entitlement in the NREGA may result in male household members utilizing the households’ entitled work days even if women would like to participate in NREGS. Since local officials also tend to be male, it may also be easier for men to learn about or access work opportunities, whether through closer network links to those providing work, better access to information about work from other males, or gender-based discrimination by local leaders who allot work. In contrast, NREGS’ mandated pay parity across genders may make men less likely to opt into NREGS work since they may be more likely than women to find relatively better paying opportunities elsewhere, given gender wage gaps in local labor markets.

REINFORCING GENDER STEREOTYPES

See the discussion on the previous page under “Burdens to Women or Reinforcement of Negative Gender Stereotypes”.

ADDRESSING CONSTRAINTS TO FEMALE PARTICIPATION THROUGH PROGRAM DESIGN

NREGS aims to address women’s participation in multiple ways, including its quota for at least one-third of workers to be women, its provision of work close to workers’ homes, and a policy to provide a creche facility if a minimum number of children are present at worksites. Work hours are also supposed to be flexible (although we have only heard about this occasionally happening in the field; most days were from 8am to 5pm), and

⁴⁹ Preference for this role is supposed to be given to women from SHGs.

women can supposedly sign up to work with family members or other women, which may also encourage their participation.

MONITORING AND ENFORCEMENTS OF MEASURES FACILITATING WOMEN'S PARTICIPATION

Government officials at all levels track the proportion of work-days completed by women, and the proportion of workers paid into individual accounts for women, and view higher numbers favorably. Beyond this and the efforts noted above taken in the 25 pilot CFT blocks, we are not aware of systematic efforts to monitor and enforce women's participation in NREGS in Bihar.

DO WORKS SERVE BENEFICIARIES?

RULES GOVERNING LABOR VS. MATERIAL SHARE

This topic is covered in “Core System Enablers: Process for Wage Payments and Fraud Monitoring and Protection”.

FEMALE PARTICIPATION IN DECISION MAKING

This topic is covered in “Burdens to Women or Reinforcement of Negative Gender Stereotypes”, “Quotas for Women”, “Male Capture of Work”, and “Reinforcing Gender Stereotypes”.

GENDER-SENSITIVE ASSETS

The NREGS guidelines suggest that officials should make sure to approve female-friendly works, including those designated to support SHGs-linked livelihoods promotion. In practice, it is not clear that gender-sensitive assets are prioritized over others. For additional detail on this topic, please refer to “Linkages to Livelihood Opportunities” and “Mechanisms Promoting Asset Accumulation and Investment”.

MEASURES TO IMPROVE HUMAN CAPITAL/EMPLOYMENT OUTSIDE THE PROGRAM

Project LIFE-MGNREGA was the only example of a program to our awareness that intentionally focused on improving workers' employment options outside of NREGS. It began in 2015-2016 but is no longer formally operational. For more details, please refer to “Linkages to Livelihood Opportunities”.

SAFETY AND SECURITY

PROVISIONS AGAINST SEXUAL HARASSMENT

Aside from the program's standard grievance redressal mechanisms, we are not aware of any specific provisions against sexual harassment.

SAFE TRANSIT TO/FROM WORKSITE

The National Rural Employment Guarantee Act entitles participants to work within 5 km of his/her residence. There seem to be official exceptions to this rule, such as allowing workers to work beyond 5 km away from their homes but within their home block, and there is supposedly a travel allowance to help workers commute to and from farther worksites.

In practice, workers we met with said that work is provided in their village, or close to their village, and no one had travelled to a worksite more than 5 km away from their homes. All female workers we interviewed reported walking to worksites within a kilometer of their houses, while male workers noted travelling a bit farther (typically, less than 2 km) to reach worksites. This suggests that considerations like worksite placement could matter for increasing female participation in the program.

2.6 CROSS-CUTTING ISSUES

GENDER CAPACITY BUILDING

While there seems to be a strong narrative around the importance of ensuring NREGS is female-friendly, and some explicit policies are in place, we are not aware of a clearly articulated strategy at the state or lower-level focused on how to train staff on gender issues and sensitivity. Further, although NREGS does very closely track female person-days worked under the program, additional indicators related to gender sensitivity and staff training are not systematically captured, analyzed, or shared.

VALUE TO STAKEHOLDERS

GOVERNMENT

From the government's perspective, NREGS provides multiple benefits: when it functions properly, it serves as a safety net to vulnerable households. Since the government provides this work, a well-functioning system also could theoretically improve the state-citizen contract, and evidence suggests there are electoral returns to implementing NREGS well (Zimmerman 2015). Finally, local investments can theoretically increase local agricultural productivity and economic activity. Recent research by Muralidharan et al. (2018) suggests some of these economy-wide returns are evident in areas where NREGS functions effectively.

However, there are potential downsides to NREGS implementation. First and foremost is the potential for a poorly implemented, corrupt program to undermine trust in the state or serve to line the pockets of special interests while not improving development outcomes in rural areas. Second, the nature of the program's underlying act obligates the government to provide fiscal space to fund NREGS. For those governments that prefer to focus their priorities differently and see a high opportunity cost to investing in NREGS vis-a-vis other policies or programs seen as more pro-growth, this obligation can be frustrating and lead to chronic underfunding.

Our sense is that the state and central-level bureaucrats with whom we interact are largely committed to a well-functioning NREGS, while elected officials at the centre view NREGS as a program they must support (or at minimum, not cancel) for political reasons. This less positive view of NREGS correlates with recent reticence to fully fund local demand for work.

FINANCIAL SERVICE PROVIDERS

FSPs often operate in rural areas under compulsion of the state, and generally consider this aspect of their business unprofitable. *Conditional* on being mandated to operate rural cash-in-cash-out networks, NREGS is valuable for FSPs: it allows them to integrate rural households and individuals into the financial system, building their rural customer base, and it increases funds flow into rural areas. NREGS payments also drive transactions, which provide revenue to FSP operators who work on commission. However, given the overall lack of profitability on the FSP side, there is a concern that providers will have little incentive to invest in improving customer service and infrastructure on their own accord.

BENEFICIARIES / NREGS WORKERS

From a beneficiary's perspective, a well-functioning NREGS provides a valuable safety net, especially in the lean season when agricultural work is scarce. When NREGS functions as intended, it increases beneficiaries' voices in the community (since they can provide input about potential works to undertake at the Gram Sabha), and integration into the formal financial system is a natural by-product of participation.

For women in particular, a properly-functioning NREGS provides work close to home, where women are able to work with other women. Childcare is supposedly provided, increasing women's ability to join work. As outlined above, our qualitative research in Bihar found many challenges that undermine NREGS' value proposition to beneficiaries and women in particular. Perhaps unsurprisingly, some women we met saw limited value to participating in the program or expressed strong frustration with program implementation. On the other hand, given that NREGS work is sometimes the only remunerative employment available to women, many women during our fieldwork expressed an interest in working for NREGS, if it was offered to them.

PROGRAM QUALITY

ADEQUATE CHANNELS OF COMMUNICATION WITH CLEAR RIGHTS, ROLES, AND RESPONSIBILITIES

In part because NREGS is a well-established program, and because it is centrally managed, there is extensive communication from the central government on how the program should function, and what actors are responsible for which program components. Communication with officials is strong overall, and stronger at higher levels than at lower levels – although continued improvements in sharing actionable data with implementing and supervisory officials may further improve implementation (see, for example, Dodge et al. (2018) and the PayDash intervention).

In contrast, direct communication with beneficiaries largely takes place through local officials, who interpret program rules and policies in ways that best suit them and their constituencies, potential workers or otherwise. As a result, potential workers' awareness of rights, roles and responsibilities is sometimes low, especially among women, as previously described in the "Communication" section.

ROBUST PROGRAM DESIGN AND SYSTEMS

NREGS has a robust design framework. Review systems at the center, state, and district are institutionalized and regular, and officials are typically aware of implementation expectations. The guidelines for NREGS are both detailed and regularly updated. The design and systems also are updated year-to-year as NREGS matures and officials try to address new challenges or priorities.

The data systems for NREGS, while cumbersome, capture and store a huge amount of microdata on all days worked, by whom, and for how much money, across the entire country – and officials are accustomed to using that data to track implementation against targets agreed to with higher-level administrators. The backend data generated by the program is generally more useful than the limited number of variables available through the MIS for officials and the public, which are often defined using somewhat arbitrary or unclear definitions. Development of new indicators for broader consumption from the microdata is a laborious task that requires support of the Ministry of Rural Development's National Informatics Centre (NIC), making additional analysis more difficult for the states unless they maintain their own separate data systems and teams.

While payments systems function, they have complexities that can lead to delays, as discussed earlier in this document (please refer to "Core System Enablers: Public Financial Management System and NREGS").

And as is quite clear through the rest of this report, while in theory the program design is robust, a major challenge facing the program in Bihar is how to translate design into practice.

PLAN FOR PROGRAM MONITORING AND EVALUATION

Officials at all levels are monitored against predetermined targets for indicators like person-days generated, percent of days provided to women or marginalized groups, works undertaken and completed, timely wage payments, and much more. The states undergo a quarterly check-in with the central government, and district officials in Bihar participate in monthly review meetings (in addition to one-off meetings and trainings) with state officials. Lower-level monitoring varies by district but is typically more frequent than once per month, and officials use WhatsApp regularly to communicate with subordinates and colleagues about implementation goals, challenges, and accomplishments. These

meetings similarly focus on lower-level entities' progress against targets and require officials to provide an explanation for their failure to meet these pre-specified targets.

One challenge in NREGS arises in part due to this extremely close monitoring, and the pressure officials face to achieve targets. A widely cited example of how indicator tracking can result in perverse incentives for officials relates to person-days worked/labor budget expenditures. Since the NREGS wage rate in Bihar is lower than actual agricultural wages for men, local level officials at the Gram Panchayat often report it is difficult to find individuals willing to work for the going NREGS wage rate. Facing pressure to generate a projected number of person-days for the program each year, officials may then recruit workers to work at a higher wage rate than officially sanctioned. These individuals work fewer days than noted in muster rolls, ensuring the local officials are able to pay the workers a higher wage while meeting their labor budget expenditure and (falsified) person-days targets.

MONITORING AND EVALUATION INDICATOR QUALITY

While many indicators regularly tracked by NREGS officials make sense and are appropriate, others take a relatively incomplete view of the goals of the program. One example here is that women's participation in NREGS is overwhelmingly tracked through person-days completed by women. While this is certainly an important metric, there is no examination or understanding of the proportion of *workers* (rather than worker-days) that are women, the extent to which women work alongside or with their husbands, and there is no regular monitoring of the female-friendly amenities that the program is supposed to provide.

Another major issue is the clear disconnect between NREGS on paper/on the MIS and NREGS as it is implemented on the ground. While the fact that female participation according to the MIS is on the rise is encouraging, MIS data cannot speak to whether this is driven by fraud (e.g. local leaders may find it easier to exploit women as ghost workers, especially now that wage payments are channeled directly to worker bank accounts) or real gains in relative female engagement. While the social audit structure offers a potential way to collect more "on-ground" measures of program performance, that system is poorly funded and supported. Further, misreporting during the social audit process is a real risk; mitigating this risk would require careful monitoring and attention to staff incentives.

Ultimately, this makes a detailed and comprehensive analysis of women's participation difficult, particularly when relying solely on relatively accessible NREGS administrative data.

3. THE WAY FORWARD

To synthesize our key takeaways on Bihar NREGS’s performance on the D3 criteria, we developed a matrix, shown below, that displays our assessment of the states’ performance on specific criteria and whether each criterion should be considered a low, medium or high priority issue to address.

Figure 22. Overview of D3 Assessments and Priorities

			Assessment	Priority
Digitize	Reliability	Payments Networks	Needs Improvement	High
			Adequate	Low
		Program Systems Communications	Needs Improvement	High
			Poor	High
	Accessibility	Proximity	Good	Low
		Affordability	Good	Low
	Flexibility	Control	Needs Improvement	Low
		Privacy Choice	Adequate	Medium
	Privacy and Security	Privacy	Good	Low
		Fraud	Adequate	Medium
Accountability		Poor	High	
Program awareness and recourse		Payment process	Poor	High
		GRM: Awareness	Poor	High
		GRM: Functionality	Poor	High
			Poor	High
Direct	Individually owned		Good	Medium
	Access and Control		Good	Medium
	Choice		Good	Low
Design	Coverage	Targeting and eligibility	Good	Low
		Financing	Needs Improvement	High
		Transfer size	Adequate	Low
	Services and Linkages	Duration and exit	Good	Low
		Across programs	Needs Improvement	Medium
	Mitigation of Adverse Effects	Within communities	Needs Improvement	Medium
		Onboarding	Good	Low
Cross-Cutting Issues	Gender Capacity Building	Conditionality	N/A	N/A
		Gender sensitivity	Adequate	Medium
	Value to Stakeholders	Plan quality	Poor	Medium
		Plan reach	Poor	Medium
	Program Quality	Government PSPs	Adequate	High
		Beneficiaries	Adequate	Medium
		Comms: within govt.	Needs Improvement	High
		Comms: with workers	Good	Low
	Effective PFMS	Robustness/flexibility	Poor	High
		M&E	Adequate	Low
		Needs Improvement	Medium	
		Needs Improvement	High	
Core System Enablers	Financial Inclusion Policy and Regulation	Account menu	Good	Medium
		KYC	Good	Low
		Security and Data Privacy	Adequate	Medium
	Network Reliability and Infrastructure	Networks	Adequate	Low
		FSP Payment Systems	Adequate	Medium
		Infrastructure	Adequate	Low

First, a quick word on areas that we think are *not* top-priority for reform: Our team entered this exercise expecting that women’s financial inclusion would be a significant barrier to DBT access for women in Bihar. However, the progress the state has made in expanding financial access points and directing NREGS wages into individual accounts suggests that women’s access to financial services is both relatively strong and improving. While it is important for the state to continue its forward momentum in this area (here potentially high-return initiatives include focusing on improving the quality of service provision, especially at CSPs, and expanding JEEViKA’s bank mitra and bank sakhi models), we think that addressing other, more binding constraints is necessary to transform women’s access to NREGS and wages through DBTs.

In contrast, we see several crucial areas with significant room for improvement, high priority for reform, and scope for transformative impact:

First, despite ongoing improvements in payment systems, important gaps exist in the reliability, flexibility, and the design and use of data in payment systems. Gaps include the lack of a digital trail for some stages of the payment process, which limits accountability and makes it difficult to track how long it actually takes (from a worker’s perspective) for payments to be made. Increasing transparency in the payment process, and reworking processes to avoid late stage payment rejections are other areas that could be quite beneficial to workers. Here note that some – but not all – of these reforms may require support from the central government.⁵⁰ Beyond this, there has been little attention to date in ensuring materials payments are paid in a timely manner. Currently, a sarpanch or mukhiya who purchases materials for a work has little guarantee that these purchases will be reimbursed in a timely fashion, which in turn creates incentives to (a) skim from wage payments to cover materials costs and (b) focus on projects that require limited capital (and may also have a lower social return for the community). Given the amount of fraud in the system, incentives should be realigned to make it as easy as possible for local leadership to “do the right thing”.

Second, there is major scope to address the information gaps that keep women in Bihar from accessing NREGS as intended. Despite their frequently-stated interest in working, women are largely unaware of the rights afforded them under the NREGA, and they rely on local leaders to provide them with work rather than demand work as they want it.

⁵⁰ One very clear constraint is the shortage of central funds for NREGS and recent unpredictability in financing, which in turn creates payment delays. While this is an important problem, it is not one easily influenced through state-level reforms. The elections of 2019 will likely determine the level at which these problems are addressed at the national level in the short-term.

Alongside these significant information gaps, we regularly encountered extremely poor accountability systems in rural villages. There is a clear need for systems to request work and register grievances that circumvent local power structures, rather than working through them. Instituting well-publicized independent demand and grievance redressal systems will likely increase the value of NREGS for potential workers and may empower women in a variety of ways that spill over into other economic and social outcomes.

For both information gaps and accountability shortfalls, we see important potential synergies with JEEViKA's SHG platform (and the CFT model), which can help connect women to information, train them on their rights and how to independently access their wages, and hold local leaders accountable for providing work. Successful reform here would confer dual benefits: it would strengthen program functioning while also elevating and empowering women as agents of change, which is sorely needed given Bihar's current gender landscape.

A key question for a state like Bihar, where budgets are relatively small, implementation capacity is limited, and the need is great, is how to prioritize female-friendly NREGS reforms. While we clearly suggest some issues should be treated as higher-priority, we caution against assuming that successfully addressing any given high-priority constraint will resolve NREGS implementation challenges.

Previous evidence from similar contexts teaches us that one-off reforms can fall flat: consider, for example, Dutta et al. (2014)'s efforts to improve villagers' knowledge of NREGS. Even though the intervention "worked" in that villagers subsequently knew more about the NREGS, they were not more likely to access work. Similarly, efforts to address corruption may be undermined by compensating behavior if incentives are misaligned or comprehensive monitoring systems are not in place (Olken 2007, Banerjee et al. 2008).

We believe that taking a system-wide perspective is needed to craft reforms that work. Consider, for example, the idea of providing women with information and empowering them to register demand for work through a system that circumvents local leaders. This may only result in disillusionment and conflict in villages if it is difficult for leaders to implement NREGS according to program rules. For example, if a mukhiya needs money *before* a project starts to secure the necessary materials, s/he may refuse worker demands regardless of the new system, which could create further conflict in the village. Or, she may cover the cost of materials by declaring more ghost workers, which would exacerbate state-level funding crunches and further reinforce the notion that local leadership is not to be trusted.

There are important challenges to address in Bihar. A common theme throughout this report has been the extent to which the day-to-day realities experienced by women working for NREGS, or those that may want to work for NREGS, are at odds with the

vision of the program. Fortunately, they are also at odds with the aspirations of state officials in Bihar, who are committed to identifying and addressing gaps in women's access to NREGS through evidence-based policy reform. We are therefore optimistic that this report will serve as not simply a summary of current challenges, but also a platform for catalyzing a revitalized NREGS that serves the poor and elevates the status of women in Bihar.

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APPENDIX: EVOLUTION OF NREGS AND ITS PAYMENT PROCESSES

The following outlines how payments to NREGS workers have evolved since the program's inception:

2005: National Rural Employment Guarantee Act passed in parliament.

2006: NREGS implemented on a pilot basis. Originally rolled out to the poorest districts, as specified by the central government, in February 2006, with an additional 130 districts becoming part of the program in April-May 2017.

2008: NREGS becomes operational across India in April 2008, and government directs all payments to be made into bank accounts. While the transition was gradual, DBT into bank or post office accounts is essentially universal as of 2018.

2012: NREGS transition from paper muster rolls to e-muster rolls.

2016: Transition to National Electronic Funds Management System (NeFMS), enabling NREGS to make payments from the state bank account directly into worker accounts. When an FTO is approved, PFMS transfers money from the national account into the state account, and then the money moves from the state account straight to the workers' accounts. The goal is to transfer money to the workers' accounts no more than two days after an FTO is approved by the second signatory. In the official workflow it is to take 8 days from the last day of work per the e-muster up until the FTO is approved, after the second local signatory signs off on the payment. Additionally, there are still labor budget limits for each state, as the NeFMS system constrains the amount for which each state can "bill" the central government.

2016-2017 (FY): Bihar joins NeFMS.

2017: Government announces that enrollment in Aadhaar is mandatory for NREGS workers and there is provision for people to work and get paid as they wait for the number. However, what this means in practice is unclear, particularly as the government has also stated that Aadhaar numbers are not mandatory to get NREGS wages and workers are meant to give informed consent to have their Aadhaar number seeded.

2018: Recently, the Supreme Court has ruled that Aadhaar linking and seeding is *not* mandatory to receive government payments. As such, it is Aadhaar-linking is not compulsory for NREGS workers to receive payments. The government of Bihar is currently continuing to make payment to bank accounts that both are and are not Aadhaar-linked.