

# On Her Own Account: How Strengthening Women's Financial Control Impacts Labor Supply and Gender Norms\*

Erica Field  
Duke University

Rohini Pande  
Yale University

Natalia Rigol  
Harvard University

Simone Schaner  
University of Southern California

Charity Troyer Moore  
Yale University

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## Abstract

Can control over earned income incentivize women to work and influence gender norms? We report on a field experiment that randomly varied whether rural Indian women received individual bank accounts and whether their wages from a workfare program were deposited into these accounts versus the household head's account. A cross-cutting treatment varied training on account use. Relative to those offered accounts, women who also received direct deposit and training increased labor supply. In the long run, gender norms liberalized: direct deposit and training increased women's acceptance of female work, and both genders perceived fewer social costs to female work.

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# 1 Introduction

Female labor force participation (FLFP) remains low and stagnant in many emerging economies, with India a particularly stark example. Despite robust economic growth, India’s FLFP has declined from 32 percent in 2005 to 21 percent in 2019, making Indian women some of the least employed in the world (ILO, 2020). Yet, nearly one third of Indian housewives express an interest in working (Fletcher et al., 2017). Simply bringing these latent workers into the labor force would effectively double Indian FLFP.<sup>1</sup> What stops so many women who want to work from joining the labor force?

One possibility is conservative norms around work roles, a phenomenon that extends beyond India: World Values Survey data spanning 60 countries report a third of respondents said that when women earn more than husbands, it causes problems in the household, and nearly half state that children suffer when their mother works.<sup>2</sup> Other research finds that in some settings, a wife who works outside the home is a source of social stigma or shame for her husband (Boudet et al., 2012; Bernhardt et al., 2018). Arguably, when internalized by women, such norms can directly lower their utility of working (Akerlof and Kranton, 2000). And, when internalized by men, these norms may reduce women’s work through intra-household channels (Bertrand et al., 2015).

In this paper we ask whether policies that strengthen a woman’s control over own earnings can increase her ability to work outside the home when confronted with such norms, and, in turn, shift norms around women’s work. We leverage a large-scale randomized controlled trial in 197 village clusters, known as gram panchayats (GPs), in northern Madhya Pradesh (MP)—an area with restrictive gender norms.<sup>3</sup> Our study was conducted in partnership with state and bank authorities and focused on India’s federal workfare program, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), which provides rural households with a given amount of work per annum at a fixed wage.

Because the vast majority of women lacked individual bank accounts prior to the program, the status quo was for female workers’ MGNREGS wages to be deposited into the male household head’s bank account. Hence, to increase women’s control over their own earnings, in a random subset of sample GPs we worked with banks to open individual accounts for

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<sup>1</sup>Drawing women into the labor force may address other gender inequities. Female employment has been shown to delay marriage, increase female work aspirations, improve child health, and reduce the male:female sex ratio (Qian, 2008; Atkin, 2009; Jensen, 2012; Heath and Mobarak, 2015). In the United States, rapid growth in female labor force participation preceded important changes in norms regarding gender roles in both the economy and the household (Goldin, 2006).

<sup>2</sup>Based on World Values Survey data from over 86,000 respondents in 60 countries, 2010 through 2014.

<sup>3</sup>MP is the sixth largest and eighth poorest of India’s 29 states, with adult male and female rural labor force participation rates of 84 percent and 29 percent (close to the national averages) (RBI, 2016). GPs are the lowest level of government in India, and typically comprise 2-5 villages in MP.

women. In half of these GPs, we designated these accounts to receive direct deposit of women’s MGNREGS wages. Finally, we cross-randomized a short training program that gave women basic instructions for using last-mile banking providers.<sup>4</sup> By increasing women’s control over an important financial resource, we expect direct deposit and training to have increased women’s bargaining positions in their households.

This experimental design lets us isolate the effect of increasing women’s control of own income while holding financial inclusion constant by comparing outcomes for women who only received bank accounts (“accounts only”) to those who additionally received direct deposit of MGNREGS wages and bank account training (“direct deposit and training”).<sup>5</sup>

Using a combination of administrative data and household surveys, we obtain three sets of results. First, providing newly-banked women with direct deposit and training led to sizeable gains in female financial inclusion. We observe 0.33 and 0.13 standard deviation unit increases in an account use index and a banking autonomy index, respectively. The former focuses on a woman’s account activity while the latter captures whether a woman goes to the bank on her own, is comfortable transacting independently, and prefers receiving wage payments into her account. These increases in autonomy reflect a significant increase in women’s mobility and agency.

Second, direct deposit and training alter household labor supply decisions. Treated women scored 0.11 standard deviation units higher on an index of labor market engagement with gains in both public and private sector work. In addition, husbands of these treated women scored 0.17 standard deviations higher on an index of public labor supply. Among women, treatment effects are larger (at 0.21 standard deviation units for the overall index and 0.28 standard deviation units for the private sector work index) among “socially constrained” women who were least attached to the labor market, proxied by never having worked for MGNREGS at baseline. These women are less likely to work, rank lower on an empowerment index (which includes ability to make purchases independently, decision-making power within the household and mobility), and their husbands are more likely to subscribe to norms against female work. Direct deposit and training increased the empowerment index among socially constrained women by 0.11 standard deviation units, with impacts growing in scope and magnitude over time. This effectively closed the empowerment gap between constrained and unconstrained women.

Finally, three years later, direct deposit and training liberalized gender norms. Using attitudinal and vignette-based measures, we separately measured actual beliefs and percep-

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<sup>4</sup>“Last-mile” banking is defined as access to a bank kiosk within 5 kilometers of home.

<sup>5</sup>While our analysis disaggregates by treatment arms, we focus our discussion on the combined effect of direct deposit and training, which almost always exceeds the effect of just direct deposit or just training.

tions of community members’ beliefs about women and work. Stated beliefs (actual norms) of women offered direct deposit and training became more progressive than women in accounts only GPs, reflected by a 0.10 standard deviation units increase in our actual norms index. Point estimates for men are close to zero and statistically different from those for women. In contrast, perceived norms liberalized among both genders by 0.08-0.09 standard deviation units. Male impacts are driven by greater perceived acceptance of working women’s husbands suggesting that women’s ability to work is, in part, constrained by male misperceptions of the stigma they would face.

Relative to accounts only, the direct deposit and training treatment did not alter account ownership or market wages. Hence, contrary to what we find, a unitary household model would predict that labor supply decisions should be unchanged.<sup>6</sup> Consider, instead, the collective household model, which allows for differences in the husband and wife’s spending preferences. Direct deposit and training strengthened a woman’s control over her earnings and thereby, arguably, raised her bargaining power within the household. In a collective household model, increased bargaining power for the woman raises the share of household resources she controls (with a corresponding decline in resources controlled by her husband). Consistent with our findings, this model predicts a treatment-induced negative income shock for men, and a corresponding increase in male labor supply. However, women—contrary to what we observe—should work less as increased resource control operates through an income effect.

We identify two potential explanations for direct deposit and training’s positive effect on female labor supply. First, the influence of gender norms within a collective (efficient) household bargaining model. Specifically, conservative norms can cause a woman and her husband to incur a utility loss when she works. A gain in a woman’s bargaining power (by paying her wages into her own account) now has the additional effect of allowing her to place more weight on her labor supply preferences relative to her husband’s. This labor market entry among women who previously stayed at home to respect their husbands’ wishes can account for our observed labor supply increase. Second, the household may be inefficient, such that a share of women’s earnings are appropriated by their husbands (Heath and Tan, 2015). If direct deposit and training reduces “wage taxation” by husbands, then this could also create a positive labor supply response as women enter the labor market in response to higher post-tax wages. Given the nature of the intervention we expect taxation of MGNREGS wages to decline more, which could induce substitution from private sector to MGNREGS work.

Both models predict that impacts will be largest on the extensive margin—that is, among

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<sup>6</sup>We find no evidence that the direct deposit and training treatment eased savings constraints.

women least attached to the labor market at baseline—which is what we find. Both models are consistent with men losing bargaining power (or access to income) and, therefore, increasing their labor supply. Two pieces of evidence, however, point to the importance of norms as a channel. First, the wage taxation model would predict that the main female labor supply impact will be driven mostly by MGNREGS (since the interventions had no effect on private sector payments). However, we find no evidence of MGNREGS-private sector substitution, and the long-run labor supply impacts for women are driven by private sector work. Second, models of social learning and evidence on gender norms and female labor supply in richer countries, suggests that women’s entry into the workforce can, in the longer run, induce more progressive gender norms. Consistent with this, we find that direct deposit and training shifted norms internalized by both genders.

To date, much of the work on FLFP norms in economics has focused on describing norms, their transmission, and their consequences.<sup>7</sup> A smaller literature studies the impact of interventions that explicitly attempt to change actual or perceived norms.<sup>8</sup> Here, perceived norms are typically thought to be easier to change than actual norms, which are often tied to deep-seated cultural beliefs (Tankard and Paluck, 2016). We demonstrate that large-scale policies that alter behavioral incentives, but do not explicitly target norms, can shift actual norms over a relatively short time horizon.

Recent evaluations of social protection program design modifications typically focus on delivery efficiency (e.g. Muralidharan et al. (2016); Aker et al. (2016); Banerjee et al. (2016); Bachas et al. (2016) examines impacts on financial inclusion). Our results demonstrate how gender targeting can impact not only program outcomes (e.g. work days provided through MGNREGS) but also broader economic outcomes that have the potential to outlive the program (e.g. private-sector work, empowerment, and gender norms).

Finally, our work is linked to a body of literature that shows how conditional cash transfer programs targeting women can increase female bargaining power (Almås et al., 2018; Bobonis, 2009, 2011; Attanasio and Lechene, 2014). To the best of our knowledge, none find increases in female labor force participation, possibly because the income transfers are sizable enough to reduce labor supply (Skoufias et al., 2013; Hasan, 2010). In contrast, other work finds that productive asset transfers (coupled with additional support) can increase the labor supply of women in very poor households across a range of country contexts (Bandiera et al., 2017; Banerjee et al., 2015; Bedoya et al., 2019). However, none of these studies ask whether the programs alter norms limiting women’s work.

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<sup>7</sup>See, e.g. Fernandez et al. 2004; Fernandez and Fogli 2009; Alesina et al. 2013; Bertrand et al. 2015.

<sup>8</sup>See Bursztyn et al. (2018) on FLFP norms, Dhar et al. (2018) on gender norms, and Green et al. (2019) on norms related to gender-based violence.

The rest of the paper proceeds as follows: Section 2 describes gender norms, work opportunities, and MGNREGS in our study context, and then our experimental design. Section 3 provides a conceptual framework for evaluating treatment effects and our empirical strategy. Section 4 discusses treatment impacts on financial agency, labor supply and empowerment. Section 5 evaluates the longer-run impacts on gender norms and Section 6 concludes.

## 2 Experimental Context and Design

Our study takes place in 197 rural villages spread across four districts of MP. In this section we first provide an overview of work opportunities in the area, then review gender norms, and finally describe the experiment.

### 2.1 Rural Work Opportunities in India

Broadly, rural less-educated Indians - including those in our study setting - have two work options: private-sector work (self-employment and wage labor) and MGNREGS work.<sup>9</sup> The most common off-farm private-sector employment for both genders is seasonal casual wage labor for a fixed daily or weekly wage, paid in cash. This work typically occurs on others' land or construction sites and almost always pays more per day than MGNREGS work.

MGNREGS entitles rural households to up to 100 days of work per year. On paper, the program is “demand-based”: individuals place work requests with their local leader, who is obligated to arrange work opportunities. On the ground, the system is typically supply-driven: leaders schedule work projects with some notion of worker demand (e.g. more projects occur in lean seasons), but not all households receive the opportunity to work (Dutta et al., 2012), and the 100 day cap is rarely binding. Nevertheless, MGNREGS is one of the largest household-level redistribution programs in India and, indeed, the world (Subbarao et al., 2012), with annual participation rates frequently above 50 million households.

In 2008, states were asked to transition from cash to electronic payment of MGNREGS wages into beneficiary-owned bank accounts. Since female household members frequently did not have their own accounts, the initial status quo was to deposit wages for all working members of a household into a single account, almost always owned by the male head of household. Thus, despite other female-friendly features, MGNREGS payment architecture

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<sup>9</sup>In our setting, self-employment mainly consists of individuals working on their land or engaging in animal husbandry – only four percent of women and seven percent of men reported any business activity in the year before our long-run survey.

runs the risk of discouraging female workers.<sup>10</sup> Although the Minister of Rural Development announced in 2012 that a woman’s MGNREGS wages should be deposited into her individual bank account (Chatterji, 2016; UNWOMEN, 2012), administrative data show that, relative to the national average, MP was slow to change. In our study areas, rates of payment into individual bank accounts among female workers remained below 20 percent until 2016.<sup>11</sup>

## 2.2 Gender Norms Regarding Work and Mobility

Survey data show that gender norms are a key constraint on Indian women’s agency, especially when engaging with actors external to the household. The nationally representative 2011-2012 India Human Development Survey found that 52 percent of adult women stated that their husband has the most say as to whether she works. Our survey data suggest that our sample is even more conservative: in the control (status quo) group 70 percent of women stated their husband was the primary decision-maker for their work, and just half of women had gone to the local market alone in the past year.

Figure 1 graphs the distribution of actual and perceived gender norms across control GPs.<sup>12</sup> Panel A plots actual norms, specifically the GP-wise distribution of the share of men (gray bars) and women (white bars) who agree with the statement “women cannot go out to work”. In the average GP, 23 percent of women and 34 percent of men agree with this statement. There is substantial variation in average responses across communities. As norms are often maintained within caste and subcaste groups (Srinivas, 1995; Eswaran et al., 2013), this likely reflects—at least in part—cross-GP variation in caste mix.

To capture perceived norms, we asked women what fraction of community members would speak badly about a woman who works, and we asked men what fraction would think a husband is a bad provider if his wife worked.<sup>13</sup> As shown in Panel B, average perceived costs are non-trivial and higher for men: while women anticipated social sanctions from 39 percent of their neighbors, men anticipated social sanctions from 56 percent of their neighbors. Given the substantial role that men play in deciding whether their wives work, perceived norms among men are likely to be important determinants of female labor supply in this setting.

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<sup>10</sup>MGNREGS mandates gender wage parity and provides work inside rural communities, an attractive proposition for mobility-constrained women.

<sup>11</sup>Appendix Figure A1 compares the nationwide annual share of female MGNREGS workers whose wages are directly deposited into their individual account with MP as a whole, and our study districts. In MP, rates of individual payment have picked up only since FY 2015-16.

<sup>12</sup>To minimize sampling variation, we limit the analysis of GP-level norms to control GPs with at least 20 male and female surveys.

<sup>13</sup>To simplify the question for respondents, the survey asked them to report a number out of 10.

## 2.3 Experimental Design

At the outset of our study, MP was in the midst of a state-wide push to ensure that all citizens had access to a “last-mile” bank kiosk. In our study areas, bank accounts could only be accessed at a kiosk with an authenticated fingerprint.

While the banking drive coupled with the national directive to transition MGNREGS to individual direct deposits *theoretically* enabled women to have MGNREGS wages directly deposited into private, easy-to-access, secure accounts, officials were slow to target women. Thus, when we started the study in November 2013, we had wide scope to experimentally vary women’s access to individual bank accounts and whether those accounts were set up to receive direct deposits of MGNREGS wages. In our setting, enabling direct deposit facilities meant replacing the previous bank account number attached to a worker’s name in the MGNREGS system with a new bank account number.

### A. Sample

We purposely chose a cluster of four northern MP districts marked by severe gender inequities: sex ratios in these districts range from 0.84 to 0.90 females to every male (India Census, 2011) and, according to the 2015-2016 Indian DHS survey, just 36 percent of women in these districts report being able to travel outside the village alone compared to a national average of 48 percent. Appendix Figure A2 provides a timeline of experimental activities. First, we identified all GPs with functional kiosks in the study districts. We then randomly assigned these 199 GPs to one of three groups: 66 GPs formed the control group, 68 GPs were to receive bank accounts for eligible women, and 65 GPs were to receive bank accounts and direct deposit of MGNREGS wage into their new accounts.<sup>14</sup>

Between November 2013 and January 2014, we conducted a baseline census of 14,088 households listed as having worked for MGNREGS in the previous year. A married couple was eligible for inclusion in the study if at least one household member reported having ever worked for MGNREGS and the wife did not have an individual bank account.<sup>15</sup> We identified 5,851 eligible couples and two GPs without any eligible couples. These two GPs (both assigned to the control group) were dropped, leaving us with 197 GPs.

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<sup>14</sup>In drawing the sample frame, we ranked districts by sex ratio and literacy gender gap, and chose the four worst performing districts (Gwalior, Morena, Sheopur, and Shivpuri). Next, GP randomization (done in Stata) was stratified by whether, at baseline, the GP had: below/above median number of households with joint bank accounts linked to MGNREGS direct deposit, below/above median percentage of individual MGNREGS accounts, and whether the GP was located in Sheopur district.

<sup>15</sup>As our census sample was drawn from MGNREGS administrative records, eligibility required positive MGNREGS work history according to administrative data *and* the household report.

## B. Treatments

**Bank Accounts.** We individually informed eligible women in treatment GPs that they could open a bank account at the bank kiosk, free of charge, during an upcoming account opening drive. On the day of the drive, our team returned to the household to invite the woman to visit the kiosk with her documents (proof of address and a passport-sized photo) and open an account. The study team facilitated the account opening process at the kiosk.

**Direct Deposit.** In the 65 GPs selected to receive the direct deposit treatment, our team submitted a request to enter each woman’s newly-opened individual bank account into the MGNREGS administrative system—meaning her wages would be directed into her new account rather than a household account. Women provided consent to initiate this process and were informed of its implications.<sup>16</sup>

**Accounts Training.** Regulatory guidelines required banks to conduct new customer information sessions designed to build trust in formal banking and explain kiosk services (RBI, 2016). However, these sessions were rarely conducted, and our qualitative work found that women had a poor understanding of how to use their accounts. We therefore supplemented our design with a training session for new account holders inspired by regulatory guidelines.

In GPs selected for training, following the account opening camps, eligible women were invited to a group-based information session about the bank kiosk and their account. During the two-hour session, a facilitator used printed flashcards to tell the story of how a fictional woman came to use a kiosk account. The aim was to orient women to the kiosk and provide relevant information such as what an account could be used for (including saving and receiving government-sourced benefit transfers), why kiosk deposits were safe and the time and cost savings of kiosk transactions.

The training was randomized as a third, cross-cutting treatment in half the GPs selected for bank accounts or bank accounts and direct deposit. This created four treatment arms: accounts only, accounts and direct deposit, accounts and training, and accounts, direct deposit, and training.

**Intervention Catch-Up** Our study period overlapped with national changes to financial inclusion policies. In August 2014, after our treatments were implemented, the federal government announced a financial inclusion campaign, known as Pradhan Mantri Jan Dhan

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<sup>16</sup>Women could sign up for direct deposit on their own but, in practice, this was difficult because it required filing a formal request at an administrative (block) office outside their village. While GP-level officials could enable direct deposit facilities on villagers’ behalf, they had limited incentives to do so.

Yojana (PMJDY). By the time of our long-run survey in 2017, 63 percent of women in the control group – all of whom were by construction unbanked in 2013 – had a bank account.<sup>17</sup> Additionally, the share of women with individual account and direct deposit facilities increased steadily over our study period (recall Appendix Figure A1). In 2014, just 11 percent of women in our study districts were signed up for direct deposit into an individually-owned account. This share increased to 16 percent by the time of our short-run survey in 2015, and doubled to 32 percent by 2017. Thus our treatment effects reflect the *additional* effect of our interventions beyond these government efforts.

#### **D. Data and Randomization Balance Check**

Our evaluation uses multiple data sources. The first source is the baseline census of households in each GP, which rapidly screened households and collected information on bank account ownership and MGNREGS participation.

Second, we conducted two household survey waves, roughly one and three years after the first round of account openings (between August and December 2015 and April and October 2017, respectively). We reference these as the short-run and long-run surveys. We sampled 4,500 eligible women and their husbands from the census (stratified by GP) who could be matched to the MGNREGS system at the time of the short-run survey wave. Attrition was low and did not differ by treatment arm: we interviewed 93 and 91 percent of sampled women during the first and second survey waves, respectively (Appendix Table A1).

Each survey wave included modules on bank account ownership, banking activities, and labor market outcomes. The female survey collected additional data on proxies of female empowerment such as decision-making and mobility. We shortened the banking modules in the long-run survey to undertake new data collection on norms governing female work.

The third source is administrative data: Banking data for accounts opened are available from one of our two banking partners; this partner serves 81 percent of our sample. The data run from the date of account opening until April 30, 2018, and include a record of every transaction posted to 1,603 female-owned accounts. MGNREGS administrative data from the program management information system are available through November 17, 2017, and include information on when an individual worked, how much s/he was paid, and what account the wages were deposited into. We assume a woman was paid into her individual

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<sup>17</sup>By December 2017 over 300 million bank accounts (27 million in Madhya Pradesh) had been opened <https://data.gov.in/resources/stateut-wise-number-pmjdy-accounts-20122017-ministry-finance>. Accessed May 28, 2019. Under PMJDY, banks offered low-cost accounts with standardized benefits, including access to a debit card, accident and life insurance, and an overdraft facility. These PMJDY accounts featured more benefits than the no-frills accounts opened in our intervention.

account if no other household member shares that account number.<sup>18</sup>

Appendix Table A2 shows that the randomization was successful and predetermined individual, household, and GP-level characteristics specified in our pre-analysis plan are balanced across treatment arms.<sup>19</sup> The p-value from an F-test of whether the treatment group coefficients are jointly equal to zero (column 6) shows that only two out of 23 p-values from the joint test are significant at the 10 percent level or less. Column (1) provides summary statistics for our primary reference group: the “accounts only” group. On average, eligible women (Panel A) were 40 years old at the first follow up and just 11 percent reported that they could read and write. During the census 63 percent of women reported that they had worked for MGNREGS at least once before. On average, husbands are nearly five years older and have 3.2 more years of education than their wives.

### 3 Framework

We discuss, in turn, the conceptual and empirical frameworks that underlie our analysis. First, we use a simple model of female labor supply to identify the intra-household effects of our intervention. We focus on the direct deposit and training intervention which, among our treatment arms, maximized a woman’s control over her earned income: her MGNREGS wages were sent to her own account (instead of her husband’s) and the training gave her the skills needed to operate that account. Next, we outline our empirical strategy, which allows us to identify the combined effect of direct deposit and training, as well as the impacts of providing each component on its owns.

#### 3.1 Conceptual Framework

From an intra-household perspective, greater financial self-sufficiency should improve a woman’s outside option and, therefore, bargaining power within the household.<sup>20</sup> Below, we examine implications for women’s labor supply and agency outcomes followed by longer term impacts on gender norms.

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<sup>18</sup>These data were scraped in 2016 and 2017 from the public MGNREGS website. The data structure capturing account numbers changed between the 2016 and 2017 scrapes. The Variable Construction Appendix – Section D – provides additional detail on how we infer individual account ownership from available account number data in the two scrapes.

<sup>19</sup>The PAP is available at <https://www.socialscienceregistry.org/trials/115>. We were unable to obtain data on two pre-specified controls: GP median income and the below poverty line ratio. All regressions control for strata and district fixed effects.

<sup>20</sup>Given the rarity of divorce, the relevant outside option would be resorting to a non-cooperative equilibrium where spouses maintain “separate spheres” and do not share resources (Lundberg and Pollak, 1993).

## A. Model Setup

**Preferences:** The household consists of a husband and wife; spouse  $i \in F, M$  has utility function  $u^i(c^i, l^i)$  where  $c^i$  denotes private consumption and  $l^i$  leisure.<sup>21</sup>

**The Outside Option:** We assume the woman’s outside option – and her resulting bargaining power – is a function of the vector  $z$ , which could include multiple factors, such as non-labor income shares, relative wages, and the strength of the woman’s social network in the village. We assume direct deposit and training increase bargaining power by increasing financial control and agency.

**Norms:** Spouses incur two types of norms-based utility costs if the wife works. First, actual gender identity norm costs  $\alpha^i \geq 0$ , which are determined by personal beliefs about a woman’s role. For instance, a working woman could violate norms that “the wife takes care of the household” and “the husband is the breadwinner”.

Second, norms costs imposed by community members who disapprove of women working. We assume these costs are uncertain and may be misperceived. Individuals may put different weights on beliefs of different community members (e.g. by closeness in the community network, gender, or economic influence). Hence,  $i$ ’s perceived norms cost is given by  $\omega_i' E_i[\alpha]$ , where  $\omega_i$  is a vector of importance weights and the vector  $\alpha$  denotes actual norms in the community. When norms are misperceived,  $\omega_i' E_i[\alpha] \neq \omega_i' \alpha$ .

The total norms cost borne by spouse  $i$  is  $\gamma^i = \alpha^i + \omega_i' E_i[\alpha]$ . If individuals correctly perceive actual norms of all community members, then  $\gamma^i = \alpha^i + \omega_i' \alpha$ . In line with Figure 1, which suggests that individuals overestimate community opposition to working women, we focus on the case where  $\gamma^i > \alpha^i + \omega_i' \alpha$ . We assume a woman internalizes her own norms costs ( $\gamma^F$ ), and – as we shall see – may internalize costs borne by her husband.

**Labor Endowment, Wages and Tax:** A woman divides her time endowment of 1 between leisure, private sector work ( $h_P^F$ ), and MGNREGS ( $h_N^F$ ). The MGNREGS and private sector wages are  $w_N$  and  $w_P^F$ , respectively and a woman can provide no more than  $\bar{N}_s$  units of labor in sector  $s$ . Finally, we allow for the possibility that husbands “tax” their wives’ wages, at rate  $\tau_P$  in the private sector and  $\tau_N$  in the public sector.

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<sup>21</sup> $u^i(c^i, l^i)$  is twice continuously differentiable, strictly increasing, and concave in both arguments. The consumption good price is normalized to 1.

Thus, the woman solves the following problem when deciding her labor supply:

$$\begin{aligned} \max_{h_s^F, c^F} u^F(1 - h_N^F - h_P^F, c^F) - \left( \gamma^F + \frac{1 - \mu(z)}{\mu(z)} \gamma^M \right) 1(h_P^F + h_N^F > 0) \quad \text{subject to} \quad (1) \\ c^F \leq (1 - \tau_N) w_N h_N^F + (1 - \tau_P) w_P h_P^F + \phi^F(z) \\ h_s^F \geq 0 \\ \text{and} \quad h_s^F \leq \bar{N}_s \end{aligned}$$

where  $1(\cdot)$  is the indicator function;  $\mu(z) \in [0, 1]$  represents the relative weight a woman places on her own norms costs versus her husband's, which is increasing with her bargaining power and  $\phi^F(z)$  is a net transfer from her husband.

In an efficient household, the husband will not tax his wife's earnings and utility is transferred across spouses via  $\phi^F(z)$ , which generically increases with bargaining power. The only exception – which we discuss shortly – is when a woman gains bargaining power and enters the labor market. At the time of transition, the household will shift to a new income transfer schedule that accounts for her work. Appendix C shows that the outcome of a collective bargaining model, modified to include norms costs, can be represented by the solution to the above problem where  $\tau_N = \tau_P = 0$ .

If, however, the household is inefficient, then wages may be taxed. We assume tax rates on income that is easiest for husbands to access will be highest.<sup>22</sup>

When deciding whether to work, a woman will compare her utility when she pays the norms costs and chooses the optimal amount of labor to her utility when she does not work and avoids norm costs. She will first choose to work in the higher-paying sector and only work in the other sector if the hours constraint in the higher-paying sector is binding. Our framework highlights two channels through which direct deposit and training can alter labor supply:

**Channel 1–Greater Bargaining Power:** In the collective model, an increase in a woman's outside option and, therefore,  $\mu$ , the weight placed on her (relative to her husband's) preferences. It also increases her share of non-labor income ( $\phi^F$ ).

**Channel 2–Lower Wage Taxation:** In inefficient households, the direct deposit and training intervention could reduce wage taxation, with a reduction in  $\tau_N$ , the tax on MGNREGS wages, more likely.<sup>23</sup>

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<sup>22</sup>See Heath and Tan (2015) for a model of intra-household wage taxation where tax rates are tied to women's outside options. This model mapped to our setting delivers similar predictions for female labor supply as the collective model.

<sup>23</sup>A reduction in  $\tau_P$  is less likely, given that casual private-sector workers are typically paid in cash. Women usually perform both public and private sector work with their husbands or another household member; thus in the private sector wage taxation is most likely to occur at time of payment.

## B. How Will Women’s Labor Supply Change?

An increase in bargaining power (and, therefore,  $\mu$ ) would reduce the weight that women place on norms costs borne by their husbands. This would draw some women who were not working due to the preferences of their husbands into the labor market. The associated income effect – by increasing the transfer from husband to wife ( $\phi^F$ ) – would reduce female labor supply among those already working.

In inefficient households, a reduction in wage taxation would increase the effective female wage and create both an income and a substitution effect. While the overall impacts on labor supply are unclear, a tax reduction specific to MGNREGS wages would likely induce substitution into MGNREGS work from private sector work.

Our framework underscores that women induced to work due to shifts in bargaining power are *socially constrained*, as in they were not working due to the preferences of their husbands:

**Proposition 1** *Consider an increase in female bargaining power,  $\Delta\mu > 0$ . This increase in bargaining power can induce a non-working woman to enter the labor market only if prior to the change the wife is “socially constrained” by her husband:  $\gamma^M > 0$  but given the wife’s equilibrium income share she would strictly prefer to work if  $\gamma^M = 0$ .*

**Proof.** See Appendix C. ■

The framework also offers guidance for using female labor supply to distinguish between channels: if the intervention impacted bargaining power, we would anticipate positive downstream impacts on women’s agency and empowerment, an increase in public and private sector work among non-working women, and to find impacts concentrated among women most likely to be socially constrained. However, if the intervention only increased returns to MGNREGS, work for the program should increase at the expense of private sector work.

## C. How Will Men’s Labor Supply Change?

Direct deposit and training impacts the husband’s labor supply through changes in the male budget constraint.

First consider the bargaining power channel. Men whose wives were working prior to the intervention see a reduction in their share of nonlabor income ( $\phi^M$ ) – this *increases* male labor supply. The prediction for men whose wives were not working is less clear: shifting from a regime in which the woman does not work to one in which she does means shifting to a new nonlabor income transfer schedule; the net impact on male non-labor income depends on the magnitude of the bargaining power shift and other model parameters.

Now consider wage taxation: Among men with already working wives, a lower tax rate could either raise or lower “tax revenue”, depending on the female labor supply response. In contrast, men whose wives were not working prior to the intervention receive new tax revenue when their wives enter the labor market. This would induce men to work less.

#### D. How Will Norms Change?

Understanding whether direct deposit and training can shift norms, and how impacts vary by gender, is important for assessing welfare. If, for example, the interventions only operated through a bargaining power channel then this would transfer utility from men to women. If, instead, norms are malleable, then our interventions could create a long-lasting Pareto improvement – particularly if norms costs borne by both genders are reduced.

First, the act of working can alter *actual norms*, or  $\alpha^i$ , that a woman internalizes: She may, for instance, take pride in earning income or realize that her children do not suffer when she works. More broadly, she may update her personal beliefs to align with her new “identity”. Since men do not necessarily adopt new behaviors, we anticipate larger declines in  $\alpha^i$  for women than men. Further, while new attitudes could spill over onto non-complier women through social learning (Fogli and Veldkamp, 2011; Fernandez, 2013), we anticipate largest changes for women who alter their labor supply:

***Norms Hypothesis (1)*** *Direct deposit and training may liberalize actual norms about women’s work, particularly among women drawn into the labor force.*

Next, changes in *perceived norms*, with the associated social cost of  $\omega_i' E_i [\alpha]$  could occur if individuals update their perceptions, e.g. by communicating with others about beliefs or by observing the type of community sanctions that are incurred when women work. We anticipate larger changes among individuals who believe norms are more conservative than they actually are (Bursztyrn et al., 2018). Our final hypothesis is therefore:

***Norms Hypothesis (2)*** *Direct deposit and training can cause perceived norms to liberalize, with larger changes predicted among groups who, at baseline, misperceive actual norms as more restrictive than they are.*

Comparing gender-specific changes in actual and perceived norms can provide suggestive evidence on channels of influence. For instance, if women, but not men, change their actual norms then it is likely that the act of working is an important channel for updating gender norms. Shifts in perceived norms provide evidence of social learning and can help identify groups who misperceive the costs to female work.

## E. Summary

We identified several points of guidance for the empirical analysis. First, labor supply effects will be largest among women least attached to the labor market at baseline. Second, changes in male labor supply can shed light on how resources are reallocated in the household. Third, examining impacts on private versus public sector work, and on women’s empowerment, helps differentiate between bargaining power versus wage taxation channels. Finally, norms costs—and direct deposit and training’s effects on these costs—are likely to differ by gender. Separately studying effects on actual norms and perceived norms can inform us on the factors that influence norms change.

## 3.2 Empirical Framework

Our main analysis uses the following regression specification:

$$y_{igt} = \beta_0 + \beta_1 DT_g + \beta_2 D_g + \beta_3 T_g + \beta_4 C_g + \mu_s + \lambda_d + \eta_t + x'_{ig} \delta + \varepsilon_{igt} \quad (2)$$

where  $y_{igt}$  is the outcome of interest for individual  $i$  in GP  $g$  at survey round  $t$ .  $DT_g$  indicates that GP  $g$  was selected to receive accounts, direct deposit, and training;  $D_g$  indicates a GP was selected for accounts and direct deposit;  $T_g$  indicates GPs selected for accounts and training;  $C_g$  indicates a control GP that received no treatment. All regressions control for strata fixed effects ( $\mu_s$ ), district fixed effects ( $\lambda_d$ ), and survey month  $\times$  year fixed effects ( $\eta_t$ ). We control for the pre-determined variables used to assess balance in Table A2 ( $x_{ig}$ ). The error term ( $\varepsilon_{igt}$ ) is clustered at the GP level.

Our empirical strategy follows our pre-analysis plan (PAP), with a few exceptions. First, in addition to PAP-listed control variables, our regressions include district fixed effects. This is because district governments facilitated access to MGNREGS work and because there is slight (district-level) imbalance across direct deposit and training and accounts only comparison. Our results are similar when we omit these controls. Second, for multiple reasons, we set the omitted group to be GPs that only received accounts, instead of the control group: it focuses analysis on impacts of increasing financial control through direct deposit and training holding (initial) account ownership constant. Additionally, as we discussed previously, the government financial inclusion program (PMJDY) significantly increased account incidence in the control group. This makes it harder to interpret impacts relative to control. To streamline our discussion, the main regression tables omit estimated effects for the control group. (For completeness coefficients on the control group are in Appendix Tables A5-A8.

In our working paper based on the short-run survey (Field et al., 2016) we developed the

theoretical framework, which relies on norms costs faced by spouses and generates differential predictions for treatment by a woman’s baseline work status. In this paper, we continue to use this framework and, relatedly, a (non pre-specified) heterogeneity analysis based on baseline MGNREGS participation. Our PAP, which was submitted prior to short-run data analysis, also doesn’t specify that we now use two waves of data. For outcomes measured in both waves we report the pooled analysis and then separate analysis by waves. Further, for labor supply and empowerment outcomes we focus on outcomes with comparable data in the two survey waves.<sup>24</sup> Finally, our short-run analysis also motivated the data collection on gender norms in the long-run survey. Here, we include an additional evaluation of impacts on norms costs faced by women and their husbands.<sup>25</sup>

**Heterogeneous Effects** We report average intent to treat effects and effects separated by our best-available baseline measure of a woman’s work history: her report of whether she ever worked for MGNREGS.<sup>26</sup> Table A3 uses long-run survey data for the control group to show that this variable captures important differences in broader female labor force participation and—consistent with our conceptual framework—men’s attitudes towards female work. Given our conjecture that women with no baseline MGNREGS experience face higher norms-based barriers to work, we refer to them as “socially constrained”.

Relative to unconstrained women, socially constrained women were 10 percentage points less likely to have worked for pay in the past year and earned 22 percent less in the past month. Constrained women scored 0.20 and 0.08 standard deviation units lower on indices of private sector and MGNREGS work, respectively. Constrained women also scored 0.09 standard deviations lower on our empowerment index, which captures economic activity, self-reported decision making power, and mobility. While we observe no significant cross-group differences in women’s actual and perceived norms, husbands of constrained women state significantly more conservative perceived norms. There was no significant difference in actual norms between the two groups suggesting that misperceptions may be greater among husbands of socially constrained women.

Finally, using the 2016 Indian Demographic and Health Survey (DHS) we show that socially constrained women are more likely to belong to castes with stronger norms against women’s work. We use DHS FLFP measures to construct a standardized “DHS work norms”

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<sup>24</sup>In ongoing work, we complement the analysis in this paper in two ways. First, we delve into impacts of bank accounts per se in more detail and, second, we discuss additional measurement procedures used to evaluate labor supply and women’s well-being in the long-run survey.

<sup>25</sup>In lieu of an updated PAP, we have posted our grant application for the long run survey, which describes our plans to study norms in detail. See <https://www.socialscienceregistry.org/trials/115>.

<sup>26</sup>Appendix Tables A9 and A10 verify balance among the two subsamples.

index, which varies at the subcaste level (higher values indicate higher FLFP).<sup>27</sup> The last two rows of Table A3 show that, after accounting for differences in female education and household wealth, socially constrained women belong to subcastes with lower FLFP. Our heterogeneity analysis uses the following specification:

$$\begin{aligned}
y_{igt} = & \gamma_0 + \gamma_1 DT_g + \gamma_2 DT_g \times Unconst_{ig} + \gamma_3 D_g + \gamma_4 D_g \times Unconst_{ig} + \\
& \gamma_5 T_g + \gamma_6 T_g \times Unconst_{ig} + \gamma_7 C_g + \gamma_8 C_g \times Unconst_{ig} + \gamma_9 Unconst_{ig} + \\
& \mu_s + \lambda_d + \eta_t + x'_{ig} \delta + \varepsilon_{igt}
\end{aligned} \tag{3}$$

where  $Unconst_{ig}$  is an indicator for whether woman  $i$  in GP  $g$  worked for MGNREGS at baseline. Thus  $\gamma_1$  is the effect of receiving direct deposit and training (relative to just accounts) for constrained women, and  $\gamma_2$  is the differential effect for unconstrained women.

## 4 Treatment Effects on Women’s Economic Lives

Appendix Table A4, which reports “first stage” results, shows high take-up: We opened accounts for over 70 percent of eligible women in treatment GPs, with no significant differences across treatment arms (column 1). Similarly, roughly 75 percent of women in GPs selected for training were trained, and over half of women in direct deposit GPs were signed up for direct deposit.<sup>28</sup>

Below, we evaluate treatment impacts on measures of financial inclusion, labor supply and empowerment. We follow Kling et al. (2007) and divide outcomes into families and then aggregate within family into a standardized index. Appendix Tables B1-B12 present impacts on index components.

### 4.1 Women’s Financial Inclusion and Agency

Table 1 considers impacts on women’s financial inclusion. In column (1) we consider an aggregate index that includes whether the woman reports owning a bank account at the time of the survey, whether she visited the account in the past 6 months, her self-reported

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<sup>27</sup>We limit the DHS sample to the Northern “Hindi Belt” states of Madhya Pradesh, Chhattisgarh, Bihar, Gujarat, Rajasthan, and Jharkhand. We standardize multiple FLFP indicators and calculate means by subcaste. To purge the FLFP index of variation driven by socioeconomic status, we also consider an index version where FLFP indicators are first regressed on dummies for female educational attainment, husband’s educational attainment, and the DHS wealth index. We standardize regression residuals and then calculate adjusted means. We merge this subcaste-based measure onto our survey data.

<sup>28</sup>The data in Appendix Table A4 comes from our field administrative records.

savings in individual bank accounts, and the number and value of MGNREGS deposits she received into an individual account, per the MGNREGS MIS.<sup>29</sup> In column (2) we limit the sample to treatment GPs served by the partner bank that shared administrative data. We add administrative measures of average daily balances and number of transactions as two additional components to the index presented in column (1). Both direct deposit treatments significantly increased account use, with the effects for direct deposit and training 2-3 times as large as those for direct deposit only. Appendix Table B1 presents impacts on the sub-components of the indices in columns (1) and (2); the effects – especially for direct deposit and training – are present across most outcomes, in the short and long-run.

Figure 2 shows that the value of MGNREGS payments transferred into women’s individual accounts is substantial: conditional on receiving at least one deposit, the average total wage payment was just over INR 5,300 (\$81 at the 2017 exchange rate of INR 65 per US\$). This amounts to 112 percent of annual wage earnings for the same group, measured at the year three follow up. Given the magnitude of these payments, it is plausible that the intervention shifted women’s bargaining position in the household.

Do these impacts reflect meaningful changes in women’s financial agency? To shed light on this, we consider women’s banking knowledge and autonomy which we only measured in the long-run survey. Column (3) of Table 1 shows a 0.16 standard deviation units increase in bank kiosk knowledge index, which measures whether women have ever heard of the kiosk and what types of transactions they know about. Column (4) reports results for a banking autonomy index, which aggregates three types of outcomes. First, whether the respondent visits the bank alone or without male supervision and is comfortable doing so. Second, whether the respondent thinks women can visit the bank kiosk without a male relative’s supervision. Third, whether the respondent prefers having her wages paid into her own account and prefers that wages are not paid to her husband. Overall, direct deposit and training significantly increased female banking autonomy by 0.13 standard deviation units. Pointing to the importance of both having an account and being informed of its value, we see that gains in financial knowledge and agency only occur for women who received both direct deposit facilities and training.

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<sup>29</sup>Prior to October 2016, the MIS published full worker account numbers, which lets us check for unique account numbers within the household. After October 2016, we infer individual account ownership based on the last two digits of the account number. The Variable Construction Appendix (Section D) provides additional detail on the inference process. We see no individual MGNREGS deposits over the short run for women in accounts only. To avoid a division-by-zero problem, we standardize inputs into the two account use indices relative to the entire sample, rather than the accounts only group.

## 4.2 Labor Market Engagement

In Table 2 we consider impacts on overall female labor supply, MGNREGS work and private sector work. We construct three standardized “sub-indices” that we average to get the aggregate labor supply index (column 1). The “general labor supply” sub-index (column 2) includes labor supply measures that are not differentiated by work sector; the “public labor supply” sub-index (column 3) only includes MGNREGS work measures; and the “private labor supply” sub-index (column 4) only includes measures of private sector work.<sup>30</sup>

Direct deposit and training had a significant (at the 1 percent level) impact on female labor supply of 0.11 standard deviation units (Panel A). Point estimates for labor supply sub-indices are remarkably similar. Comparing Panels B and C shows that treatment effects attenuated over time. We formally reject equality of treatment effects over time for both the overall index (column 1) and the private sector sub-index (column 4). As we discuss below, this could either reflect “catch up” as the government scaled its own financial inclusion and direct deposit initiatives; or an income effect from intra-household shifts in bargaining power.

The only other treatment arm that significantly impacted labor supply was direct deposit (without training). This treatment *reduced* public sector labor supply (Panel A), while increasing private sector labor supply in the short run (Panel B). The positive impact on private sector work is consistent with a bargaining power channel, but the negative impact on public sector work is surprising. The reduction in public sector work is driven by MGNREGS MIS-based work measures, not self-reported ones (Appendix Table B9). One possibility is that local leaders list accounts of less informed villagers (here, women) when they siphon off funds by submitting false claims. Given that the accounts we opened were biometrically authenticated, the direct deposit intervention could have made it less attractive for local officials to submit false work claims in these women’s names. The difference in public labor supply point estimates between direct deposit and training versus direct deposit only is consistent with our findings for women’s financial agency. It suggests that the training was important in helping women effectively leverage the direct deposit facilities.

Table 3 studies impacts on male labor supply. Here we find evidence that direct deposit and training substantially increased male engagement in public sector, but not private sector work. Given that MGNREGS work pays less than private sector work and is concentrated

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<sup>30</sup>The *general labor supply sub-index* includes an indicator for work in the past month, earnings in the past month, and total months worked over the past year. The *public sector sub-index* includes (i) MIS-based short-term (past month) and longer-term (past 12 months) work indicators and wages earned over those periods and (ii) survey-based reports of MGNREGS work for the same time periods. The *private sector sub-index* includes a private sector work indicator, private sector earnings in past year and a dummy for whether her occupation/main status is a worker. Earnings proxy for intensive margin labor supply, given no significant impacts on market wages (see Appendix Table A14).

in the lean season, this suggests a greater willingness of men to accept work at lower wages. We observe impacts in both the short run – when women also work more in the public sector – and the long run, when women do not. The impacts of the direct deposit only intervention on male labor supply mirror those for women but are more noisily estimated.

In Table 4 we examine heterogeneity in labor supply response by women’s baseline labor status. Columns (1)-(4) consider women’s labor supply. Consistent with our theoretical framework, direct deposit and training had a larger impact on socially constrained women. Specifically, it increased labor supply for constrained women by 0.21 standard deviation units overall (column 2). We reject equality of treatment effects for constrained and unconstrained women for the aggregate labor index, the general sub-index, and the private sector sub-index. We also note that both direct deposit alone and training alone significantly increased the private labor supply sub-index for constrained women (column 4); this suggests both intervention components were important for this group.

In columns (5)-(8) we consider the male labor supply response. The treatment effects on public sector labor supply are qualitatively larger and only statistically significant among men married to *unconstrained* women. This is in line with the bargaining power effects mapped out by our theoretical framework, since only these men should see their share of nonlabor income unambiguously decrease.

Appendix Table A11 shows that effects for socially constrained women are large and significant in both the short run, at 0.23 standard deviation units, and the long run, at 0.19 standard deviation units. The long-run effects for constrained women are entirely driven by private sector work.<sup>31</sup> In contrast, effects for unconstrained women fade out in the long run.

There are two possible reasons for fade out. First, that independent government efforts to transition women to MGNREGS direct deposit helped accounts only women catch up to their peers in direct deposit and training. Patterns for both unconstrained and constrained women are consistent with direct deposit catch-up: while direct deposit (no training) increased constrained women’s private and general labor supply in the short run ( $\gamma_3$ , columns 5 and 11), long run effects attenuate, while training impacts grew over time ( $\gamma_5$ ), which explains the sustained effect of the combined intervention.

Using MGNREGS administrative data, Figure A3 graphs the share of workfare wages paid into individual accounts by quarter.<sup>32</sup> Very few women in accounts only gained ac-

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<sup>31</sup>To evaluate the concern of misreporting of work type, we examine women’s report of payment method for each work type. In both survey waves, less than 2 percent of women reported receiving non-MGNREGS payments into a bank account, and our results are robust to recoding private-sector work to zero if it is paid into a bank account. Our qualitative field work found that villagers clearly distinguish MGNREGS work from other types of casual work, as the recruitment and payment systems are very different.

<sup>32</sup>As we can only infer direct deposit status when women work, we cannot directly measure the share of all sample women who are signed up for direct deposit in a given quarter.

cess to direct deposit until 2017, when the government initiated direct deposit enrollment camps. These camps increased direct deposit receipt rates—especially among unconstrained women—shortly before our long-run survey. This is consistent with catch-up and suggests that observed long-run labor supply and norms impacts may underestimate the benefits of direct deposit and training, especially for unconstrained women.

A second possibility is that, in the longer run, an income effect generated by greater bargaining power among unconstrained women discouraged work. This is plausible: the fact that direct deposit and training increased private-sector labor supply suggests a broad improvement in women’s outside options, as opposed to a narrow increase in the effective MGNREGS wage.

Examining impacts on women’s empowerment can help distinguish between these explanations: if catch-up is driven solely by an income effect, then unconstrained women in direct deposit and training should be more empowered than peers in accounts only.<sup>33</sup>

### 4.3 Women’s Empowerment

Women’s economic empowerment is typically realized in multiple domains. The direct deposit and training intervention enhanced women’s financial agency (Table 1) and, alongside, led to women working more (and exerting more control over earnings, Table 2). We now examine whether treated women report more empowerment in other aspects of their economic and social lives.

The aggregate empowerment index averages the three sub-indices: The purchase sub-index proxies a woman’s economic autonomy by aggregating questions about whether she made different types of purchases, either at all or (in a separate set of dummy variables) with her own money in the past year.<sup>34</sup> The mobility sub-index aggregates dummy variables indicating a woman visited a series of locations in the past year and in the past 30 days.<sup>35</sup> Finally, the self-reported decision-making sub-index aggregates two dummy variables indicating the woman reported having a say in whether she works and how her own income and benefits payments are spent.

Table 5 considers the pooled estimates. In Panel A, we consider average treatment effects and cannot reject the null of no impact on proxied empowerment. However, in Panel B we

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<sup>33</sup>Another test would be to examine time trends in labor force participation: policy catch up would suggest an overall upward trend in FLFP, while an income effect would suggest a downward trend. However, other changes in the economic environment between the two survey waves—including the 2016 banknote demonitization—makes an examination of time trends difficult.

<sup>34</sup>Purchase categories include groceries, eating out, clothing, child health, home improvement, and festivals. See the Variable Construction Appendix for additional detail.

<sup>35</sup>The locations are the village market, the district market, her natal home, the local child care center, and the public health center.

see that treatment effects vary by women’s baseline social status. Overall, direct deposit and training increased the aggregate empowerment index among constrained women by 0.11 standard deviation units relative to accounts only, with the largest effects on the purchase sub-index. We also find a significant 0.08 standard deviation units impact in the training only arm, which suggests that providing knowledge on how to use accounts was important for more marginalized women. Absent intervention, unconstrained women score 0.10 standard deviation units higher on the empowerment index; thus both treatments essentially close the empowerment gap between the constrained and unconstrained.

Appendix Table A13 shows that effects for constrained women grew in scope and magnitude over time, with significant impacts of direct deposit and training on both purchases (0.19 standard deviation units) and mobility (0.12 standard deviation units) in the long run. Unconstrained women, on the other hand, were unaffected in both periods.

The long-run null effect on aggregate empowerment for unconstrained women is consistent with catch up (i.e., through the government’s efforts to initiate individual direct deposit payments across the state), but the lack of short-run effects—when unconstrained women were working more—is not. It is possible that our measures of empowerment are harder to move for this group of women (who started with higher levels of baseline empowerment) and that the relevant measures of agency for this group are those reported, for instance, in Table 1 (or along dimensions that we didn’t measure).

In contrast, the private sector labor supply and empowerment effects for constrained women suggest that direct deposit and training increased their outside options, helping them overcome their husbands’ preferences that their wives not work. In the next section we ask what this means for gender norms.

## 5 Impacts on Gender Norms

If the act of working changes the gender norms that women (or possibly their husbands) adhere to, then actual norm costs will fall (norms hypothesis 1). The largest norm cost reductions should occur among women drawn into the labor force by the intervention. If they overestimated community norms against female work, then perceived norms costs should also fall (norms hypothesis 2). Social learning can cause men’s perceived norms to shift. Below, we describe the data we collected on norms and then evaluate these hypotheses empirically.

## 5.1 Data Collection and Measurement

We conducted extensive qualitative work to inform our norms-related survey modules. We sought to structure questions to capture both beliefs about whether women should work, and gender-specific norms costs. To this end, we designed three modules. The first covered *personal beliefs*: We asked individuals (i) whether women should be able to work outside the home, and (ii) if they wanted their sons to marry women who wish to work and their daughters to marry men who permitted work.

Second, we developed a *vignettes module*, to elicit attitudes towards working women and their husbands, holding household characteristics constant. The vignette featured two hypothetical families belonging to the respondent’s caste and living in the respondent’s village. The only difference was that in one family the wife worked for pay, while in the other family she stayed at home. We used pictures to make the families salient to the respondents. Respondents were asked which woman was the better wife, mother, and caretaker. To capture perceived norms we asked which woman had more respect in the community. Then we asked which man was the better husband, provider, and who had more community respect (see Section D for details).

The final module was designed to measure gender-specific intensity of *perceived norms costs*. Here, we asked respondents what fraction of individuals in the community would speak badly of a woman who worked outside the home, and what fraction of respondents would think a man was a bad provider if his wife worked for pay.

## 5.2 Actual Norms

To measure actual norms, defined as average (injunctive) beliefs about what people “should” do (Prentice, 2007), we combine three variables from the personal “personal beliefs” sub-index. To explore incidence by gender we calculate two sub-indices: The acceptance of working women sub-index aggregates vignette judgments of whether the working woman is the better wife, the better mother, and the better caretaker. The acceptance of working women’s husbands sub-index aggregates vignette responses regarding which man is the better provider and husband. The aggregate actual norms index averages the personal preferences and acceptance sub-indices. Throughout, higher values correspond to greater acceptance of female work. To facilitate cross-gender comparison, we standardize all index components relative to women in the accounts only group.

The first four columns of Table 6 present results. Among women, direct deposit and training liberalized actual norms by 0.10 standard deviation units, significant at the 1 percent level, with similar impacts across subindices (Panel A). We interpret this as a reduction, on

average, in a woman’s actual norm costs,  $\alpha^F$ .

In contrast, columns (1)-(4) of Panel B show that point estimates for men are smaller in magnitude and never statistically significant. This could occur if men saw limited gains from their wives working, or if personal behavior change (rather than spousal change) is needed to shift gender identity norms. Since men report slightly more progressive personal preferences, this closes the actual norms gap between men and women.<sup>36</sup>

Figure 3 shows treatment effects for men and women in socially constrained (Panel A) and unconstrained (Panel B) households. Direct deposit and training had larger impacts on actual norms of constrained women. Thus, the liberalization of actual norms (or, equivalently, the reduction in norm costs) are concentrated in the group that exhibited sustained growth in labor force attachment following the intervention. This is consistent with the idea that working reoriented constrained women’s gender identity norms.

### 5.3 Perceived Norms

To study perceived norms, we construct gender-specific perceived acceptance sub-indices, which include the vignette question on community respect and “fraction of the community who judges” question. Then we average the acceptance of working women and acceptance of husbands sub-indices to create an overall perceived norms index. All index components are standardized relative to the “accounts only” treatment group and constructed so that higher values correspond to fewer costs to female work. In terms of our framework, we interpret more liberal perceived norms as a reduction in  $\omega_i' E_i [\alpha]$ . By comparing treatment effects across perceived and actual norms in Table 6, we can evaluate changes in the misperception gap ( $\omega_i' E_i [\alpha] - \omega_i' \alpha$ ).

Columns (5)-(7) show that direct deposit and training significantly liberalized perceived norms, with very similar impacts on men and women (0.08-0.09 standard deviation units). Panel A shows that women reduced perceived norms costs associated with both working women and working women’s husbands by 0.08 standard deviation units. This is similar in magnitude to the impacts on actual norms. Overall, these results are consistent with either women learning about shifts in others’ views and/or generalizing from their changing views regarding women’s work.

Panel B shows that, unlike actual norms, perceived norms liberalize among men in both the direct deposit and training and training only arms. This is mostly driven by greater perceived acceptance of working women’s *husbands*, where we see statistically significant

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<sup>36</sup>In line with Figure 1, accounts only women were more likely than men to state that “women can work”. However, they were substantially less likely to prefer a daughter-in-law who works, or a son-in-law who lets his wife work. For this reason, they score lower than men on the personal preferences sub-index.

treatment effect of 0.13 standard deviation units. Impacts on perceived acceptance of working women are smaller and not significantly different from zero.

These impacts for men are notable given that they state more restrictive perceived norms relative to women: in accounts only the perceived acceptance of husbands index is 0.33 standard deviation units lower among men, while the perceived acceptance of wives index is 0.14 standard deviation units lower. Moreover, men's perceived norms are conservative relative to actual norms: in accounts only, men report that 57 percent of the community will negatively judge the husband of a working woman; yet as can be seen in Appendix Table B11, only 33 percent of men report that women cannot work and in the vignettes just 48 percent of men report that the non-working woman's spouse is the better husband.<sup>37</sup> Taken together, these observations suggest that the direct deposit and training treatment reduced norm misperception among men, and, thereby, potentially enhanced household welfare.

Why did men update their perceived norms? First, a husband may directly learn that he had overestimated the social sanctions associated with a woman working when his wife starts to work. Second, seeing higher levels of FLFP in his community could help him indirectly learn that the social costs of work are lower than expected. Finally, men may learn about women's changing attitudes ( $\alpha^F$ ) through other channels. Figure 4 shows that although direct deposit and training had a larger impact on perceived acceptance of husbands among men in constrained households, point estimates are positive and significant for the unconstrained as well. This suggests that social learning may have contributed to the persistent shift in men's perceived norms.

## 6 Discussion and Conclusion

The direct deposit and training had substantial positive impacts on women's work, including in the private sector. This indicates that, rather than just making work for MGNREGS more attractive, the intervention increased women's outside options. This empowered them to push back against gender norms internalized by their husbands. This is consistent with the fact that we see larger, more persistent effects for socially constrained women, whose husbands perceive more social costs to having a wife who works. The sustained effects for constrained women are particularly striking in light of the Indian government's independent efforts to scale up financial inclusion for women in the period between our short-run and long-run survey.

The intervention also had broader implications for women's lives: first, it led to signifi-

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<sup>37</sup>An important caveat here is that we cannot measure the beliefs of community members outside our sample, e.g. village elites whose households do not work for MGNREGS.

cant gains in financial autonomy and agency. Alongside, it increased constrained women’s perceptions of own empowerment. Finally, treated women state more progressive attitudes about women in the labor force, while both genders report lower perceived social costs of female work.

Our findings are in line with the framework laid out in Section 3. Moreover, they are not readily explained by alternative channels through which our treatment may have influenced women in the study, which we consider below.

## 6.1 Alternative Explanations

To rationalize an increase in both MGNREGS and private-sector work, an alternative mechanism needs to impact the return to both forms of work. A natural possibility would be if women’s increased participation in MGNREGS changed private sector wages. However, direct deposit and training left these wages unaffected (Appendix Table A14).<sup>38</sup>

Another possibility is that direct deposit and training impacted labor supply by easing savings constraints, as in Callen et al. (2019). However, accounts only women also received bank accounts, and our experiment did not generate immediate variation in access to financial instruments (Appendix Tables A4, B1). Further, Appendix Figure A5, Panels A and B show that non-MGNREGS deposit activity in accounts only is very similar to that in direct deposit and training. Thus, it doesn’t appear that treatment effects reflect a sudden surge in women’s use of bank accounts for non-MGNREGS transactions.

A final possibility is that women faced some fixed cost to working that was independent of social norms. In this case, if direct deposit and training improved the return to working for MGNREGS, it could induce women to pay the fixed cost and enter the broader labor market. One non-norms cost women might face when entering the labor market is finding child care. If this were the binding constraint, then women with young (especially pre-school age) children should be most impacted by our interventions. Appendix Figure A4 estimates effects by whether or not a household had a child under the age of 8 at the time of the short-run survey. Treatment effects are apparent for both subgroups, which suggests that our results are not driven by women who face the largest child care burdens at home.

Another potential fixed cost relates to learning about work opportunities in the private sector. In the private sector, landlords or labor recruiters visit households and offer them short-term work opportunities. However, recruiters target both genders, and since virtually all men work, it is unlikely that women’s MGNREGS participation increased access to recruiters. Given these results, and the fact that one-off fixed costs may be less relevant as

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<sup>38</sup>We do find a marginally significant increase in the female daily farm wage in the short run. The impact is small – at 10 percent of the dependent variable mean – and not present for the non-farm daily wage.

MGNREGS and market work tend to take place in different seasons, we find no compelling evidence that non-norms fixed costs are driving our results.

## 6.2 Policy Implications

In recent decades, economic progress in India has translated into better-paying jobs and more attractive work opportunities, with wage growth in rural areas outstripping that in urban areas (Jacoby and Dasgupta, 2015). Yet this growth has failed to draw Indian women into the labor market. We argue that social norms around appropriate gender roles play an important role in keeping women out of the labor force, but these norms can be overcome by interventions that increase women’s outside options.

Strengthening women’s control over MGNREGS wages through direct deposit and training increased women’s work both for the program and in the private sector. These changes run counter to the prediction of a basic model of efficient household decision-making, where an increase in bargaining power (precipitated by greater female control over workfare wages) would reduce female labor supply. Allowing for a norms channel rationalizes our main treatment effects and key heterogeneity in effects: treatment effects are largest among the subset of socially constrained women, who lacked MGNREGS work experience at baseline and had husbands who were significantly opposed to female work.

Our results have multiple policy implications. First, gender targeting can impact women’s engagement with workfare programs and the labor market at large. Second, impacts can extend beyond economic fundamentals, reshaping the norms that govern female work. This creates scope for interventions like ours to create further welfare gains by altering the nature of preferences themselves. Third, our long-run results can help inform intervention scale-up discussions. Between our two survey waves, the Indian government began scaling up MGNREGS direct deposit to female-owned accounts across our study area. Different from our intervention, this scale-up did not involve either targeted outreach to eligible women or any systematic account training. It appears that these program features were relevant for the most marginalized women, and an important reason why we find persistent effects on constrained women’s labor supply in the long run.

Finally, our results contribute to a growing literature on the importance of gender norms in mediating women’s interactions with the labor market. Most existing work focuses on richer countries, where gender norms are more equitable. Against this backdrop, we see our paper making two important contributions. First, policy makers interested in changing norms do not always need to invest in costly norms-change campaigns; in some settings, targeting economic incentives is enough. Importantly, policies that target incentives are often easier to

implement as norms can be difficult to measure and hard to move directly. Further, policies that cause women to increase engagement with actors external to the household are likely important for norm updating in the community. This finding is similar to the role model effect associated with women village leaders in India (Beaman et al., 2009). Second, strengthening women's economic agency can potentially unleash broader social change, especially as more conservative men update their beliefs about the social costs of adopting progressive behaviors.

Our paper also highlights some important open research questions relating to how norms are updated and perceived by community members. For example, while our results make it clear that norms shift with behavior, we cannot say whose behavior (or beliefs) are most influential for changing the beliefs of others. Bringing tools from the networks literature to bear on these questions is a promising avenue for future work.

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Table 1: Impact of Treatments on Financial Inclusion and Agency

	(1) Aggregate Account Use Index: Full Sample	(2) Aggregate Account Use Index: Bank Admin Data	(3) Bank Kiosk Knowledge Index	(4) Banking Autonomy Index
<i>Panel A: Pooled</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.328*** (0.045)	0.287*** (0.046)		
$\beta_2$ : Accounts + Direct Deposit	0.137*** (0.053)	0.091* (0.048)		
$\beta_3$ : Accounts + Training	0.037 (0.036)	-0.021 (0.042)		
Accounts Only Mean	-0.011	-0.021		
N	8297	4968		
<i>Panel B: Short-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.366*** (0.050)	0.314*** (0.048)		
$\beta_2$ : Accounts + Direct Deposit	0.161** (0.064)	0.118** (0.055)		
$\beta_3$ : Accounts + Training	0.066* (0.038)	-0.003 (0.043)		
Accounts Only Mean	-0.017	-0.019		
N	4179	2504		
<i>Panel C: Long-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.286*** (0.049)	0.268*** (0.050)	0.163* (0.090)	0.130** (0.057)
$\beta_2$ : Accounts + Direct Deposit	0.109** (0.055)	0.075 (0.054)	-0.065 (0.089)	-0.033 (0.056)
$\beta_3$ : Accounts + Training	-0.002 (0.048)	-0.041 (0.051)	-0.073 (0.088)	0.026 (0.057)
Accounts Only Mean	-0.004	-0.023	0.000	-0.000
N	4118	2464	4118	4118
<i>Panel D: P-values from F-Tests</i>				
$\beta_1$ : Short-Run = Long-Run	0.103	0.253		
$\beta_2$ : Short-Run = Long-Run	0.353	0.433		
$\beta_3$ : Short-Run = Long-Run	0.167	0.443		

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. The account use indices in columns 1 and 2 are standardized relative to the entire sample because some index components are always equal to zero in the accounts only group. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table 2: Impact of Treatments on Women's Labor Supply

	Aggregate Index Components			
	(1) Aggregate Labor Supply Index	(2) General Labor Supply Sub-Index	(3) Public Labor Supply Sub-Index	(4) Private Labor Supply Sub-Index
<i>Panel A: Pooled</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.108*** (0.036)	0.101* (0.053)	0.106 (0.064)	0.117** (0.049)
$\beta_2$ : Accounts + Direct Deposit	-0.012 (0.040)	0.021 (0.058)	-0.119** (0.058)	0.063 (0.046)
$\beta_3$ : Accounts + Training	0.017 (0.044)	0.009 (0.051)	-0.004 (0.086)	0.047 (0.041)
Accounts Only Mean	-0.000	0.000	0.000	-0.000
N	8297	8297	8297	8297
<i>Panel B: Short-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.159*** (0.043)	0.130** (0.058)	0.160* (0.081)	0.188*** (0.052)
$\beta_2$ : Accounts + Direct Deposit	0.016 (0.043)	0.066 (0.059)	-0.137** (0.067)	0.119** (0.050)
$\beta_3$ : Accounts + Training	0.026 (0.049)	0.029 (0.058)	0.001 (0.085)	0.046 (0.046)
Accounts Only Mean	-0.000	0.000	-0.000	0.000
N	4179	4179	4179	4179
<i>Panel C: Long-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.058 (0.049)	0.112 (0.072)	0.025 (0.078)	0.035 (0.070)
$\beta_2$ : Accounts + Direct Deposit	-0.042 (0.052)	-0.015 (0.075)	-0.107 (0.082)	-0.003 (0.063)
$\beta_3$ : Accounts + Training	0.006 (0.054)	0.016 (0.066)	-0.034 (0.113)	0.037 (0.060)
Accounts Only Mean	-0.000	-0.000	0.000	-0.000
N	4118	4118	4118	4118
<i>Panel D: P-values from F-Tests</i>				
$\beta_1$ : Short-Run = Long-Run	0.084*	0.830	0.175	0.043**
$\beta_2$ : Short-Run = Long-Run	0.257	0.268	0.750	0.067*
$\beta_3$ : Short-Run = Long-Run	0.731	0.853	0.758	0.885

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table 3: Impact of Treatments on Men's Labor Supply

	Aggregate Index Components			
	(1) Aggregate Labor Supply Index	(2) General Labor Supply Sub-Index	(3) Public Labor Supply Sub-Index	(4) Private Labor Supply Sub-Index
<i>Panel A: Pooled</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.033 (0.045)	-0.051 (0.067)	0.173** (0.079)	-0.024 (0.052)
$\beta_2$ : Accounts + Direct Deposit	0.001 (0.052)	0.074 (0.077)	-0.132* (0.072)	0.062 (0.063)
$\beta_3$ : Accounts + Training	0.036 (0.048)	0.077 (0.082)	-0.038 (0.088)	0.068 (0.062)
Accounts Only Mean	0.489	0.648	0.173	0.647
N	7771	7771	7771	7771
<i>Panel B: Short-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.094* (0.057)	0.078 (0.090)	0.157* (0.090)	0.047 (0.070)
$\beta_2$ : Accounts + Direct Deposit	0.040 (0.067)	0.155 (0.099)	-0.142* (0.080)	0.107 (0.087)
$\beta_3$ : Accounts + Training	0.068 (0.061)	0.111 (0.098)	-0.015 (0.095)	0.108 (0.087)
Accounts Only Mean	0.497	0.690	0.159	0.641
N	3957	3957	3957	3957
<i>Panel C: Long-Run</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	-0.001 (0.049)	-0.103 (0.065)	0.166* (0.097)	-0.068 (0.043)
$\beta_2$ : Accounts + Direct Deposit	-0.014 (0.052)	0.055 (0.073)	-0.131 (0.100)	0.034 (0.049)
$\beta_3$ : Accounts + Training	0.006 (0.054)	0.069 (0.074)	-0.073 (0.111)	0.024 (0.051)
Accounts Only Mean	0.482	0.605	0.188	0.652
N	3814	3814	3814	3814
<i>Panel D: P-values from F-Tests</i>				
$\beta_1$ : Short-Run = Long-Run	0.112	0.061*	0.937	0.049**
$\beta_2$ : Short-Run = Long-Run	0.375	0.297	0.920	0.299
$\beta_3$ : Short-Run = Long-Run	0.348	0.646	0.625	0.289

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table 4: Heterogeneous Impact of Treatments on Labor Supply: Pooling Short-Run and Long-Run

	Women's Labor Supply				Men's Labor Supply			
	Aggregate Index Components				Aggregate Index Components			
	(1) Aggregate Labor Supply Index	(2) General Labor Supply Sub-Index	(3) Public Labor Supply Sub-Index	(4) Private Labor Supply Sub-Index	(5) Aggregate Labor Supply Index	(6) General Labor Supply Sub-Index	(7) Public Labor Supply Sub-Index	(8) Private Labor Supply Sub-Index
$\gamma_1$ : Accounts + Direct Deposit + Training	0.209*** (0.042)	0.208*** (0.059)	0.141 (0.089)	0.277*** (0.069)	0.008 (0.064)	-0.034 (0.104)	0.129 (0.115)	-0.070 (0.073)
$\gamma_2$ : Accounts + Direct Deposit + Training $\times$ Unconstrained	-0.152*** (0.053)	-0.151** (0.066)	-0.055 (0.075)	-0.251*** (0.081)	0.044 (0.073)	-0.015 (0.119)	0.069 (0.097)	0.079 (0.081)
$\gamma_3$ : Accounts + Direct Deposit	0.036 (0.047)	0.056 (0.064)	-0.089 (0.069)	0.140** (0.067)	0.094 (0.073)	0.247* (0.126)	-0.088 (0.087)	0.124 (0.091)
$\gamma_4$ : Accounts + Direct Deposit $\times$ Unconstrained	-0.071 (0.052)	-0.048 (0.064)	-0.048 (0.062)	-0.116 (0.080)	-0.143* (0.079)	-0.260* (0.138)	-0.076 (0.079)	-0.092 (0.098)
$\gamma_5$ : Accounts + Training	0.085 (0.053)	0.100* (0.058)	-0.007 (0.087)	0.163** (0.070)	0.088 (0.059)	0.186 (0.113)	-0.062 (0.104)	0.140* (0.082)
$\gamma_6$ : Accounts + Training $\times$ Unconstrained	-0.098* (0.055)	-0.132** (0.065)	0.011 (0.080)	-0.174** (0.085)	-0.072 (0.076)	-0.156 (0.132)	0.044 (0.091)	-0.105 (0.089)
$\gamma_9$ : Unconstrained	0.222*** (0.034)	0.247*** (0.045)	0.094** (0.042)	0.326*** (0.063)	0.083* (0.047)	0.150 (0.093)	0.033 (0.049)	0.066 (0.057)
<i>P-values from F-Tests</i>								
$\gamma_1 + \gamma_2 = 0$	0.226	0.378	0.183	0.655	0.308	0.511	0.009***	0.882
$\gamma_3 + \gamma_4 = 0$	0.477	0.903	0.037**	0.672	0.415	0.870	0.045**	0.659
$\gamma_5 + \gamma_6 = 0$	0.796	0.594	0.968	0.820	0.797	0.748	0.851	0.622
Accounts Only Mean - Constrained	-0.159	-0.183	-0.075	-0.218	0.497	0.655	0.158	0.677
N	8297	8297	8297	8297	7771	7771	7771	7771

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. All columns show pooled time periods only. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table 5: Impact of Treatments on Empowerment: Pooling Short-Run and Long-Run

	Aggregate Index Components			
	(1) Aggregate Empowerment Index	(2) Purchase Sub-Index	(3) Mobility Sub-Index	(4) Decision Making Sub-Index
<i>Panel A: Main Effects</i>				
$\beta_1$ : Accounts + Direct Deposit + Training	0.027 (0.030)	0.034 (0.048)	0.053 (0.034)	-0.002 (0.041)
$\beta_2$ : Accounts + Direct Deposit	-0.006 (0.029)	-0.043 (0.045)	0.002 (0.035)	0.026 (0.043)
$\beta_3$ : Accounts + Training	0.016 (0.033)	-0.010 (0.047)	0.037 (0.035)	0.023 (0.045)
Accounts Only Mean	0.001	0.000	-0.000	-0.000
N	8276	8276	8297	8297
<i>Panel B: Heterogeneous Effects</i>				
$\gamma_1$ : Accounts + Direct Deposit + Training	0.111*** (0.040)	0.196*** (0.061)	0.076 (0.049)	0.069 (0.060)
$\gamma_2$ : Accounts + Direct Deposit + Training $\times$ Unconstrained	-0.128*** (0.042)	-0.244*** (0.064)	-0.040 (0.051)	-0.107 (0.077)
$\gamma_3$ : Accounts + Direct Deposit	0.012 (0.037)	0.025 (0.062)	-0.023 (0.044)	0.041 (0.058)
$\gamma_4$ : Accounts + Direct Deposit $\times$ Unconstrained	-0.014 (0.039)	-0.081 (0.064)	0.043 (0.043)	-0.011 (0.063)
$\gamma_5$ : Accounts + Training	0.082** (0.039)	0.067 (0.059)	0.041 (0.042)	0.146** (0.061)
$\gamma_6$ : Accounts + Training $\times$ Unconstrained	-0.095** (0.046)	-0.105 (0.067)	-0.013 (0.039)	-0.172** (0.075)
$\gamma_9$ : Unconstrained	0.103*** (0.029)	0.183*** (0.045)	0.035 (0.029)	0.096* (0.051)
<i>P-values from F-Tests</i>				
$\gamma_1 + \gamma_2 = 0$	0.598	0.358	0.325	0.465
$\gamma_3 + \gamma_4 = 0$	0.956	0.238	0.626	0.529
$\gamma_5 + \gamma_6 = 0$	0.742	0.473	0.474	0.633
Accounts Only Mean - Constrained	-0.068	-0.152	0.007	-0.067
N	8276	8276	8297	8297

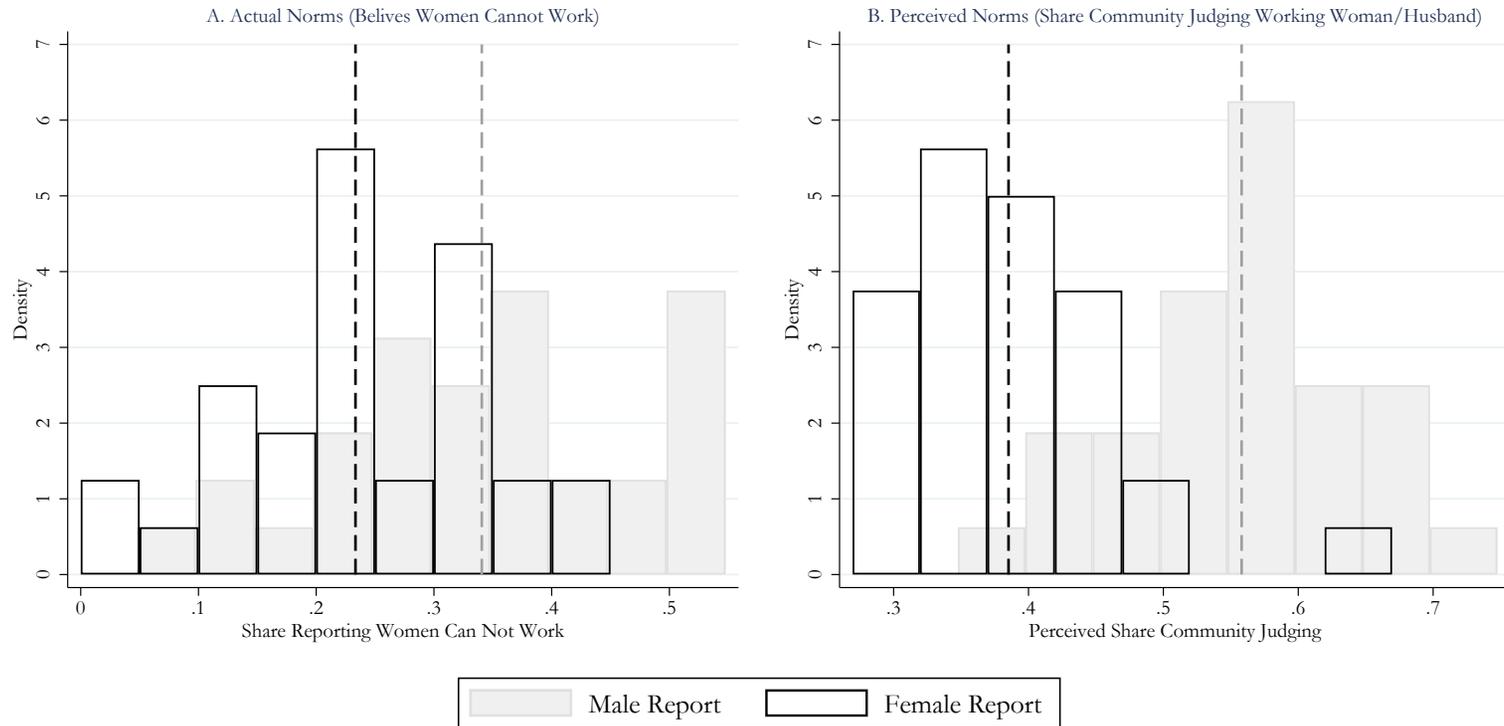
*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. All columns show pooled time periods only. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table 6: Impact of Treatments on Actual and Perceived Norms

	Actual Norms				Perceived Norms		
	Aggregate Index Components				Aggregate Index Components		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Aggregate Actual Norms Index	Personal Beliefs Sub-Index	Working Women Acceptance Sub-Index	Husbands Acceptance Sub-Index	Aggregate Perceived Norms Index	Perceived Working Women Acceptance Sub-Index	Perceived Husbands Acceptance Sub-Index
<i>Panel A: Female Reports</i>							
$\beta_1$ : Accounts + Direct Deposit + Training	0.101*** (0.037)	0.112*** (0.040)	0.084 (0.059)	0.107** (0.052)	0.077** (0.037)	0.075* (0.041)	0.080* (0.043)
$\beta_2$ : Accounts + Direct Deposit	-0.030 (0.037)	0.018 (0.048)	-0.035 (0.057)	-0.072 (0.049)	-0.023 (0.040)	-0.039 (0.045)	-0.007 (0.043)
$\beta_3$ : Accounts + Training	0.018 (0.042)	0.000 (0.041)	0.025 (0.055)	0.030 (0.064)	0.049 (0.040)	0.065 (0.042)	0.032 (0.047)
Accounts Only Mean	-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000
N	4118	4118	4118	4118	4116	4116	4116
<i>Panel B: Male Reports</i>							
$\beta_1$ : Accounts + Direct Deposit + Training	-0.022 (0.042)	-0.069 (0.056)	0.035 (0.051)	-0.033 (0.056)	0.086* (0.045)	0.045 (0.054)	0.127** (0.054)
$\beta_2$ : Accounts + Direct Deposit	-0.020 (0.038)	-0.032 (0.061)	0.019 (0.049)	-0.048 (0.047)	0.064 (0.046)	0.047 (0.057)	0.080 (0.051)
$\beta_3$ : Accounts + Training	-0.031 (0.042)	-0.022 (0.063)	-0.004 (0.050)	-0.067 (0.057)	0.086* (0.044)	0.052 (0.052)	0.121** (0.054)
Accounts Only Mean	0.077	0.180	0.001	0.049	-0.236	-0.138	-0.334
N	3814	3814	3814	3814	3813	3813	3813
<i>Panel C: P-values from F-Tests</i>							
$\beta_1$ : Male = Female	0.026**	0.002***	0.570	0.079*	0.876	0.627	0.494
$\beta_2$ : Male = Female	0.844	0.444	0.477	0.704	0.127	0.175	0.192
$\beta_3$ : Male = Female	0.383	0.751	0.716	0.242	0.447	0.783	0.192

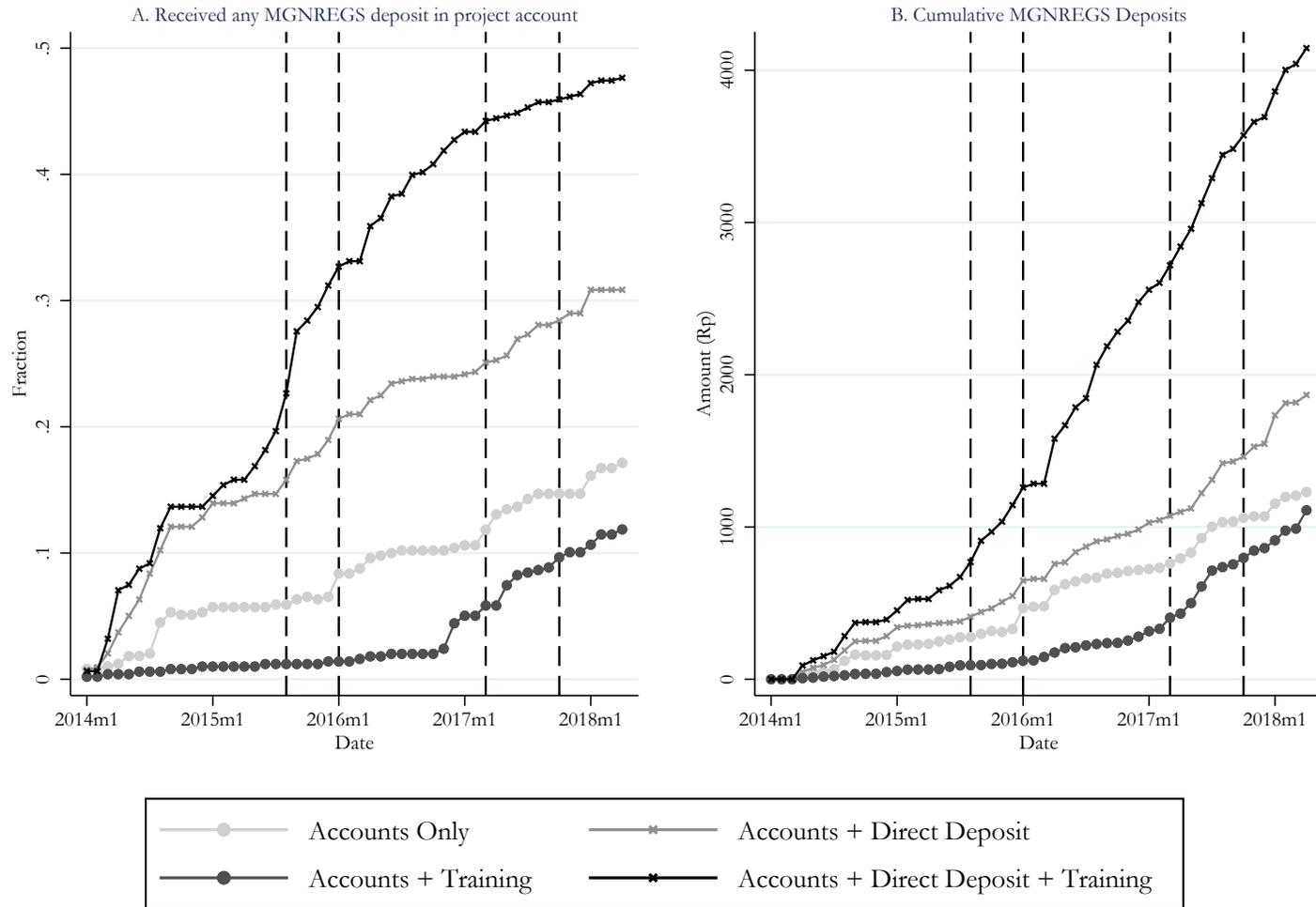
*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Figure 1: Distribution of Village-Level Attitudes and Perceived Social Sanctions for Female Work



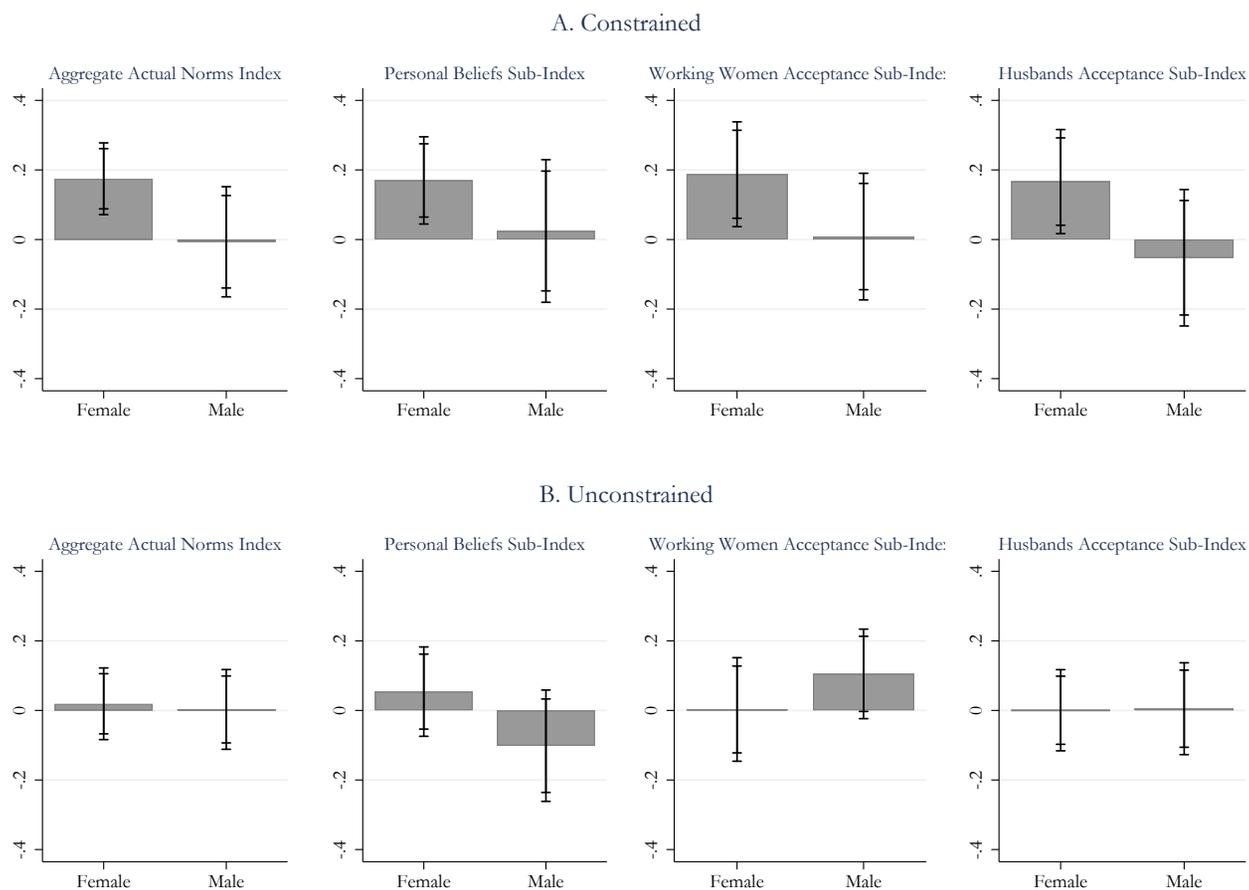
*Notes:* Both panels limit the sample to 32 Control group GPs that have 20 or more non-missing observations for both male and female reports. Panel A plots the GP-level distribution of the share of respondents who agree with the statement “women can not go out and work” over “women can go out for work”. Panel B plots the average female report of the share of households who would speak badly about a woman if she were to go out and work and the average male report of the share of households who would think a man is a bad provider if his wife were to go out and work. The dashed lines report the GP-level average of each variable of interest.

Figure 2: Bank Administrative Data - MGNREGS Deposits in Project Accounts Over Time



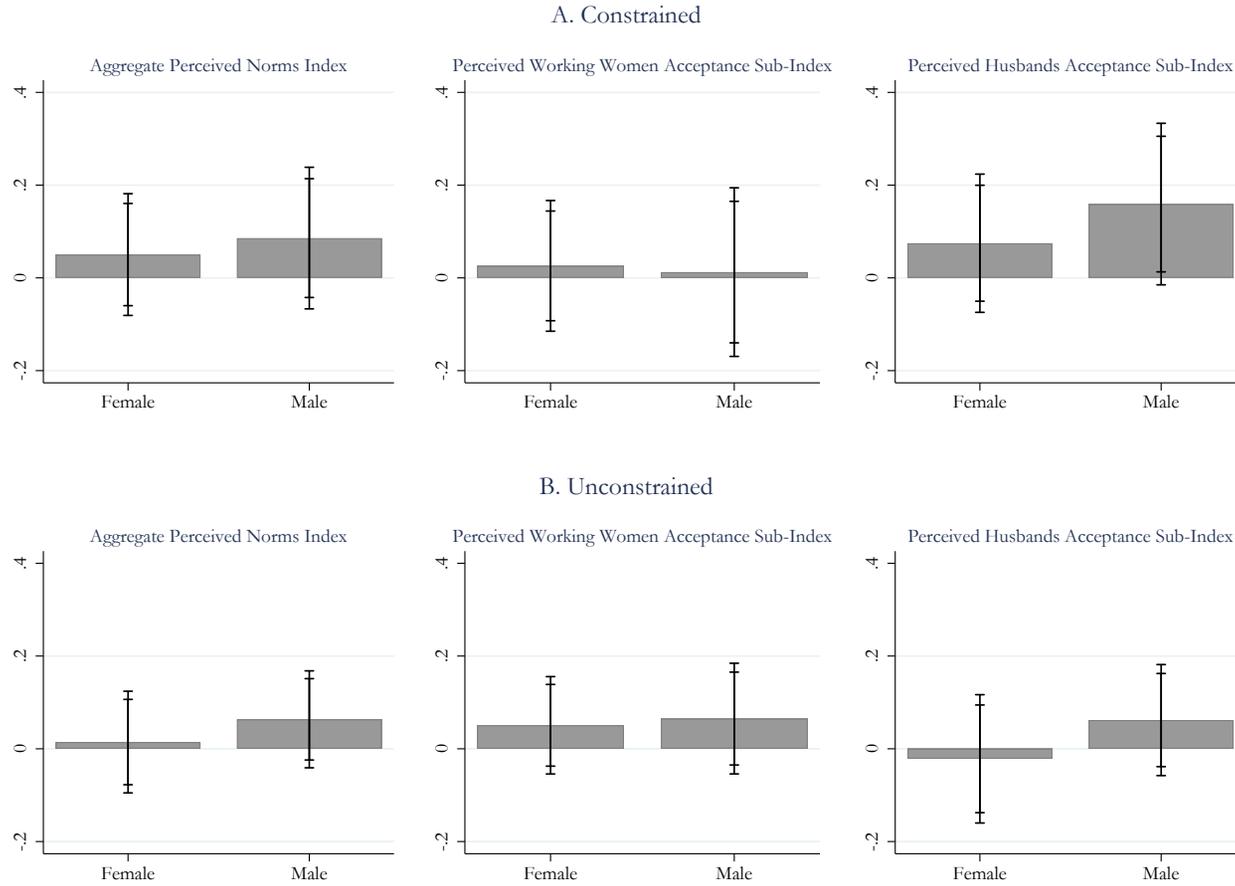
*Notes:* Administrative bank account data. All non-account openers are coded as having zero values for all measures. All outcomes are top-coded at the 99th percentile by month. Dashed lines demarcate the beginning and end of the short-run and long-run surveys. The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017.

Figure 3: Treatment Effects on Actual Norms by Baseline Social Constraint Status



*Notes:* Whiskers display 90 and 95 percent confidence intervals, based on standard errors clustered at the GP level. Estimates are based on regressions that include strata and survey month fixed effects. GP level controls include: number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, and proportion of population defined as marginal workers. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, and distance to nearest banking kiosk.

Figure 4: Treatment Effects on Perceived Norms by Baseline Social Constraint Status



*Notes:* Whiskers display 90 and 95 percent confidence intervals, based on standard errors clustered at the GP level. Estimates are based on regressions that include strata and survey month fixed effects. GP level controls include: number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, and proportion of population defined as marginal workers. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, and distance to nearest banking kiosk.

# A Appendix Tables and Figures: Additional Analysis

Table A1: Balance on Attrition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Accounts Only Mean	Control	Accounts + Direct Deposit	Accounts + Training	Accounts + Direct Deposit + Training	P-Value: Joint Test	N
<i>Panel A: Full Sample</i>							
Woman Interviewed at Short-Run	0.931	-0.017	0.005	0.005	0.019	0.055*	4500
Husband Interviewed at Short-Run	0.869	-0.006	0.021	0.016	0.031	0.206	4500
Woman Interviewed at Long-Run	0.911	-0.009	0.016	0.007	0.026	0.127	4500
Husband Interviewed at Long-Run	0.844	-0.013	0.035	0.003	0.023	0.229	4500
<i>Panel B: Constrained Women</i>							
Woman Interviewed at Short-Run	0.917	-0.011	0.029	0.001	0.030	0.109	1714
Husband Interviewed at Short-Run	0.868	0.005	0.035	-0.003	0.027	0.571	1714
Woman Interviewed at Long-Run	0.880	-0.006	0.059**	0.008	0.031	0.039**	1714
Husband Interviewed at Long-Run	0.814	-0.005	0.071**	0.006	0.005	0.139	1714
<i>Panel C: Unconstrained Women</i>							
Woman Interviewed at Short-Run	0.940	-0.018	-0.011	0.011	0.013	0.133	2784
Husband Interviewed at Short-Run	0.869	-0.009	0.011	0.029	0.035	0.175	2784
Woman Interviewed at Long-Run	0.930	-0.011	-0.015	0.009	0.022	0.270	2784
Husband Interviewed at Long-Run	0.862	-0.020	0.007	-0.000	0.033	0.314	2784

*Notes:* Each row is a separate regression. The sample includes all individuals selected for follow-up. Husbands were only interviewed if their wives were interviewed. All regressions include district and strata fixed effects. The first column gives the mean among the Accounts Only group, columns 2-5 give regression coefficients. Robust standard errors clustered at the GP level are omitted from the table for legibility. Column 6 gives the p-value from a test that all treatment coefficients are jointly equal to zero. \* p $\leq$  0.10, \*\* p $\leq$  0.05, \*\*\* p $\leq$  0.01.

Table A2: Balance on Predetermined Demographic Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Accounts Only Mean	Control	Accounts + Direct Deposit	Accounts + Training	Accounts + Direct Deposit + Training	P-Value: Joint Test	N
<i>Panel A: Individual Characteristics of Eligible Women</i>							
Age	40.091	-0.490	-0.536	0.188	-1.090	0.476	4179
Can Read or Write	0.112	-0.022	-0.003	-0.021	0.003	0.359	4179
Number of Children <3 Years Old	1.180	0.160**	0.207**	0.157*	0.152	0.096*	4179
Ever Worked for MGNREGS Before Baseline (Unconstrained) <sup>†</sup>	0.628	0.045	-0.013	0.011	0.016	0.474	4179
<i>Panel B: Household/Couple Characteristics</i>							
Male-Female Age Gap	-3.893	-0.467**	-0.466*	-0.325	0.038	0.023**	4179
Male-Female Education Gap	3.190	-0.360	-0.278	-0.046	0.077	0.350	4179
Scheduled Caste	0.290	-0.030	-0.038	0.026	-0.012	0.834	4179
Scheduled Tribe	0.076	0.108**	0.044	0.062	0.038	0.169	4179
Household Size	5.424	0.064	0.313*	0.264*	0.288	0.175	4179
Distance to Nearest Kiosk Bank	4.082	-0.775	-1.013	-1.926**	-0.462	0.080*	4179
<i>Panel C: GP Characteristics</i>							
Fraction GP Population Female	0.461	0.001	0.001	-0.000	0.005	0.685	197
Fraction GP Population SC	0.217	-0.061**	-0.049	0.003	-0.022	0.052*	197
Fraction GP Population ST	0.057	0.105***	0.036	0.013	0.092**	0.003***	197
Fraction GP Population NREGA Workers <sup>+</sup>	0.279	-0.134	-0.154	-0.162	-0.069	0.673	197
Fraction GP Population NREGA Ghost Workers <sup>+</sup>	0.328	-0.014	0.029	0.016	0.037	0.723	197
Num. New NREGA Projects 2 Yrs. Before Baseline <sup>+</sup>	31.353	13.285	0.978	1.737	-8.761	0.357	197
Sarpanch - Scheduled Caste	0.147	0.010	0.090	-0.004	0.128	0.607	197
Sarpanch - Scheduled Tribe	0.176	0.028	-0.064	-0.051	-0.049	0.654	197
Sarpanch - Other Backward Caste	0.382	0.016	0.106	0.024	0.056	0.923	197
Sarpanch - Male	0.471	0.084	0.074	0.019	0.066	0.935	197
Gwalior District	0.265	-0.016	0.084	-0.126	0.052	0.205	197
Morena District	0.235	0.037	0.030	0.087	0.108	0.828	197
Shivpuri District	0.265	-0.020	-0.114	0.039	-0.160*	0.169	197

*Notes:* Each row is a separate regression. All regressions except for the district regressions include district and strata fixed effects. District regressions only include strata fixed effects. Regressions in Panel C are at the GP level with robust standard errors; otherwise, regressions are at the individual level with standard errors clustered at the GP level. Standard errors are omitted from the table for legibility. The first column gives the mean among the Accounts Only group, columns 2-5 give regression coefficients. Column 6 gives the p-value from a test that all coefficients are jointly equal to zero. Variables marked by <sup>†</sup> are from the baseline census, and variables marked by <sup>+</sup> are from the MIS data. Non-MIS data in Panel C are from the Indian Census and a sarpanch survey. Otherwise, data are from the short run survey. A ghost worker is an individual who was listed as working on the MGNREGS MIS but self reports they did not work for the program during the reference period. \* p≤ 0.10, \*\* p≤ 0.05, \*\*\* p≤ 0.01.

Table A3: Predictors of Being Constrained

	(1) Unconstrained Mean	(2) Constrained Mean	(3) Difference C-U	(4) N
<i>Panel A: Characteristics of Women</i>				
Age <sup>+</sup>	40.459	37.830	-2.629*** (0.641)	1699
Years Education <sup>+</sup>	0.471	1.113	0.643*** (0.153)	1646
Age Had First Child (Among Women With Kids at Baseline) <sup>+</sup>	19.031	19.254	0.223 (0.178)	1594
Has Individual Bank Account	0.585	0.500	-0.085*** (0.026)	1620
If Worked for Pay in Last Year	0.837	0.740	-0.097*** (0.020)	1620
Earnings Last Month	871.999	680.206	-191.793*** (63.220)	1596
Private Labor Index	0.070	-0.128	-0.197*** (0.049)	1620
MGNREGS Labor Index	-0.073	-0.148	-0.075* (0.038)	1620
Empowerment Index	0.071	-0.022	-0.093*** (0.027)	1610
Actual Norms Index	-0.074	-0.089	-0.016 (0.032)	1620
Perceived Norms Index: Acceptance Working Women	-0.026	-0.087	-0.062 (0.044)	1618
Perceived Norms Index: Acceptance Husbands	-0.039	-0.086	-0.047 (0.039)	1618
<i>Panel B: Characteristics of Husbands</i>				
Age <sup>+</sup>	44.962	42.813	-2.149*** (0.792)	1655
Years Education <sup>+</sup>	3.266	4.996	1.730*** (0.260)	1649
Has Individual Bank Account	0.837	0.820	-0.017 (0.021)	1490
If Worked for Pay in Last Year	0.990	0.994	0.004 (0.004)	1490
Earnings Last Month	1438.257	1508.418	70.160 (138.827)	1472
Private Labor Index	0.612	0.680	0.067** (0.031)	1490
MGNREGS Labor Index	0.177	0.054	-0.123* (0.063)	1490
Actual Norms Index	0.030	-0.000	-0.031 (0.032)	1490
Perceived Norms Index: Acceptance Working Women	-0.085	-0.209	-0.123*** (0.042)	1490
Perceived Norms Index: Acceptance Husbands	-0.283	-0.423	-0.141*** (0.046)	1490
<i>Panel C: Household Characteristics</i>				
Other Backwards Caste <sup>+</sup>	0.496	0.507	0.012 (0.053)	1575
Scheduled Caste/Scheduled Tribe <sup>+</sup>	0.458	0.403	-0.054 (0.054)	1575
Household Income Last Month (Male Report)	5345.488	4637.625	-707.863** (342.178)	1487
DHS Work Index (Residualized) <sup>†</sup>	0.026	-0.018	-0.044** (0.019)	1489
DHS Work Index (Unresidualized) <sup>†</sup>	0.045	-0.016	-0.061*** (0.022)	1489

Notes: Standard errors clustered at the GP level in parentheses. Sample limited to control group. The mean of the constrained indicator for this sample is 0.336. The first two columns show the means among unconstrained and constrained women. The third column shows the regression coefficient on an indicator variable for being constrained. <sup>+</sup>Outcomes are from short run survey; otherwise, outcomes are from long run survey. <sup>†</sup>Index constructed using the Indian Demographic and Health Survey V (2005-2006) and merged onto our sample at the subcaste level. The residualized index residualizes out female education, husband education, and the DHS wealth index within the DHS data. See Data Appendix for more details. Variables measured in INR topcoded at the 99th percentile. The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. \* p $\leq$  0.10, \*\* p $\leq$  0.05, \*\*\* p $\leq$  0.01.

Table A4: First Stage Outcomes

	(1)	(2)	(3)
	Account Opened	Processed Direct Deposit	Attended Training
$\beta_1$ : Accounts + Direct Deposit + Training	0.001 (0.040)	0.544*** (0.036)	0.755*** (0.021)
$\beta_2$ : Accounts + Direct Deposit	-0.054 (0.055)	0.513*** (0.042)	-0.020* (0.011)
$\beta_3$ : Accounts + Training	0.004 (0.044)	-0.031 (0.019)	0.722*** (0.031)
Accounts Only Mean	0.734	0.017	0.002
N	4497	4497	4500

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata and district fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, and proportion of population in scheduled tribe. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table A5: Impact of Treatments on Main Outcomes: Control Group (Part 1)

	Pooled		Short Run		Long Run	
	Control Coefficient	N	Control Coefficient	N	Control Coefficient	N
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: Women's Bank Use</i>						
Aggregate Account Use Index: Full Sample ( $\beta_4$ )	-0.215*** (0.033)	8297	-0.242*** (0.040)	4179	-0.198*** (0.036)	4118
Effect for Constrained ( $\gamma_7$ )	-0.207*** (0.042)	8297	-0.259*** (0.051)	4179	-0.166*** (0.049)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.011 (0.041)	8297	0.029 (0.050)	4179	-0.049 (0.050)	4118
Banking Autonomy Index ( $\beta_4$ )					-0.224*** (0.049)	4118
Effect for Constrained ( $\gamma_7$ )					-0.172*** (0.055)	4118
Interaction with Unconstrained ( $\gamma_8$ )					-0.079 (0.061)	4118
Bank Kiosk Knowledge Index ( $\beta_4$ )					-0.513*** (0.075)	4118
Effect for Constrained ( $\gamma_7$ )					-0.488*** (0.089)	4118
Interaction with Unconstrained ( $\gamma_8$ )					-0.037 (0.084)	4118
<i>Panel B: Women's Labor Supply</i>						
( $\beta_4$ )	0.009 (0.034)	8297	0.050 (0.038)	4179	-0.022 (0.044)	4118
Effect for Constrained ( $\gamma_7$ )	0.100** (0.041)	8297	0.116** (0.045)	4179	0.097* (0.057)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.139*** (0.041)	8297	-0.093* (0.054)	4179	-0.189*** (0.055)	4118
( $\beta_4$ )	-0.005 (0.045)	8297	-0.002 (0.047)	4179	0.030 (0.063)	4118
Effect for Constrained ( $\gamma_7$ )	0.086 (0.053)	8297	0.087* (0.048)	4179	0.137 (0.085)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.134** (0.052)	8297	-0.124** (0.057)	4179	-0.168** (0.077)	4118
( $\beta_4$ )	-0.004 (0.061)	8297	0.062 (0.077)	4179	-0.078 (0.077)	4118
Effect for Constrained ( $\gamma_7$ )	0.054 (0.073)	8297	0.107 (0.101)	4179	-0.017 (0.074)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.091 (0.061)	8297	-0.064 (0.091)	4179	-0.099 (0.072)	4118
( $\beta_4$ )	0.036 (0.039)	8297	0.089** (0.038)	4179	-0.018 (0.055)	4118
Effect for Constrained ( $\gamma_7$ )	0.162*** (0.061)	8297	0.156** (0.060)	4179	0.171* (0.089)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.193*** (0.069)	8297	-0.092 (0.082)	4179	-0.299*** (0.093)	4118

*Notes:* This table reports coefficients on the control group dummy ( $\beta_4$ ), or the control group dummy and its interaction ( $\gamma_7$  and  $\gamma_8$ ) for main regressions. Each row lists results in the pooled, short-run, and long-run waves for each main outcome variable. Sub-rows show results for the same outcome variable in the interacted specification. Bank administrative data outcomes are omitted, as this data was not collected for the control group. N reports the sample size. All regressions cluster robust standard errors at the GP level and include strata, district, and wave-specific survey month fixed effects. See Table 1 for a list of individual and GP-level controls. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table A6: Impact of Treatments on Main Outcomes: Control Group (Part 2)

	Pooled		Short Run		Long Run	
	Control Coefficient	N	Control Coefficient	N	Control Coefficient	N
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel C: Men's Labor Supply</i>						
Aggregate Labor Supply Index ( $\beta_4$ )	-0.004 (0.043)	7771	0.042 (0.060)	3957	-0.036 (0.045)	3814
Effect for Constrained ( $\gamma_7$ )	0.012 (0.057)	7771	0.071 (0.086)	3957	-0.035 (0.055)	3814
Interaction with Unconstrained ( $\gamma_8$ )	-0.024 (0.058)	7771	-0.041 (0.090)	3957	-0.005 (0.056)	3814
General Labor Supply Sub-Index ( $\beta_4$ )	-0.037 (0.065)	7771	0.007 (0.089)	3957	-0.058 (0.061)	3814
Effect for Constrained ( $\gamma_7$ )	0.032 (0.101)	7771	0.115 (0.144)	3957	-0.038 (0.095)	3814
Interaction with Unconstrained ( $\gamma_8$ )	-0.103 (0.109)	7771	-0.159 (0.154)	3957	-0.038 (0.111)	3814
Public Labor Supply Sub-Index ( $\beta_4$ )	-0.017 (0.072)	7771	0.025 (0.081)	3957	-0.040 (0.089)	3814
Effect for Constrained ( $\gamma_7$ )	-0.017 (0.089)	7771	0.048 (0.115)	3957	-0.063 (0.091)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.001 (0.070)	7771	-0.033 (0.099)	3957	0.035 (0.086)	3814
Private Labor Supply Sub-Index ( $\beta_4$ )	0.043 (0.052)	7771	0.096 (0.077)	3957	-0.009 (0.042)	3814
Effect for Constrained ( $\gamma_7$ )	0.021 (0.068)	7771	0.050 (0.108)	3957	-0.004 (0.052)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.030 (0.066)	7771	0.068 (0.114)	3957	-0.013 (0.049)	3814
<i>Panel D: Empowerment</i>						
Aggregate Empowerment Index ( $\beta_4$ )	-0.008 (0.028)	8276	-0.018 (0.036)	4179	-0.001 (0.032)	4097
Effect for Constrained ( $\gamma_7$ )	0.024 (0.034)	8276	-0.004 (0.039)	4179	0.052 (0.046)	4097
Interaction with Unconstrained ( $\gamma_8$ )	-0.044 (0.034)	8276	-0.014 (0.040)	4179	-0.077* (0.047)	4097
Purchase Sub-Index ( $\beta_4$ )	-0.028 (0.041)	8276	-0.036 (0.051)	4179	-0.020 (0.057)	4097
Effect for Constrained ( $\gamma_7$ )	0.050 (0.055)	8276	0.024 (0.068)	4179	0.079 (0.073)	4097
Interaction with Unconstrained ( $\gamma_8$ )	-0.103* (0.056)	8276	-0.076 (0.069)	4179	-0.134* (0.075)	4097
Mobility Sub-Index ( $\beta_4$ )	0.009 (0.030)	8297	-0.007 (0.034)	4179	0.012 (0.037)	4118
Effect for Constrained ( $\gamma_7$ )	-0.005 (0.040)	8297	-0.055 (0.043)	4179	0.033 (0.050)	4118
Interaction with Unconstrained ( $\gamma_8$ )	0.020 (0.035)	8297	0.076* (0.039)	4179	-0.036 (0.047)	4118
Decision Making Sub-Index ( $\beta_4$ )	-0.004 (0.040)	8297	-0.010 (0.060)	4179	0.008 (0.042)	4118
Effect for Constrained ( $\gamma_7$ )	0.034 (0.049)	8297	0.020 (0.061)	4179	0.058 (0.068)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.056 (0.057)	8297	-0.041 (0.072)	4179	-0.076 (0.082)	4118

*Notes:* This table reports coefficients on the control group dummy ( $\beta_4$ ), or the control group dummy and its interaction ( $\gamma_7$  and  $\gamma_8$ ) for main regressions. Each row lists results in the pooled, short-run, and long-run waves for each main outcome variable. Sub-rows show results for the same outcome variable in the interacted specification. Bank administrative data outcomes are omitted, as this data was not collected for the control group. N reports the sample size. All regressions cluster robust standard errors at the GP level and include strata, district, and wave-specific survey month fixed effects. See Table 1 for a list of individual and GP-level controls. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table A7: Impact of Treatments on Main Outcomes:  
Control Group (Part 3)

	Long Run	
	Control	N
	Coefficient	
	(1)	(2)
<i>Panel E: Actual Norms, Female Report</i>		
Aggregate Actual Norms Index ( $\beta_4$ )	-0.015 (0.035)	4118
Effect for Constrained ( $\gamma_7$ )	0.046 (0.045)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.096* (0.050)	4118
Personal Beliefs Sub-Index ( $\beta_4$ )	-0.011 (0.036)	4118
Effect for Constrained ( $\gamma_7$ )	0.006 (0.054)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.041 (0.063)	4118
Working Women Acceptance Sub-Index ( $\beta_4$ )	-0.031 (0.052)	4118
Effect for Constrained ( $\gamma_7$ )	0.062 (0.068)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.145* (0.075)	4118
Husbands Acceptance Sub-Index ( $\beta_4$ )	-0.002 (0.049)	4118
Effect for Constrained ( $\gamma_7$ )	0.069 (0.069)	4118
Interaction with Unconstrained ( $\gamma_8$ )	-0.103 (0.079)	4118
<i>Panel F: Actual Norms, Male Report</i>		
Aggregate Actual Norms Index ( $\beta_4$ )	-0.030 (0.037)	3814
Effect for Constrained ( $\gamma_7$ )	-0.059 (0.069)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.048 (0.082)	3814
Personal Beliefs Sub-Index ( $\beta_4$ )	-0.046 (0.054)	3814
Effect for Constrained ( $\gamma_7$ )	-0.045 (0.082)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.012 (0.103)	3814
Working Women Acceptance Sub-Index ( $\beta_4$ )	0.010 (0.045)	3814
Effect for Constrained ( $\gamma_7$ )	-0.057 (0.082)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.104 (0.103)	3814
Husbands Acceptance Sub-Index ( $\beta_4$ )	-0.054 (0.048)	3814
Effect for Constrained ( $\gamma_7$ )	-0.075 (0.087)	3814
Interaction with Unconstrained ( $\gamma_8$ )	0.030 (0.101)	3814

*Notes:* This table reports coefficients on the control group dummy ( $\beta_4$ ), or the control group dummy and its interaction ( $\gamma_7$  and  $\gamma_8$ ) for main regressions. Each row lists results in the long-run wave for each main outcome variable. Sub-rows show results for the same outcome variable in the interacted specification. Bank administrative data outcomes are omitted, as this data was not collected for the control group. N reports the sample size. All regressions cluster robust standard errors at the GP level and include strata, district, and wave-specific survey month fixed effects. See Table 1 for a list of individual and GP-level controls. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table A8: Impact of Treatments on Main Outcomes: Control Group (Part 4)

	Long Run	
	Control Coefficient (1)	N (2)
<i>Panel G: Perceived Norms, Female Report</i>		
Aggregate Perceived Norms Index ( $\beta_4$ )	0.021 (0.036)	4116
Effect for Constrained ( $\gamma_7$ )	0.071 (0.063)	4116
Interaction with Unconstrained ( $\gamma_8$ )	-0.081 (0.077)	4116
Perceived Working Women Acceptance Sub-Index ( $\beta_4$ )	-0.005 (0.041)	4116
Effect for Constrained ( $\gamma_7$ )	0.044 (0.068)	4116
Interaction with Unconstrained ( $\gamma_8$ )	-0.084 (0.084)	4116
Perceived Husbands Acceptance Sub-Index ( $\beta_4$ )	0.048 (0.039)	4116
Effect for Constrained ( $\gamma_7$ )	0.097 (0.070)	4116
Interaction with Unconstrained ( $\gamma_8$ )	-0.079 (0.088)	4116
<i>Panel H: Perceived Norms, Male Report</i>		
Aggregate Perceived Norms Index ( $\beta_4$ )	0.071* (0.038)	3813
Effect for Constrained ( $\gamma_7$ )	0.057 (0.058)	3813
Interaction with Unconstrained ( $\gamma_8$ )	0.028 (0.067)	3813
Perceived Working Women Acceptance Sub-Index ( $\beta_4$ )	0.058 (0.046)	3813
Effect for Constrained ( $\gamma_7$ )	0.031 (0.068)	3813
Interaction with Unconstrained ( $\gamma_8$ )	0.045 (0.082)	3813
Perceived Husbands Acceptance Sub-Index ( $\beta_4$ )	0.084* (0.046)	3813
Effect for Constrained ( $\gamma_7$ )	0.083 (0.072)	3813
Interaction with Unconstrained ( $\gamma_8$ )	0.012 (0.075)	3813

*Notes:* This table reports coefficients on the control group dummy ( $\beta_4$ ), or the control group dummy and its interaction ( $\gamma_7$  and  $\gamma_8$ ) for main regressions. Each row lists results in the long-run wave for each main outcome variable. Sub-rows show results for the same outcome variable in the interacted specification. Bank administrative data outcomes are omitted, as this data was not collected for the control group. N reports the sample size. All regressions cluster robust standard errors at the GP level and include strata, district, and wave-specific survey month fixed effects. See Table 1 for a list of individual and GP-level controls. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table A9: Balance on Predetermined Demographic Characteristics - Unconstrained Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Accounts Only Mean	Control	Accounts + Direct Deposit	Accounts + Training	Accounts + Direct Deposit + Training	P-Value: Joint Test	N
<i>Panel A: Individual Characteristics of Eligible Women</i>							
Age	41.110	-0.640	-0.336	-0.136	-1.262	0.721	2603
Can Read or Write	0.080	-0.017	0.001	-0.002	-0.001	0.761	2603
Number of Children <3 Years Old	1.171	0.138	0.128	0.234*	0.191	0.438	2603
Ever Worked for MGNREGS Before Baseline (Unconstrained) <sup>†</sup>	1.000	0.000	0.000	0.000	0.000	.	2603
<i>Panel B: Household/Couple Characteristics</i>							
Male-Female Age Gap	-4.159	-0.188	-0.158	0.085	0.175	0.314	2603
Male-Female Education Gap	3.008	-0.508*	-0.402	-0.326	-0.206	0.487	2603
Scheduled Caste	0.279	-0.050	0.003	0.009	-0.014	0.679	2603
Scheduled Tribe	0.097	0.135***	0.040	0.092	0.038	0.140	2603
Household Size	5.393	-0.004	0.161	0.296	0.273	0.288	2603
Distance to Nearest Kiosk Bank	3.566	0.151	-0.370	-1.326	0.148	0.123	2603
<i>Panel C: GP Characteristics</i>							
Fraction GP Population Female	0.463	-0.000	0.000	-0.002	0.004	0.713	192
Fraction GP Population SC	0.223	-0.066**	-0.053	-0.005	-0.021	0.046**	192
Fraction GP Population ST	0.058	0.107***	0.038	0.015	0.090**	0.004***	192
Fraction GP Population NREGA Workers <sup>+</sup>	0.286	-0.137	-0.160	-0.164	-0.054	0.667	192
Fraction GP Population NREGA Ghost Workers <sup>+</sup>	0.323	-0.007	0.013	0.016	0.039	0.761	192
Num. New NREGA Projects 2 Yrs. Before Baseline <sup>+</sup>	31.727	13.648	1.158	1.475	-7.493	0.465	192
Sarpanch - Scheduled Caste	0.152	0.004	0.094	-0.013	0.100	0.691	192
Sarpanch - Scheduled Tribe	0.182	0.025	-0.065	-0.053	-0.054	0.673	192
Sarpanch - Other Backward Caste	0.364	0.037	0.110	0.048	0.095	0.906	192
Sarpanch - Male	0.455	0.099	0.106	0.034	0.103	0.871	192
Gwalior District	0.273	-0.020	0.088	-0.133	0.019	0.227	192
Morena District	0.212	0.046	0.031	0.106	0.149	0.637	192
Shivpuri District	0.273	-0.026	-0.119	0.027	-0.168*	0.197	192

*Notes:* Each row is a separate regression. All regressions except for the district regressions include district and strata fixed effects. District regressions only include strata fixed effects. Regressions in Panel C are at the GP level with robust standard errors; otherwise, regressions are at the individual level with standard errors clustered at the GP level. Standard errors are omitted from the table for legibility. The first column gives the mean among the Accounts Only group, columns 2-5 give regression coefficients. Column 6 gives the p-value from a test that all treatment coefficients are jointly equal to zero. Variables marked by <sup>†</sup> are from the baseline census, and variables marked by <sup>+</sup> are from the MIS data. Non-MIS data in Panel C are from the Indian Census or a sarpanch survey. Otherwise, data are from the short run survey. A ghost worker is an individual who was listed as working on the MGNREGS MIS but self reports they did not work for the program during the reference period. Sample restricted to women who reported having done NREGA work at baseline. \* p $\leq$  0.10, \*\* p $\leq$  0.05, \*\*\* p $\leq$  0.01.

Table A10: Balance on Predetermined Demographic Characteristics - Constrained Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Accounts Only Mean	Control	Accounts + Direct Deposit	Accounts + Training	Accounts + Direct Deposit + Training	P-Value: Joint Test	N
<i>Panel A: Individual Characteristics of Eligible Women</i>							
Age	38.374	-0.704	-0.662	0.827	-1.056	0.450	1576
Can Read or Write	0.167	-0.014	-0.011	-0.055	0.018	0.341	1576
Number of Children <3 Years Old	1.194	0.208*	0.305**	0.029	0.114	0.080*	1576
Ever Worked for MGNREGS Before Baseline (Unconstrained) <sup>†</sup>	0.000	0.000	0.000	0.000	0.000	.	1576
<i>Panel B: Household/Couple Characteristics</i>							
Male-Female Age Gap	-3.444	-0.914**	-0.962**	-1.036**	-0.196	0.011**	1576
Male-Female Education Gap	3.495	-0.058	-0.073	0.434	0.579	0.324	1576
Scheduled Caste	0.307	0.014	-0.088	0.047	-0.008	0.469	1576
Scheduled Tribe	0.042	0.060*	0.047*	0.019	0.037	0.247	1576
Household Size	5.477	0.157	0.493**	0.183	0.303	0.229	1576
Distance to Nearest Kiosk Bank	4.953	-2.178*	-1.975	-2.654**	-1.335	0.131	1576
<i>Panel C: GP Characteristics</i>							
Fraction GP Population Female	0.462	0.001	0.001	-0.000	0.004	0.850	186
Fraction GP Population SC	0.225	-0.064**	-0.072**	-0.007	-0.029	0.035**	186
Fraction GP Population ST	0.053	0.105***	0.045	0.026	0.096**	0.006***	186
Fraction GP Population NREGA Workers <sup>+</sup>	0.291	-0.143	-0.158	-0.165	-0.072	0.721	186
Fraction GP Population NREGA Ghost Workers <sup>+</sup>	0.349	-0.028	0.036	0.013	0.023	0.516	186
Num. New NREGA Projects 2 Yrs. Before Baseline <sup>+</sup>	32.531	15.452	1.556	0.990	-7.826	0.381	186
Sarpanch - Scheduled Caste	0.125	0.021	0.122	0.028	0.122	0.604	186
Sarpanch - Scheduled Tribe	0.188	0.031	-0.066	-0.047	-0.048	0.676	186
Sarpanch - Other Backward Caste	0.406	-0.012	0.083	0.003	0.051	0.924	186
Sarpanch - Male	0.469	0.096	0.076	0.054	0.045	0.936	186
Gwalior District	0.281	-0.050	0.088	-0.113	0.035	0.293	186
Morena District	0.219	0.068	0.029	0.132	0.132	0.645	186
Shivpuri District	0.250	-0.018	-0.118	-0.019	-0.166*	0.193	186

*Notes:* Each row is a separate regression. All regressions except for the district regressions include district and strata fixed effects. District regressions only include strata fixed effects. Regressions in Panel C are at the GP level with robust standard errors; otherwise, regressions are at the individual level with standard errors clustered at the GP level. Standard errors are omitted from the table for legibility. The first column gives the mean among the Accounts Only group, columns 2-5 give regression coefficients. Column 6 gives the p-value from a test that all treatment coefficients are jointly equal to zero. Variables marked by <sup>†</sup> are from the baseline census, and variables marked by <sup>+</sup> are from the MIS data. Non-MIS data in Panel C are from the Indian Census or a sarpanch survey. Otherwise, data are from the short run survey. A ghost worker is an individual who was listed as working on the MGNREGS MIS but self reports they did not work for the program during the reference period. Sample restricted to women who reported not having done NREGA work at baseline. \* p<sub>≤</sub> 0.10, \*\* p<sub>≤</sub> 0.05, \*\*\* p<sub>≤</sub> 0.01.

Table A11: Heterogeneous Impact of Treatments on Women's Labor Supply by Survey Wave

	Aggregate Index Components							
	Aggregate Labor Supply Index		General Labor Supply Sub-Index		Public Labor Supply Sub-Index		Private Labor Supply Sub-Index	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run
$\gamma_1$ : Accounts + Direct Deposit + Training	0.233*** (0.053)	0.189*** (0.067)	0.216*** (0.063)	0.247** (0.099)	0.212* (0.127)	0.042 (0.082)	0.270*** (0.070)	0.280*** (0.104)
$\gamma_2$ : Accounts + Direct Deposit + Training $\times$ Unconstrained	-0.101 (0.062)	-0.210*** (0.073)	-0.108 (0.071)	-0.207** (0.099)	-0.078 (0.111)	-0.027 (0.085)	-0.117 (0.088)	-0.396*** (0.109)
$\gamma_3$ : Accounts + Direct Deposit	0.054 (0.053)	0.023 (0.067)	0.118* (0.069)	-0.001 (0.095)	-0.107 (0.095)	-0.067 (0.081)	0.152** (0.070)	0.136 (0.098)
$\gamma_4$ : Accounts + Direct Deposit $\times$ Unconstrained	-0.045 (0.069)	-0.107 (0.067)	-0.057 (0.092)	-0.023 (0.089)	-0.043 (0.096)	-0.074 (0.081)	-0.034 (0.095)	-0.225** (0.105)
$\gamma_5$ : Accounts + Training	0.025 (0.061)	0.145** (0.069)	0.074 (0.061)	0.155* (0.087)	-0.025 (0.111)	-0.016 (0.095)	0.026 (0.073)	0.297*** (0.098)
$\gamma_6$ : Accounts + Training $\times$ Unconstrained	0.012 (0.069)	-0.212*** (0.068)	-0.057 (0.076)	-0.211** (0.089)	0.055 (0.100)	-0.028 (0.105)	0.038 (0.099)	-0.398*** (0.107)
$\gamma_9$ : Unconstrained	0.185*** (0.044)	0.263*** (0.046)	0.237*** (0.046)	0.269*** (0.065)	0.079 (0.066)	0.102* (0.058)	0.239*** (0.074)	0.418*** (0.082)
<i>P-values from F-Tests</i>								
$\gamma_1 + \gamma_2 = 0$	0.014**	0.715	0.120	0.614	0.080*	0.878	0.024**	0.113
$\gamma_3 + \gamma_4 = 0$	0.868	0.147	0.437	0.772	0.051*	0.156	0.093*	0.190
$\gamma_5 + \gamma_6 = 0$	0.539	0.266	0.824	0.450	0.746	0.758	0.311	0.118
Accounts Only Mean - Constrained	-0.132	-0.186	-0.184	-0.182	-0.049	-0.102	-0.163	-0.275
N	4179	4118	4179	4118	4179	4118	4179	4118

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table A12: Heterogeneous Impact of Treatments on Men's Labor Supply by Survey Wave

	Aggregate Index Components							
	Aggregate Labor Supply Index		General Labor Supply Sub-Index		Public Labor Supply Sub-Index		Private Labor Supply Sub-Index	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run
$\gamma_1$ : Accounts + Direct Deposit + Training	0.099	-0.066	0.112	-0.141	0.179	0.068	0.007	-0.125**
	(0.093)	(0.070)	(0.156)	(0.113)	(0.144)	(0.121)	(0.111)	(0.061)
$\gamma_2$ : Accounts + Direct Deposit + Training $\times$ Unconstrained	0.005	0.098	-0.032	0.055	-0.029	0.152	0.077	0.086
	(0.105)	(0.081)	(0.174)	(0.135)	(0.130)	(0.113)	(0.125)	(0.073)
$\gamma_3$ : Accounts + Direct Deposit	0.129	0.077	0.276*	0.245*	-0.052	-0.114	0.163	0.099
	(0.092)	(0.077)	(0.156)	(0.132)	(0.119)	(0.100)	(0.124)	(0.081)
$\gamma_4$ : Accounts + Direct Deposit $\times$ Unconstrained	-0.123	-0.155*	-0.164	-0.306**	-0.140	-0.043	-0.064	-0.116
	(0.103)	(0.085)	(0.175)	(0.147)	(0.116)	(0.100)	(0.137)	(0.097)
$\gamma_5$ : Accounts + Training	0.134	0.041	0.219	0.169	-0.010	-0.128	0.193*	0.082
	(0.085)	(0.064)	(0.142)	(0.118)	(0.135)	(0.103)	(0.114)	(0.080)
$\gamma_6$ : Accounts + Training $\times$ Unconstrained	-0.090	-0.052	-0.158	-0.147	0.006	0.084	-0.118	-0.095
	(0.106)	(0.081)	(0.174)	(0.141)	(0.121)	(0.114)	(0.143)	(0.083)
$\gamma_9$ : Unconstrained	0.087	0.082*	0.120	0.177*	0.051	0.019	0.089	0.048
	(0.076)	(0.047)	(0.132)	(0.093)	(0.080)	(0.068)	(0.098)	(0.044)
<i>P-values from F-Tests</i>								
$\gamma_1 + \gamma_2 = 0$	0.102	0.580	0.409	0.254	0.072*	0.040**	0.297	0.445
$\gamma_3 + \gamma_4 = 0$	0.935	0.193	0.319	0.435	0.026**	0.195	0.333	0.775
$\gamma_5 + \gamma_6 = 0$	0.563	0.866	0.611	0.803	0.969	0.751	0.485	0.808
Accounts Only Mean - Constrained	0.515	0.477	0.721	0.585	0.160	0.156	0.664	0.691
N	3957	3814	3957	3814	3957	3814	3957	3814

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table A13: Impact of Treatments on Empowerment: Short-Run and Long-Run Effects

	Aggregate Index Components							
	Aggregate Empowerment Index		Purchase Sub-Index		Mobility Sub-Index		Decision Making Sub-Index	
	(1) Short-Run	(2) Long-Run	(3) Short-Run	(4) Long-Run	(5) Short-Run	(6) Long-Run	(7) Short-Run	(8) Long-Run
<i>Panel A: Main Effects</i>								
$\beta_1$ : Accounts + Direct Deposit + Training	0.022 (0.036)	0.027 (0.040)	0.070 (0.055)	-0.017 (0.071)	0.053 (0.038)	0.051 (0.039)	-0.057 (0.060)	0.056 (0.050)
$\beta_2$ : Accounts + Direct Deposit	-0.020 (0.040)	-0.001 (0.033)	-0.039 (0.061)	-0.068 (0.059)	0.034 (0.039)	-0.032 (0.045)	-0.055 (0.061)	0.099** (0.048)
$\beta_3$ : Accounts + Training	-0.026 (0.038)	0.049 (0.040)	-0.077 (0.051)	0.042 (0.071)	0.041 (0.036)	0.013 (0.044)	-0.044 (0.064)	0.099** (0.050)
Accounts Only Mean	0.000	0.002	0.000	0.000	-0.000	0.000	0.000	-0.000
N	4179	4097	4179	4097	4179	4118	4179	4118
<i>Panel B: Heterogeneous Effects</i>								
$\gamma_1$ : Accounts + Direct Deposit + Training	0.083** (0.040)	0.137** (0.056)	0.194*** (0.073)	0.189** (0.087)	0.026 (0.053)	0.124** (0.056)	0.030 (0.069)	0.116 (0.083)
$\gamma_2$ : Accounts + Direct Deposit + Training $\times$ Unconstrained	-0.092* (0.048)	-0.169*** (0.055)	-0.184** (0.081)	-0.312*** (0.084)	0.042 (0.056)	-0.124** (0.060)	-0.135 (0.096)	-0.086 (0.099)
$\gamma_3$ : Accounts + Direct Deposit	0.006 (0.045)	0.017 (0.049)	0.030 (0.077)	0.015 (0.080)	0.005 (0.050)	-0.043 (0.054)	-0.018 (0.063)	0.093 (0.082)
$\gamma_4$ : Accounts + Direct Deposit $\times$ Unconstrained	-0.030 (0.050)	-0.011 (0.049)	-0.084 (0.086)	-0.105 (0.080)	0.046 (0.046)	0.023 (0.053)	-0.052 (0.079)	0.031 (0.092)
$\gamma_5$ : Accounts + Training	0.035 (0.047)	0.127** (0.051)	-0.032 (0.070)	0.159* (0.082)	0.033 (0.046)	0.037 (0.057)	0.103 (0.075)	0.198** (0.079)
$\gamma_6$ : Accounts + Training $\times$ Unconstrained	-0.084 (0.059)	-0.115** (0.055)	-0.057 (0.081)	-0.164* (0.087)	0.009 (0.050)	-0.050 (0.054)	-0.204** (0.100)	-0.138 (0.102)
$\gamma_9$ : Unconstrained	0.064* (0.034)	0.146*** (0.040)	0.138** (0.060)	0.233*** (0.059)	-0.005 (0.030)	0.080** (0.039)	0.060 (0.061)	0.138* (0.072)
<i>P-values from F-Tests</i>								
$\gamma_1 + \gamma_2 = 0$	0.834	0.419	0.886	0.102	0.114	0.994	0.189	0.619
$\gamma_3 + \gamma_4 = 0$	0.604	0.869	0.442	0.164	0.222	0.698	0.364	0.018**
$\gamma_5 + \gamma_6 = 0$	0.305	0.783	0.134	0.948	0.296	0.784	0.225	0.336
Accounts Only Mean - Constrained	-0.028	-0.111	-0.089	-0.218	0.054	-0.042	-0.050	-0.084
N	4179	4097	4179	4097	4179	4118	4179	4118

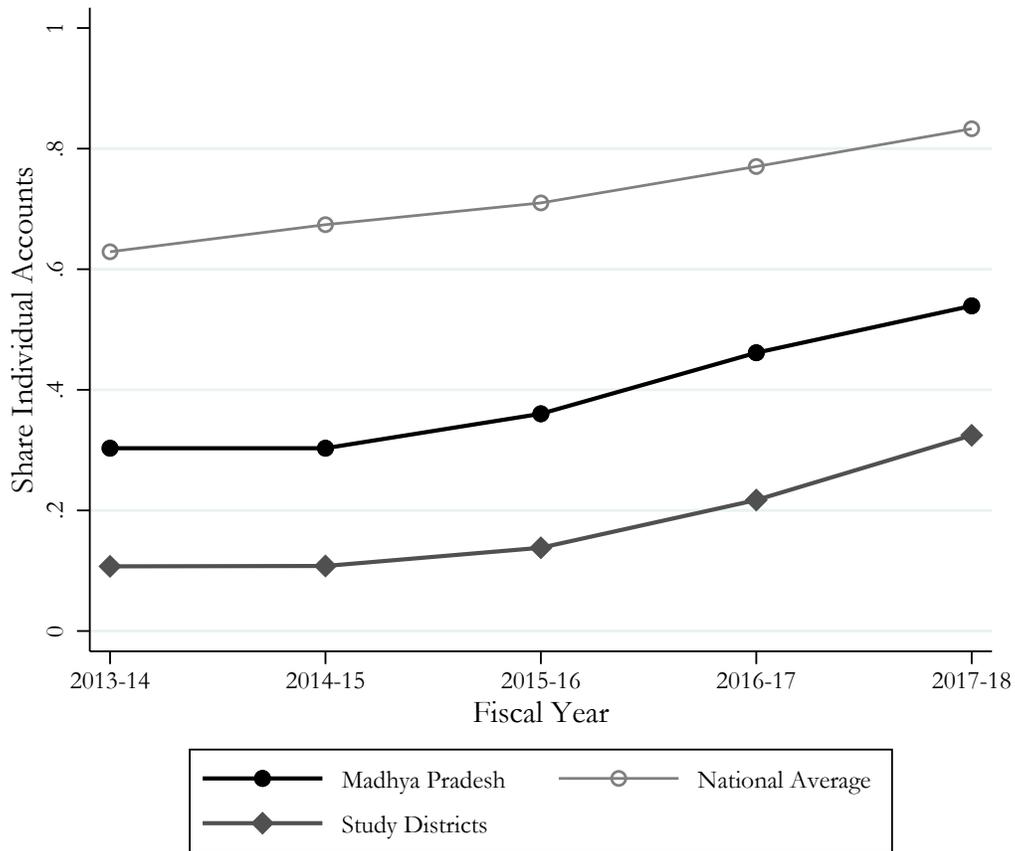
*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table A14: Impact of Treatments on Daily Wages

	Farm Labor			Non-Farm Labor			MGNREGS		
	(1) Pooled	(2) Short-Run	(3) Long-Run	(4) Pooled	(5) Short-Run	(6) Long-Run	(7) Pooled	(8) Short-Run	(9) Long-Run
<i>Panel A: Women</i>									
$\beta_1$ : Accounts + Direct Deposit + Training	10.818 (6.893)	17.141* (9.170)	6.432 (6.542)	1.288 (8.847)	-1.923 (12.741)	12.640 (11.605)	3.153 (9.207)	-8.619 (11.942)	7.873 (12.270)
$\beta_2$ : Accounts + Direct Deposit	5.915 (6.592)	6.777 (8.736)	4.441 (6.335)	-5.499 (8.485)	-2.222 (11.472)	-3.008 (10.949)	0.924 (8.996)	-16.225 (11.953)	12.335 (10.783)
$\beta_3$ : Accounts + Training	1.527 (6.664)	2.824 (8.553)	-0.032 (6.773)	-20.147** (8.544)	-7.348 (10.628)	-18.210 (11.496)	-0.075 (8.120)	1.970 (9.354)	-7.433 (11.179)
Accounts Only Mean	194.454	177.982	206.740	206.771	191.400	222.143	176.268	157.867	198.350
N	5043	2192	2851	932	457	475	793	400	393
<i>Panel B: Men</i>									
$\beta_1$ : Accounts + Direct Deposit + Training	0.224 (6.570)	9.774 (8.649)	-3.350 (7.081)	-7.635 (5.913)	-2.961 (9.430)	-10.338 (6.765)	1.552 (6.406)	4.768 (7.342)	-2.603 (9.456)
$\beta_2$ : Accounts + Direct Deposit	-1.993 (6.957)	-1.410 (9.279)	-4.256 (7.186)	-6.638 (5.896)	-2.695 (9.269)	-11.583* (6.731)	-6.641 (6.651)	-8.992 (7.970)	-3.681 (9.159)
$\beta_3$ : Accounts + Training	0.702 (5.926)	1.736 (7.712)	1.910 (5.654)	-3.499 (7.623)	4.161 (11.641)	-9.370 (6.468)	3.324 (5.892)	0.132 (6.547)	6.377 (9.373)
Accounts Only Mean	206.253	186.449	219.845	239.990	227.064	250.124	200.721	183.545	222.156
N	4583	1932	2651	3810	1686	2124	2044	1155	889

*Notes:* Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Figure A1: Share of Women Receiving MGNREGS Payments in Individual Accounts Over Time

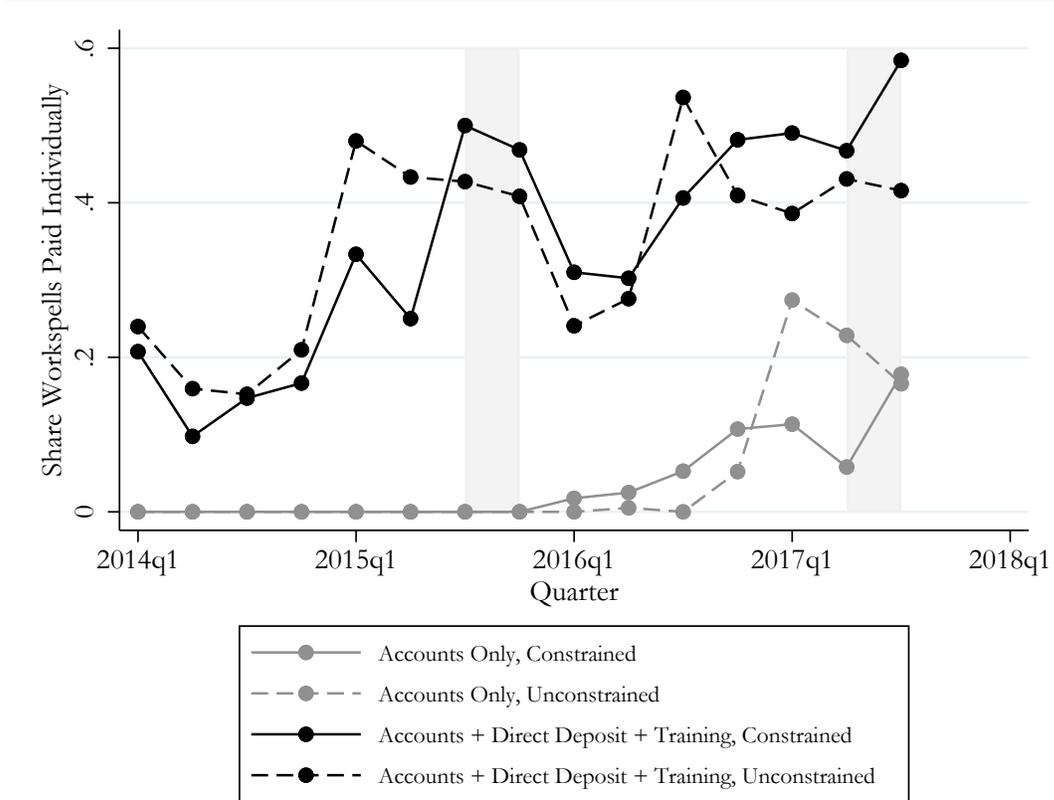


*Notes:* Data from MGNREGS MIS Table R1.2.6: Women Joint Account Detail, accessed at <http://mnregaweb4.nic.in/netnrega/MISreport4.aspx>. Figures for FY 2013-14 omit Andhra Pradesh, Manipur, and Dadra and Nagar Haveli due to missing data.

Figure A2: Timeline of Experimental Activities

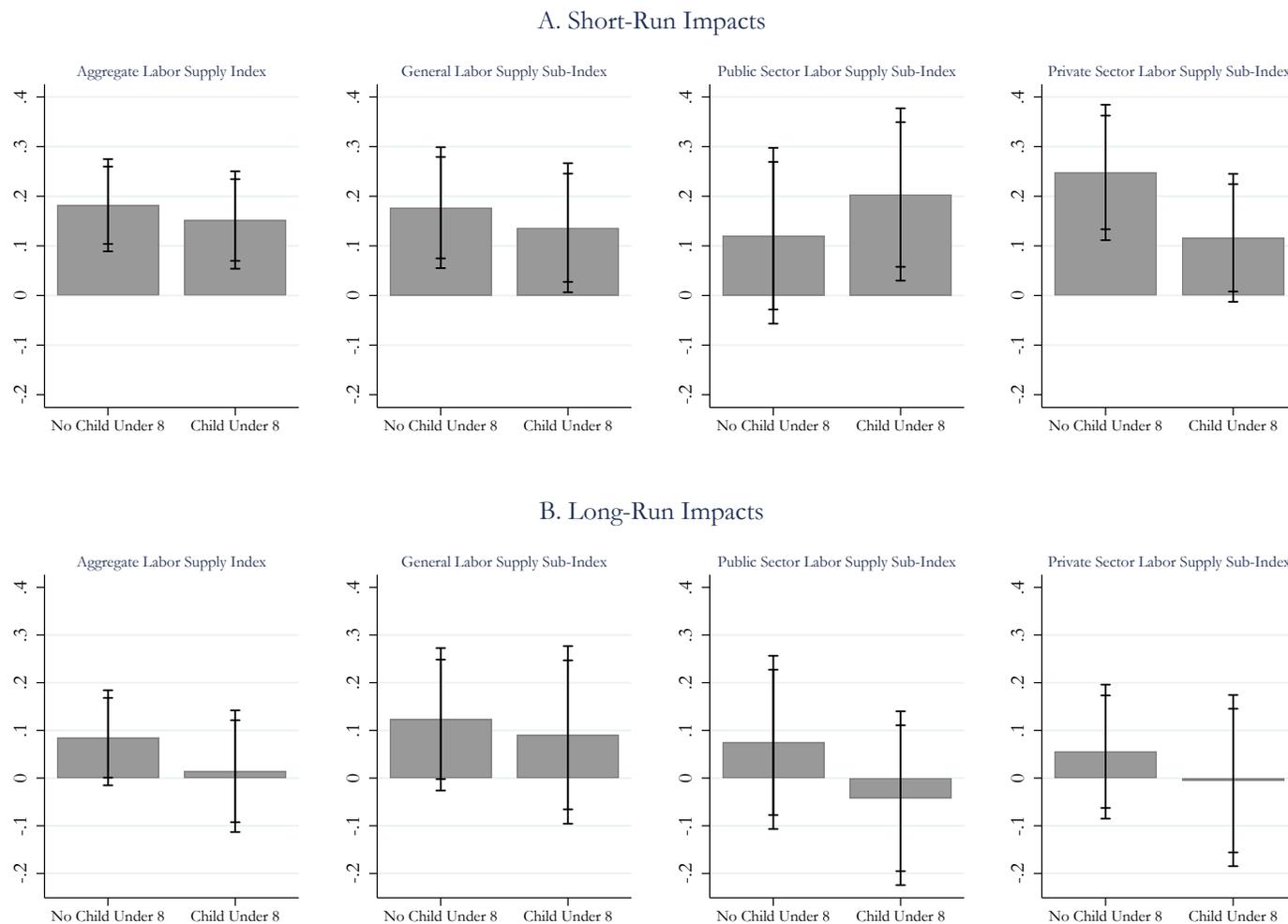
Activity	2013		2014												2015												...	2017									
	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	
Baseline Census	█	█																																			
Account Opening at the CSP	█	█	█	█	█	█	█	█																													
Wave 1 Direct Deposit Signup	█	█	█	█	█	█	█	█																													
Training Sessions						█																															
Wave 2 Direct Deposit Signup															█	█	█	█	█																		
Bank Card Disbursement at the CSP																																					
Short-Run Survey																																					
Long-Run Survey																																					

Figure A3: Share of MGNREGS Wages Paid Individually Over Time



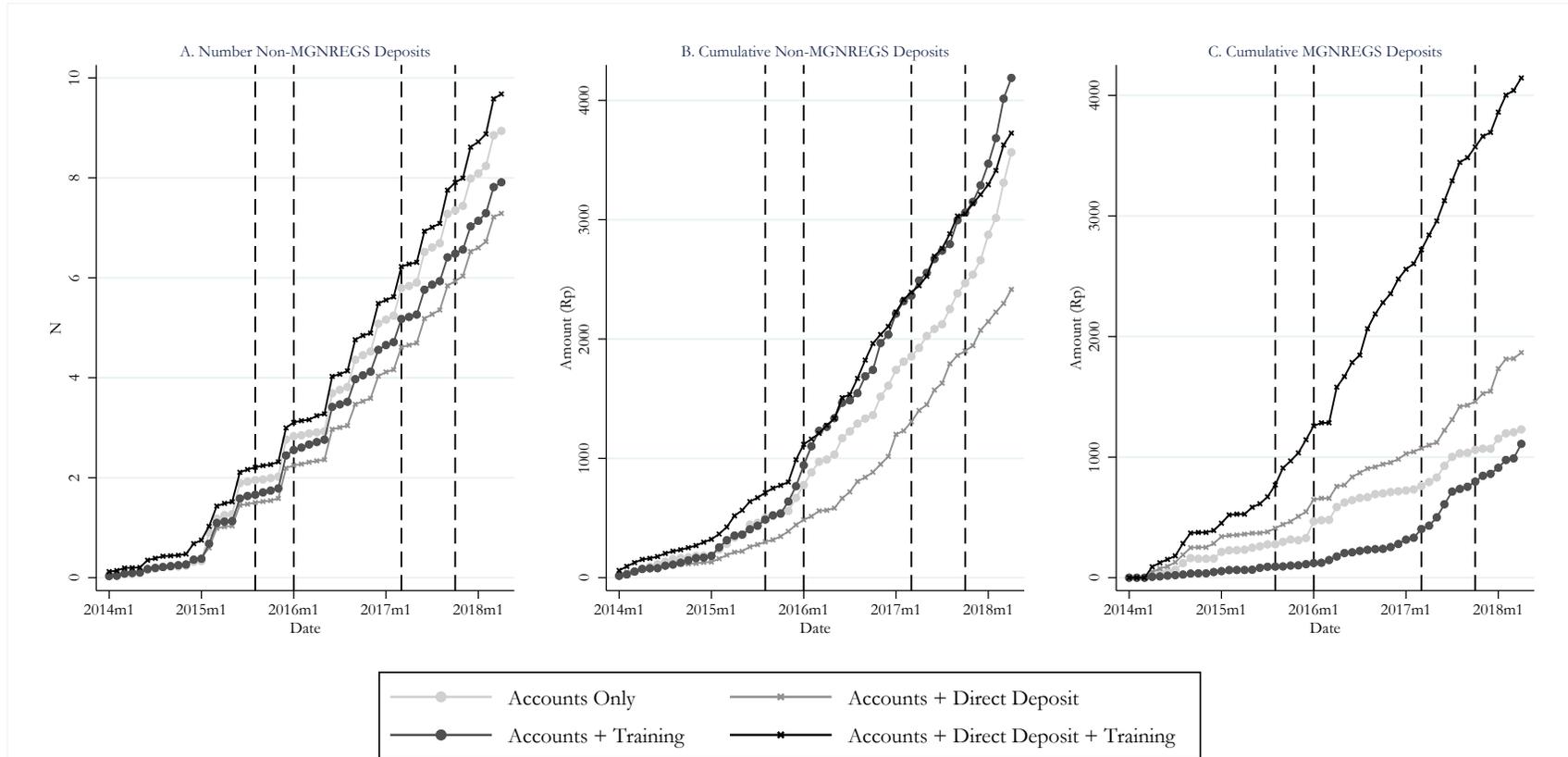
*Notes:* This graphs the share of MGNREGS payments made to sampled women in individual accounts according to MGNREGS MIS data. A small number of payments cannot be classified as individual or joint; these are dropped from all estimates. Shaded bars indicate follow-up survey periods.

Figure A4: Effects of Direct Deposit and Training by Age of Youngest Child in the Household



*Notes:* This figure graphs treatment effects of Direct Deposit and Training relative to Accounts Only by whether or not the household has a children under the age of eight. Whiskers give 90 and 95 percent confidence intervals on point estimates. Robust standard errors are clustered at the gram panchayat level. All regressions include controls for strata, district, and wave-specific survey month fixed effects.

Figure A5: Non-MGNREGS Activity in Project Bank Accounts



*Notes:* Administrative bank account data. All non-account openers are coded as having zero values for all measures. All outcomes are top-coded at the 99th percentile by month. Dashed lines demarcate the beginning and end of the short-run and long-run surveys. The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017.

## B Appendix Tables and Figures: Impacts on Index Components

Table B1: Impact of Treatments on Banking Sub-Index Components (part 1)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel A: Aggregate Account Use Index</i>						
If Own Ind. Acct.: Pooled	0.057** (0.024)	-0.037 (0.035)	-0.007 (0.030)	-0.407*** (0.026)	0.857	8297
Short-Run	0.032 (0.025)	-0.028 (0.041)	-0.013 (0.032)	-0.534*** (0.029)	0.886	4179
Long-Run	0.078*** (0.028)	-0.050 (0.034)	-0.009 (0.033)	-0.283*** (0.028)	0.827	4118
If Visited - 6 months: Pooled	0.075*** (0.027)	0.016 (0.022)	0.078*** (0.026)	-0.049** (0.021)	0.171	8279
Short-Run	0.059 (0.038)	-0.021 (0.035)	0.101*** (0.035)	-0.103*** (0.028)	0.161	4173
Long-Run	0.088*** (0.029)	0.046* (0.026)	0.049* (0.028)	-0.005 (0.022)	0.181	4106
Ind. Acct. Balance: Pooled	31.339 (35.176)	2.628 (32.528)	4.777 (29.030)	-41.918 (26.220)	154.626	8107
Short-Run	60.792* (31.072)	-14.150 (25.405)	34.217 (26.988)	7.154 (24.092)	84.592	4127
Long-Run	7.358 (47.035)	9.956 (52.440)	-23.704 (39.995)	-94.222** (37.257)	228.131	3980
Any MGNREGS Payment Ind. Acct.†: Pooled	0.197*** (0.023)	0.122*** (0.028)	-0.010 (0.014)	-0.009 (0.013)	0.027	8073
Short-Run	0.243*** (0.026)	0.159*** (0.037)	-0.003 (0.014)	0.020 (0.020)	0.000	3977
Long-Run	0.153*** (0.025)	0.089*** (0.030)	-0.015 (0.023)	-0.033** (0.016)	0.054	4096
Value MGNREGS Payments Ind. Acct.†: Pooled	763.843*** (118.987)	435.155*** (133.797)	-22.213 (86.701)	-28.621 (79.808)	131.978	8073
Short-Run	728.502*** (103.338)	524.273*** (157.916)	-8.676 (62.924)	84.630 (79.403)	0.000	3977
Long-Run	800.967*** (165.477)	341.667** (170.149)	-30.410 (162.931)	-130.496 (107.329)	263.957	4096
Average Daily Ind. Acct. Balance† Pooled	144.543*** (45.735)	62.994 (38.676)	-49.821 (41.145)	0.000 (0.000)	156.521	3856
Short-Run	77.271*** (25.575)	19.503 (26.305)	-36.080 (26.128)	0.000 (0.000)	82.520	1939
Long-Run	221.274*** (75.403)	92.521 (63.690)	-60.282 (65.240)	0.000 (0.000)	229.292	1917
Num. Ind. Acct. Transactions† Pooled	1.922*** (0.585)	-0.405 (0.572)	-1.057 (0.695)	0.000 (0.000)	5.326	3856
Short-Run	1.523*** (0.453)	-0.181 (0.476)	-0.586 (0.528)	0.000 (0.000)	4.137	1939
Long-Run	2.510*** (0.815)	-0.808 (0.823)	-1.595 (0.981)	0.000 (0.000)	6.495	1917

*Notes:* All monetary values are denominated in Indian Rupees and top-coded at the 99th percentile. The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. The outcome variables in this table feed into the account use index. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. MGNREGS administrative data variables are marked with †. Bank administrative data variables are marked with † and are only included in the Aggregate Account Use Index: Bank Admin Data version. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \* p< 0.10, \*\* p< 0.05, \*\*\* p< 0.10.

Table B2: Impact of Treatments on Banking Sub-Index Components (part 2)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel B: Banking Autonomy Index (Long-Run Only)</i>						
Visits Bank Alone	0.033 (0.025)	-0.005 (0.027)	0.021 (0.028)	-0.026 (0.023)	0.107	4103
Visits Bank Without Male Supervision	0.061* (0.032)	0.016 (0.030)	0.060* (0.032)	-0.017 (0.027)	0.188	4103
Comfortable Conducting Transactions at Bank Kiosk	0.097** (0.045)	-0.024 (0.043)	-0.011 (0.043)	-0.238*** (0.037)	0.605	3987
Comfortable Visiting Bank Kiosk Alone	0.087** (0.041)	-0.033 (0.042)	0.006 (0.046)	-0.179*** (0.038)	0.534	3997
Believes Can Visit Bank Kiosk Without Male	0.043 (0.044)	-0.076* (0.043)	0.027 (0.048)	-0.141*** (0.041)	0.426	4048
Prefers Payments for Work into Own Bank Acct.	0.034 (0.031)	-0.014 (0.028)	-0.044 (0.032)	-0.081*** (0.026)	0.302	4106
Prefers Payments for Work not to Husband	0.043* (0.023)	0.015 (0.025)	-0.000 (0.024)	-0.048** (0.020)	0.828	4106
<i>Panel C: Bank Kiosk Knowledge Index (Long-Run Only)</i>						
Heard of Bank Kiosk Before	0.036 (0.033)	-0.035 (0.037)	-0.034 (0.036)	-0.216*** (0.030)	0.828	4118
Num. Transactions Ever Conducted At Bank Kiosk	0.227** (0.108)	-0.033 (0.099)	-0.073 (0.095)	-0.454*** (0.083)	1.701	3859

*Notes:* The outcome variables in this table feed into the Bank Autonomy Index and Bank Kiosk Knowledge Index. These questions were only asked in the long run survey. See Data Appendix for further details on variable construction. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \* p≤ 0.10, \*\* p≤ 0.05, \*\*\* p≤ 0.10.

Table B3: Impact of Treatments on Aggregate Women's Labor Supply Index Sub-Components (Part 1)

	Accounts + Direct Deposit+ Training	Accounts+ Direct Deposit	Accounts + Training	Control	Accounts Only Mean	N
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: General Labor Supply Sub-Index</i>						
If Worked for Pay Past Month: Pooled	0.052* (0.028)	0.020 (0.034)	0.019 (0.033)	-0.016 (0.028)	0.391	8244
Short-Run	0.076*** (0.028)	0.023 (0.030)	0.036 (0.031)	-0.011 (0.025)	0.203	4127
Long-Run	0.052 (0.039)	-0.002 (0.044)	0.024 (0.043)	0.020 (0.038)	0.579	4117
Earnings Past Month: Pooled	73.662 (61.991)	23.601 (68.912)	-29.682 (58.292)	0.934 (53.044)	456.659	8140
Short-Run	82.513* (48.561)	41.882 (50.180)	-0.587 (42.792)	-24.686 (40.530)	278.362	4107
Long-Run	142.396 (102.856)	13.259 (102.065)	-3.767 (92.557)	103.243 (88.189)	636.506	4033
Months Worked Past Year: Pooled	0.237 (0.208)	0.065 (0.215)	-0.047 (0.194)	-0.047 (0.176)	2.547	8175
Short-Run	0.240 (0.206)	0.229 (0.202)	-0.001 (0.194)	0.168 (0.160)	1.975	4133
Long-Run	0.332 (0.287)	-0.154 (0.265)	0.011 (0.230)	-0.142 (0.214)	3.132	4042
<i>Panel B: Public Labor Supply Sub-Index</i>						
Worked for MGNREGS Past Month - Self Report: Pooled	0.005 (0.011)	-0.001 (0.012)	-0.011 (0.012)	0.000 (0.010)	0.021	7800
Short-Run	0.012 (0.011)	-0.006 (0.013)	-0.015 (0.015)	-0.002 (0.010)	0.017	4179
Long-Run	-0.001 (0.016)	0.004 (0.018)	-0.007 (0.014)	0.002 (0.014)	0.025	3621
Worked for MGNREGS Past Year - Self Report: Pooled	0.018 (0.021)	0.004 (0.023)	0.005 (0.027)	-0.003 (0.020)	0.115	7847
Short-Run	-0.001 (0.021)	-0.017 (0.022)	-0.016 (0.030)	-0.026 (0.020)	0.104	4179
Long-Run	0.045 (0.029)	0.024 (0.032)	0.034 (0.032)	0.023 (0.027)	0.129	3668
Worked for MGNREGS Past Month - MIS Report: Pooled	0.013 (0.023)	-0.031 (0.022)	-0.005 (0.031)	-0.011 (0.022)	0.075	8297
Short-Run	0.052** (0.022)	-0.009 (0.017)	0.014 (0.022)	0.041** (0.019)	0.029	4179
Long-Run	-0.036 (0.035)	-0.057 (0.037)	-0.030 (0.053)	-0.058* (0.034)	0.123	4118
Worked for MGNREGS Past Year - MIS Report: Pooled	0.079** (0.037)	-0.108*** (0.034)	-0.012 (0.052)	-0.036 (0.036)	0.282	8297
Short-Run	0.091* (0.051)	-0.116** (0.046)	-0.005 (0.053)	-0.002 (0.047)	0.277	4179
Long-Run	0.049 (0.051)	-0.111** (0.050)	-0.037 (0.064)	-0.072 (0.047)	0.288	4118
MGNREGS Wages Past Month - MIS Report: Pooled	17.700 (42.542)	-51.176 (40.123)	-6.639 (57.547)	-8.650 (42.107)	119.360	8297
Short-Run	62.394** (29.897)	-16.590 (24.339)	13.089 (27.378)	60.903** (26.784)	34.681	4179
Long-Run	-46.402 (67.661)	-98.946 (72.276)	-38.529 (102.640)	-71.193 (71.514)	205.928	4118
MGNREGS Wages Past Year - MIS Report: Pooled	217.131 (199.973)	-415.973** (181.541)	31.832 (276.561)	-176.805 (182.438)	976.194	8297
Short-Run	90.074 (174.018)	-428.853*** (132.653)	53.320 (160.716)	-62.591 (141.699)	641.045	4179
Long-Run	273.648 (317.038)	-483.739 (307.959)	-58.559 (432.215)	-274.768 (293.267)	1318.816	4118

*Notes:* The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. All outcome variables in this table feed into the MGNREGS labor supply index. All monetary values are denominated in Indian Rupees and top-coded at the 99th percentile. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table B4: Impact of Treatments on Aggregate Women's Labor Supply Index Sub-Components (Part 2)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel C: Private Labor Supply Sub-Index</i>						
Primary Occupation Past Year was Worker: Pooled	0.023 (0.028)	0.043 (0.026)	0.031 (0.027)	0.002 (0.026)	0.371	8290
Short-Run	0.067*** (0.024)	0.038 (0.023)	0.021 (0.022)	0.027 (0.020)	0.116	4172
Long-Run	-0.017 (0.042)	0.009 (0.037)	0.043 (0.037)	0.007 (0.034)	0.631	4118
If Worked for Pay Past Year: Pooled	0.052** (0.026)	0.022 (0.025)	-0.001 (0.025)	0.000 (0.023)	0.767	8297
Short-Run	0.090*** (0.031)	0.057* (0.032)	0.003 (0.034)	0.034 (0.028)	0.700	4179
Long-Run	0.011 (0.032)	-0.027 (0.030)	-0.005 (0.028)	-0.030 (0.026)	0.835	4118
Private Work Earnings Past Year: Pooled	956.202** (415.194)	569.581 (408.590)	342.197 (373.115)	437.330 (313.699)	3883.477	7763
Short-Run	1204.329* (638.226)	919.499 (618.829)	579.080 (552.318)	841.085* (443.691)	3742.679	3832
Long-Run	688.968 (472.614)	275.348 (421.308)	236.835 (404.224)	76.232 (337.586)	4020.259	3931

*Notes:* The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. All outcome variables in this table feed into the private labor or general labor supply indices. All monetary values are denominated in Indian Rupees and top-coded at the 99th percentile. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table B5: Impact of Treatments on Aggregate Men's Labor Supply Index Sub-Components (Part 1)

	Accounts + Direct Deposit+ Training	Accounts+ Direct Deposit	Accounts + Training	Control	Accounts Only Mean	N
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: General Labor Supply Sub-Index</i>						
If Worked for Pay Past Month: Pooled	-0.007 (0.023)	0.042 (0.028)	0.025 (0.025)	-0.021 (0.024)	0.578	7749
Short-Run	0.039 (0.030)	0.057 (0.037)	0.036 (0.032)	0.002 (0.032)	0.426	3935
Long-Run	-0.025 (0.032)	0.017 (0.032)	0.031 (0.030)	-0.018 (0.028)	0.733	3814
Earnings Past Month: Pooled	-158.994 (115.278)	80.096 (138.288)	17.294 (136.184)	-107.370 (108.781)	1381.424	7678
Short-Run	41.033 (126.680)	171.510 (134.509)	95.723 (132.490)	-39.840 (119.544)	1144.708	3919
Long-Run	-198.093 (128.207)	61.221 (160.257)	30.815 (139.981)	-88.366 (118.091)	1626.179	3759
Months Worked Past Year: Pooled	-0.112 (0.228)	0.254 (0.247)	0.290 (0.252)	-0.096 (0.213)	3.985	7476
Short-Run	0.235 (0.221)	0.230 (0.248)	0.334 (0.263)	0.195 (0.221)	2.991	3923
Long-Run	-0.264 (0.274)	0.185 (0.280)	0.389 (0.291)	-0.195 (0.248)	5.069	3553
<i>Panel B: Public Labor Supply Sub-Index</i>						
Worked for MGNREGS Past Month - Self Report: Pooled	0.019 (0.013)	-0.009 (0.013)	-0.016 (0.014)	0.002 (0.012)	0.043	7265
Short-Run	0.011 (0.017)	-0.007 (0.017)	-0.009 (0.018)	0.001 (0.015)	0.045	3947
Long-Run	0.027* (0.016)	-0.012 (0.014)	-0.024* (0.014)	0.003 (0.014)	0.041	3318
Worked for MGNREGS Past Year - Self Report: Pooled	0.056* (0.034)	-0.013 (0.038)	0.013 (0.036)	-0.008 (0.032)	0.244	7372
Short-Run	0.063* (0.033)	-0.017 (0.037)	0.006 (0.036)	0.001 (0.032)	0.189	3947
Long-Run	0.051 (0.048)	-0.014 (0.051)	0.033 (0.047)	0.001 (0.044)	0.304	3425
Worked for MGNREGS Past Month - MIS Report: Pooled	0.033 (0.026)	-0.026 (0.024)	-0.016 (0.032)	-0.003 (0.025)	0.094	7771
Short-Run	0.046* (0.024)	-0.012 (0.020)	0.009 (0.024)	0.032 (0.021)	0.040	3957
Long-Run	0.015 (0.040)	-0.048 (0.040)	-0.041 (0.053)	-0.026 (0.038)	0.150	3814
Worked for MGNREGS Past Year - MIS Report: Pooled	0.094** (0.037)	-0.085** (0.039)	-0.016 (0.050)	-0.039 (0.038)	0.331	7771
Short-Run	0.071 (0.051)	-0.100** (0.050)	-0.035 (0.053)	-0.040 (0.048)	0.331	3957
Long-Run	0.108** (0.053)	-0.077 (0.057)	-0.009 (0.064)	-0.030 (0.054)	0.331	3814
MGNREGS Wages Past Month - MIS Report: Pooled	51.370 (52.725)	-49.075 (47.379)	-43.705 (58.053)	2.409 (50.016)	164.410	7771
Short-Run	62.379* (33.672)	-18.902 (26.564)	10.071 (29.823)	53.992* (28.969)	48.043	3957
Long-Run	28.408 (88.008)	-99.829 (83.599)	-98.895 (102.336)	-25.355 (85.210)	284.224	3814
MGNREGS Wages Past Year - MIS Report: Pooled	387.687 (285.362)	-440.021 (268.731)	-146.158 (289.354)	-294.730 (240.221)	1366.158	7771
Short-Run	-84.843 (218.440)	-477.823** (207.476)	-76.195 (218.905)	-283.508 (187.927)	912.462	3957
Long-Run	891.524* (456.974)	-480.371 (424.272)	-215.238 (442.858)	-176.004 (377.265)	1833.296	3814

*Notes:* The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. All outcome variables in this table feed into the MGNREGS labor supply index. All monetary values are denominated in Indian Rupees and top-coded at the 99th percentile. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \* p ≤ 0.10, \*\* p ≤ 0.05, \*\*\* p ≤ 0.10.

Table B6: Impact of Treatments on Aggregate Men's Labor Supply Index Sub-Components (Part 2)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel C: Private Labor Supply Sub-Index</i>						
Primary Occupation Past Year was Worker: Pooled	-0.020 (0.026)	0.032 (0.029)	0.004 (0.026)	0.008 (0.026)	0.676	7767
Short-Run	0.009 (0.035)	0.028 (0.042)	0.030 (0.039)	0.044 (0.040)	0.424	3953
Long-Run	-0.027** (0.013)	0.007 (0.014)	-0.006 (0.014)	0.002 (0.012)	0.935	3814
If Worked for Pay Past Year: Pooled	-0.004 (0.012)	0.015 (0.013)	-0.000 (0.012)	-0.003 (0.012)	0.929	7771
Short-Run	-0.004 (0.021)	0.015 (0.022)	0.005 (0.020)	-0.008 (0.021)	0.871	3957
Long-Run	-0.002 (0.006)	0.005 (0.006)	-0.003 (0.006)	0.005 (0.005)	0.989	3814
Private Work Earnings Past Year: Pooled	-153.609 (797.399)	880.141 (929.235)	1208.485 (965.118)	459.550 (716.020)	9019.638	7452
Short-Run	969.758 (1000.846)	1588.227 (1105.730)	1726.731 (1201.035)	1333.701 (922.397)	8457.283	3945
Long-Run	-893.744 (840.376)	362.283 (983.185)	711.721 (982.588)	-289.665 (797.858)	9646.489	3507

*Notes:* The exchange rate was approximately INR 64 per USD in 2015 and INR 65 per USD in 2017. All outcome variables in this table feed into the private labor or general labor supply indices. All monetary values are denominated in Indian Rupees and top-coded at the 99th percentile. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ .

Table B7: Impact of Treatments on Aggregate Empowerment Purchase Sub-Index Sub-Components (Part 1)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel A: Woman has made purchases for [activity]</i>						
Food: Pooled	0.044* (0.026)	0.009 (0.024)	0.011 (0.025)	-0.004 (0.023)	0.604	8295
Short-Run	0.061* (0.033)	0.013 (0.034)	-0.016 (0.034)	-0.007 (0.028)	0.482	4179
Long-Run	0.028 (0.034)	-0.020 (0.031)	0.041 (0.032)	0.016 (0.028)	0.730	4116
Clothing: Pooled	-0.026 (0.027)	-0.050** (0.025)	-0.016 (0.026)	-0.043 (0.027)	0.495	8294
Short-Run	0.018 (0.035)	-0.059* (0.033)	-0.031 (0.031)	-0.030 (0.031)	0.384	4179
Long-Run	-0.066* (0.034)	-0.060** (0.030)	0.002 (0.033)	-0.041 (0.030)	0.608	4115
Child Health: Pooled	0.008 (0.021)	0.008 (0.024)	-0.029 (0.025)	0.004 (0.020)	0.548	8288
Short-Run	0.020 (0.030)	-0.009 (0.035)	-0.046 (0.030)	-0.000 (0.030)	0.441	4179
Long-Run	-0.010 (0.030)	-0.001 (0.026)	-0.013 (0.035)	0.017 (0.023)	0.659	4109
Home Improvement: Pooled	-0.032 (0.025)	-0.042* (0.024)	-0.029 (0.028)	-0.047** (0.023)	0.359	8292
Short-Run	-0.023 (0.026)	-0.037 (0.027)	-0.058** (0.025)	-0.057*** (0.022)	0.243	4179
Long-Run	-0.037 (0.046)	-0.067* (0.040)	0.002 (0.044)	-0.021 (0.037)	0.478	4113
Festivals: Pooled	0.030 (0.028)	0.016 (0.027)	-0.006 (0.027)	-0.016 (0.025)	0.506	8293
Short-Run	0.051 (0.036)	-0.017 (0.040)	-0.044 (0.033)	-0.018 (0.032)	0.374	4179
Long-Run	0.006 (0.038)	0.025 (0.032)	0.038 (0.039)	0.001 (0.030)	0.641	4114
Food Outside Home: Pooled	0.040 (0.027)	0.015 (0.028)	0.003 (0.025)	0.013 (0.025)	0.487	8292
Short-Run	0.044 (0.038)	0.014 (0.040)	-0.018 (0.035)	0.020 (0.034)	0.344	4179
Long-Run	0.035 (0.037)	-0.010 (0.033)	0.029 (0.036)	0.024 (0.030)	0.634	4113

*Notes:* The outcome variables in this table feed into purchase sub-indices which then feed into the aggregate empowerment index. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table B8: Impact of Treatments on Aggregate Empowerment Purchase Sub-Index Sub-Components (Part 2)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel B: Woman sometimes/always uses own funds for [activity]</i>						
Food: Pooled	0.046* (0.027)	-0.011 (0.024)	0.011 (0.028)	-0.018 (0.024)	0.511	8295
Short-Run	0.056 (0.035)	-0.011 (0.035)	-0.030 (0.033)	-0.027 (0.030)	0.424	4179
Long-Run	0.029 (0.042)	-0.037 (0.038)	0.045 (0.044)	0.003 (0.035)	0.600	4116
Clothing: Pooled	0.001 (0.030)	-0.040 (0.025)	-0.001 (0.027)	-0.037 (0.027)	0.412	8294
Short-Run	0.040 (0.035)	-0.041 (0.031)	-0.036 (0.028)	-0.029 (0.029)	0.317	4179
Long-Run	-0.042 (0.041)	-0.059 (0.038)	0.032 (0.042)	-0.033 (0.037)	0.509	4115
Child Health: Pooled	0.022 (0.025)	0.001 (0.027)	-0.008 (0.025)	0.004 (0.023)	0.460	8288
Short-Run	0.039 (0.030)	-0.002 (0.036)	-0.034 (0.027)	-0.001 (0.029)	0.376	4179
Long-Run	-0.007 (0.040)	-0.024 (0.035)	0.009 (0.042)	0.010 (0.031)	0.547	4109
Home Improvement: Pooled	-0.035 (0.024)	-0.056** (0.023)	-0.022 (0.028)	-0.055** (0.023)	0.313	8292
Short-Run	-0.007 (0.026)	-0.039 (0.024)	-0.044* (0.023)	-0.046** (0.020)	0.210	4179
Long-Run	-0.063 (0.046)	-0.092** (0.041)	-0.002 (0.048)	-0.053 (0.039)	0.419	4113
Festivals: Pooled	0.045 (0.029)	-0.010 (0.026)	-0.001 (0.028)	-0.024 (0.025)	0.432	8293
Short-Run	0.066* (0.036)	-0.020 (0.040)	-0.040 (0.033)	-0.017 (0.032)	0.327	4179
Long-Run	0.019 (0.045)	-0.023 (0.038)	0.038 (0.044)	-0.023 (0.036)	0.540	4114
Food Outside Home: Pooled	0.031 (0.028)	-0.013 (0.029)	-0.003 (0.028)	-0.002 (0.027)	0.419	8292
Short-Run	0.044 (0.039)	-0.004 (0.042)	-0.031 (0.034)	0.020 (0.035)	0.302	4179
Long-Run	0.015 (0.045)	-0.044 (0.040)	0.024 (0.043)	-0.008 (0.037)	0.540	4113

*Notes:* The outcome variables in this table feed into purchase sub-indices which then feed into the aggregate empowerment index. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table B9: Impact of Treatments on Aggregate Empowerment Index Sub-Components (Part 1)

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel A: Decision Making Sub-Index - Makes decisions about [activity]</i>						
Spending Earnings: Pooled	0.021 (0.025)	0.027 (0.026)	0.024 (0.027)	0.024 (0.024)	0.440	8205
Short-Run	-0.001 (0.037)	-0.002 (0.039)	-0.006 (0.038)	0.024 (0.037)	0.483	4096
Long-Run	0.046* (0.027)	0.058** (0.028)	0.058* (0.030)	0.025 (0.025)	0.397	4109
Taking Employment: Pooled	-0.020 (0.022)	-0.003 (0.022)	0.000 (0.023)	-0.022 (0.020)	0.272	8171
Short-Run	-0.051* (0.030)	-0.049* (0.029)	-0.034 (0.031)	-0.029 (0.028)	0.264	4065
Long-Run	0.009 (0.030)	0.036 (0.028)	0.036 (0.027)	-0.015 (0.026)	0.281	4106
<i>Panel B: Mobility Sub-Index - If visited [location] in Past Month</i>						
Market: Pooled	0.019 (0.030)	0.009 (0.032)	-0.016 (0.030)	-0.022 (0.026)	0.515	8076
Short-Run	0.007 (0.038)	0.055 (0.040)	0.024 (0.040)	-0.030 (0.035)	0.519	4129
Long-Run	0.031 (0.040)	-0.037 (0.041)	-0.068* (0.040)	-0.030 (0.035)	0.511	3947
District Market: Pooled	0.016 (0.021)	0.013 (0.024)	0.022 (0.025)	0.002 (0.020)	0.140	8116
Short-Run	0.015 (0.027)	0.008 (0.026)	0.001 (0.029)	-0.012 (0.023)	0.178	4161
Long-Run	0.026 (0.026)	0.028 (0.033)	0.041 (0.027)	0.013 (0.026)	0.100	3955
Natal Home: Pooled	0.017 (0.029)	0.009 (0.029)	0.039 (0.030)	0.002 (0.026)	0.272	8084
Short-Run	-0.033 (0.033)	0.021 (0.037)	0.050 (0.032)	-0.027 (0.031)	0.301	4147
Long-Run	0.052 (0.036)	-0.017 (0.035)	0.010 (0.046)	0.004 (0.034)	0.239	3937
Anganwadi: Pooled: Pooled	0.046* (0.024)	-0.026 (0.022)	0.002 (0.021)	0.013 (0.020)	0.183	7935
Short-Run	0.061** (0.028)	-0.005 (0.026)	0.004 (0.025)	0.008 (0.023)	0.182	4150
Long-Run	0.033 (0.031)	-0.045 (0.030)	-0.008 (0.031)	0.028 (0.028)	0.185	3785
Primary Health Center: Pooled	0.004 (0.023)	0.005 (0.022)	0.017 (0.022)	0.011 (0.018)	0.253	7966
Short-Run	-0.020 (0.029)	-0.013 (0.030)	0.001 (0.028)	0.006 (0.024)	0.265	4156
Long-Run	0.025 (0.033)	0.025 (0.033)	0.032 (0.033)	0.023 (0.030)	0.239	3810

*Notes:* The outcome variables in this table feed into decision and mobility sub-indices which then feed into the aggregate empowerment index. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table B10: Impact of Treatments on Aggregate Empowerment Index Sub-Components (Part 2)

	Accounts + Direct Deposit+ Training	Accounts+ Direct Deposit	Accounts + Training	Control	Accounts Only Mean	N
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel C: Mobility Sub-Index - If visited [location] in Past Year</i>						
Market: Pooled	0.023 (0.031)	0.007 (0.030)	0.002 (0.027)	0.010 (0.025)	0.778	8076
Short-Run	0.029 (0.032)	0.028 (0.034)	0.002 (0.031)	-0.016 (0.028)	0.809	4129
Long-Run	0.002 (0.034)	-0.018 (0.033)	-0.020 (0.029)	0.011 (0.027)	0.745	3947
District Market: Pooled	-0.053 (0.038)	-0.037 (0.042)	0.011 (0.042)	-0.029 (0.034)	0.421	8116
Short-Run	-0.033 (0.041)	-0.022 (0.044)	0.006 (0.044)	-0.027 (0.033)	0.446	4161
Long-Run	-0.064 (0.044)	-0.045 (0.050)	0.010 (0.046)	-0.031 (0.040)	0.394	3955
Natal Home: Pooled	0.031* (0.017)	-0.010 (0.018)	0.019 (0.019)	-0.011 (0.016)	0.860	8084
Short-Run	0.061*** (0.023)	0.023 (0.023)	0.039 (0.025)	0.002 (0.021)	0.837	4147
Long-Run	-0.002 (0.019)	-0.044** (0.021)	-0.001 (0.022)	-0.021 (0.017)	0.886	3937
Anganwadi: Pooled	0.079** (0.036)	0.029 (0.034)	0.050* (0.030)	0.053* (0.028)	0.358	7935
Short-Run	0.092** (0.040)	0.068* (0.038)	0.080** (0.035)	0.069** (0.033)	0.314	4150
Long-Run	0.074 (0.045)	-0.013 (0.042)	0.006 (0.039)	0.040 (0.036)	0.408	3785
Primary Health Center: Pooled	0.034 (0.030)	0.014 (0.027)	0.004 (0.029)	0.006 (0.024)	0.687	7966
Short-Run	0.026 (0.039)	-0.012 (0.041)	-0.030 (0.041)	-0.008 (0.035)	0.645	4156
Long-Run	0.035 (0.032)	0.033 (0.026)	0.029 (0.027)	0.013 (0.025)	0.733	3810

*Notes:* The outcome variables in this table feed into decision and mobility sub-indices which then feed into the aggregate empowerment index. See Data Appendix for further details on variable construction, such as minor differences in construction between the short-run and long-run survey. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

Table B11: Impact of Treatments on Aggregate Actual Norms Index Sub-Components

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel A: Personal Beliefs Sub-Index (Long-Run Only)</i>						
<i>Female Reports</i>						
Believes Women Can Work	0.032 (0.027)	-0.002 (0.027)	-0.001 (0.028)	-0.014 (0.026)	0.784	4111
Prefers Daughter-in-Law Who Works	0.082*** (0.030)	0.011 (0.032)	0.020 (0.028)	0.006 (0.025)	0.350	4118
Prefers Son-in-Law Who Allows Wife to Work	0.037 (0.025)	0.015 (0.026)	-0.017 (0.025)	-0.005 (0.021)	0.247	4118
<i>Male Reports</i>						
Believes Women Can Work	-0.005 (0.032)	0.000 (0.031)	-0.016 (0.031)	-0.025 (0.027)	0.674	3813
Prefers Daughter-in-Law Who Works	-0.026 (0.033)	-0.000 (0.033)	0.010 (0.036)	-0.003 (0.032)	0.500	3814
Prefers Son-in-Law Who Allows Wife to Work	-0.061* (0.031)	-0.042 (0.035)	-0.019 (0.036)	-0.031 (0.028)	0.459	3814
<i>Panel B: Working Women Acceptance Sub-Index (Long-Run Only)</i>						
<i>Female Reports</i>						
Believes Working Woman is Better Wife	0.072** (0.034)	0.002 (0.033)	0.039 (0.031)	-0.010 (0.028)	0.542	4114
Believes Working Woman is Better Mother	0.024 (0.035)	-0.060* (0.033)	-0.024 (0.033)	-0.042 (0.031)	0.511	4114
Believes Working Woman is Better Caretaker	0.030 (0.033)	0.005 (0.035)	0.022 (0.034)	0.005 (0.032)	0.503	4113
<i>Male Reports</i>						
Believes Working Woman is Better Wife	-0.013 (0.036)	-0.003 (0.031)	-0.048 (0.033)	-0.033 (0.028)	0.585	3797
Believes Working Woman is Better Mother	0.027 (0.034)	0.004 (0.031)	0.038 (0.028)	0.032 (0.028)	0.461	3800
Believes Working Woman is Better Caretaker	0.038 (0.026)	0.026 (0.027)	0.004 (0.032)	0.016 (0.026)	0.511	3798
<i>Panel C: Husbands Acceptance Sub-Index (Long-Run Only)</i>						
<i>Female Reports</i>						
Believes Working Woman's Husband is Better Provider	0.055* (0.028)	-0.020 (0.026)	0.034 (0.034)	0.009 (0.025)	0.490	4113
Believes Working Woman's Husband is Better Husband	0.053* (0.030)	-0.052* (0.030)	-0.004 (0.035)	-0.012 (0.029)	0.499	4115
<i>Male Reports</i>						
Believes Working Woman's Husband is Better Provider	0.003 (0.031)	-0.006 (0.028)	-0.021 (0.034)	0.002 (0.029)	0.516	3794
Believes Working Woman's Husband is Better Husband	-0.036 (0.032)	-0.042 (0.027)	-0.046 (0.029)	-0.056** (0.026)	0.522	3801

*Notes:* These questions were only asked in the long run survey. The outcome variables in this table feed into the aggregate actual norms index. See Data Appendix for further details on variable construction. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \* p $\leq$  0.10, \*\* p $\leq$  0.05, \*\*\* p $\leq$  0.10.

Table B12: Impact of Treatments on Aggregate Perceived Norms Index Sub-Components

	Accounts + Direct Deposit+ Training (1)	Accounts+ Direct Deposit (2)	Accounts + Training (3)	Control (4)	Accounts Only Mean (5)	N (6)
<i>Panel A: Perceived Working Women Acceptance Sub-Index (Long-Run Only)</i>						
<i>Female Reports</i>						
Frac. Community Who Will Not Think Poorly of Working Woman	0.018 (0.018)	0.004 (0.018)	0.022 (0.016)	0.005 (0.015)	0.619	4105
Working Woman is Viewed with More Respect	0.043 (0.030)	-0.046 (0.031)	0.025 (0.032)	-0.014 (0.030)	0.519	4111
<i>Male Reports</i>						
Frac. Community Who Will Not Think Poorly of Working Woman	0.004 (0.019)	0.010 (0.019)	0.022 (0.019)	0.016 (0.017)	0.561	3806
Working Woman is Viewed with More Respect	0.039 (0.035)	0.030 (0.039)	0.012 (0.036)	0.030 (0.032)	0.486	3806
<i>Panel B: Perceived Husbands Acceptance Sub-Index (Long-Run Only)</i>						
<i>Female Reports</i>						
Frac. Community Who Will Not Think Poorly of Husband	0.004 (0.015)	0.004 (0.015)	0.002 (0.017)	0.012 (0.014)	0.593	4108
Working Woman's Husband is Viewed with More Respect	0.073** (0.029)	-0.014 (0.031)	0.029 (0.035)	0.025 (0.029)	0.525	4107
<i>Male Reports</i>						
Frac. Community Who Will Not Think Poorly of Husband	0.045** (0.017)	0.030* (0.017)	0.048*** (0.016)	0.034** (0.014)	0.430	3802
Working Woman's Husband is Viewed with More Respect	0.040 (0.034)	0.022 (0.034)	0.027 (0.034)	0.018 (0.031)	0.512	3801

*Notes:* These questions were only asked in the long run survey. The outcome variables in this table feed into the aggregate perceived norms index. See Data Appendix for further details on variable construction. Robust standard errors clustered at the GP level in parentheses. All regressions include strata, district, and wave-specific survey month fixed effects. GP level controls include; number of new MGNREGS work projects over the two years prior to baseline, proportion of MGNREGS workers to GP population over two years prior to baseline, proportion of MGNREGS ghost workers at baseline, sex ratio, proportion of population in scheduled caste, proportion of population in scheduled tribe, sarpanch caste, and sarpanch gender. Individual level controls include; scheduled caste, scheduled tribe, age, household size, number of children over age 3, worked for MGNREGS before baseline, age difference between husband and wife, education difference between husband and wife, and distance to nearest banking kiosk. Missing values for controls are recoded as the mean and accounted for with the inclusion of indicator dummies for missing values. \*  $p \leq 0.10$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.10$ .

## C Theoretical Appendix

### C.1 Mapping the Framework to a Collective Model

In this section we show how a collective model of household bargaining with fixed norms costs can be represented by the reduced form presented in the main paper. We use this model to show that women induced to work by an increase in bargaining power are all socially constrained, in that they would prefer to work if their husbands did not incur any norms costs.

We assume a household consists of two members ( $i \in \{M, F\}$ ). Individual utility functions, norms costs, wages, and hours constraints are the same as those described in the main text. Further, each household receives non-labor income  $y$ . Finally, we assume that the wife's Pareto weight is given by  $\mu$ . This weight may be a function of wages, non-labor income, and "distribution factors" ( $z$ ), which affect the bargaining weight  $\mu$ , but do not otherwise enter the household utility maximization problem (Blundell et al., 2005).

The household's allocation problem is given by:

$$\begin{aligned} \max_{h_s^i, c^i} \quad & \mu(z) [u^F(1 - h_N^F - h_P^F, c^F) - \gamma^F 1(h_P^F + h_N^F > 0)] + \\ & (1 - \mu(z)) [u^M(1 - h_N^M - h_P^M, c^M) - \gamma^M 1(h_P^M + h_N^M > 0)] \quad \text{subject to} \\ & c^M + c^F \leq \sum_{i=M,F} \sum_{s=N,P} w_s^i h_s^i + y \\ & h_s^i \geq 0 \\ & h_N^i \leq \bar{N}_s^i \end{aligned} \tag{4}$$

Where  $1(\cdot)$  is the indicator function.

Apart from the norms costs, this is a standard collective model. To deal with the fixed costs associated with female work, we can imagine the household solving two versions of the problem: subproblem (a) in which the constraint  $h_N^F = h_P^F = 0$  is imposed, avoiding norms costs, and subproblem (b) in which norms costs are paid and female labor supply is chosen optimally. Then the household chooses the solution that delivers the highest utility.

A useful insight of the collective approach, which essentially follows from the Second Fundamental Theorem of Welfare Economics, is that the household problem can be represented in two stages. In the first stage, the household implements a sharing rule in which the wife receives a share of non-labor income given by  $\Phi^F(w_P^F, w_N^F, w_P^M, w_N^M, y, z)$ , while the husband receives share  $\Phi^M = y - \Phi^F$ .<sup>39</sup> In the second stage, each spouse maximizes his or her own

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<sup>39</sup>An individual's income share can be negative or positive – the purpose of  $\Phi^i$  is to fix which point on the Pareto frontier the household ends up choosing.

individual utility subject to the budget constraint  $c^i \leq w_N^i h_N^i + w_P^i h_P^i + \Phi^i$  and the hours constraints (see Proposition 1 in Chiappori (1992) for a formal proof).

In order for the decentralized solution to prevail given market prices, preferences over consumption and leisure must be separable, in that each spouse only cares about his/her own consumption and leisure. This condition is satisfied as long as  $\gamma^M = 0$ . Things look different when  $\gamma^M > 0$ , since women's preferences over consumption and leisure are no longer separable from men's. However, we can rewrite program 4 to satisfy separability. Specifically, let the wife's modified utility be:  $u^F(l^F, c^F) - \gamma^F - \frac{1-\mu}{\mu}\gamma^M$ . The husband's modified utility is  $u^M(l^M, c^M)$ . The bargaining power weighted objective function matches that of program 4, but the utility functions are separable.

This in turn implies that in the two stage problem, we can think of the wife behaving as if she maximizes  $u^F(l^F, c^F) - \gamma^F - \frac{1-\mu}{\mu}\gamma^M$ : she internalizes the norms costs borne by her husband, with more weight placed on this cost the lower her relative bargaining power. Further, this modified two-stage formulation corresponds to the reduced-form problem laid out in the main text.

## C.2 Characterizing Changes in Labor Supply Due to Bargaining Power Shifts

In standard collective models, agent  $i$ 's share of nonlabor income increases with bargaining power – this is intuitive, as more bargaining power for  $i$  translates into more utility, which is transferred across spouses via the nonlabor income share in the two-stage solution. However in our setup there may be a discontinuous shift in the sharing rule when a change in  $\mu(z)$  induces the woman to enter or exist the labor force – intuitively, this corresponds to the household shifting between the sharing rule dictated by subproblem (a) to that dictated by subproblem (b) or vice versa.

The above insight is important, as it complicates predictions for male labor supply: while typically an increase in female bargaining power will reduce the male income share and therefore increase male labor supply, men may actually see their income share *increase* in cases where gains in female bargaining power induce the wife to work.

We are now prepared to prove Proposition 1, which characterizes when gains in bargaining power will induce women to enter the labor market.

**Proof of Proposition 1.** Suppose the woman was not socially constrained before the bargaining power shift (either  $\gamma^M = 0$  or  $\gamma^M > 0$  but the wife would weakly prefer not to work if  $\gamma^M$  were zero). Then it must be that the woman's equilibrium nonlabor income share is weakly lower after the bargaining power shift – otherwise she would not enter the

labor force. But if the woman is not socially constrained, this would imply that she is weakly worse off after the bargaining power shift, which would in turn imply that the new equilibrium is not on the Pareto frontier, a contradiction. ■

## D Variable Construction Appendix

We describe variable construction from our two household surveys: SR refers to short-run survey and LR to long-run survey. Survey questions from which variables are derived are provided in quotations.

### D.1 Banking Outcomes

#### D.1.1 Aggregate Account Use Index

- *If owns individual account* – In both surveys, we use "Who is the primary account holder?" and "Whose name(s) are on this account?" If the woman reports being the primary account holder and only ever lists her own name as being on the account, then we consider the account her individual account. This variable is present in both the Full Sample and Bank Admin Data version of the index.
- *If visited a bank in the past 6 months* –
  - SR : "How often do you go to the [account location] to deposit or withdraw money?", which is asked for every account. We only consider the most frequently visited individual account. We code responses weekly/bi-weekly/monthly/bi-monthly/once in 6 months as 1. We code once in the last year/never been to the account since account opening *and* not owning an individual account as 0. This variable is present in both the Full Sample and Bank Admin Data version of the index.
  - LR : "Did you ever visit any of the accounts?" and "When did you last visit any account or ATM?" If they visited any account in the past 6 months since the date of the survey, they are coded as 1. If not, or if they do not have an individual account, they are coded as 0. If they refused or do not know whether they visited any of the accounts, then they are coded as missing. This variable is present in both the Full Sample and Bank Admin Data version of the index.
- *Individual account balance* – In both surveys, we use "How much money is currently in this account?" for accounts where the respondent is the only account holder. If he/she does not know or refuses, then this is replaced with the answer to the question "What is the total amount of savings you have in your bank accounts?" if the respondent reported at least one individual account and no joint accounts. If the respondent owns at least one individual account and a joint account, then we fill using the reported personal

savings less the reported joint bank account balance. This variable is bottom-coded to zero and top-coded at the 99th percentile by gender. This variable is present in both the Full Sample and Bank Admin Data version of the index.

- *Any MGNREGS Payment Individual Account* – uses MGNREGS administrative data to determine if any MGNREGS payments were deposited into the respondents bank account. Variable is coded to 1 if at least one payment was deposited, and 0 otherwise. The short-run outcome uses bank data from Nov. 2013 through Dec. 2015. The long-run outcome uses bank data from Jan. 2016 through Sept. 2017. See MGNREGS section of this appendix for details on how individual accounts were identified in the MGNREGS administrative data. This variable is present in both the Full Sample and Bank Admin Data version of the index.
- *Value MGNREGS Payments Individual Account* – uses MGNREGS administrative data to count the value of all MGNREGS payments deposited into the respondent's bank account. Variable is equal to the sum of all payments made within the time period of interest. See MGNREGS section of this appendix for details on how individual accounts were identified in the MGNREGS administrative data. This variable is present in both the Full Sample and Bank Admin Data version of the index.
- *Average Daily Individual Account Balance* – uses bank administrative data to calculate the average daily balance in the respondent's bank account. This variable is only present in the Bank Admin Data version of the index.
- *Number Individual Account Transactions* – uses bank administrative data to count the number of transactions made in the respondent's individual account. This variable is only present in the Bank Admin Data version of the index.

### D.1.2 Banking Autonomy Index (LR survey only)

Here, we code variables as missing if they don't know or refuse to say for any question.

- *If visits bank alone* – uses "When you visit an account or ATM do you usually go alone or with someone else?" The variable is 1 if the respondent answer "alone" and they have visited any of their bank accounts or the ATM within the past year ("How many times did you go to the any of your bank accounts or ATM to deposit, withdraw money, check the account balance or do any other transaction in the last year (365 days)?"). If they report usually going with spouse/with child/with other male household member/with other female household member/with friend or other relative or they have not visited

in the past year, they are coded to 0. This variable is also 0 if they lack access to any active accounts that are held by either the respondent or her children.

- *If visits bank without supervision of a male* – uses "When you visit an account or ATM do you usually go alone or with someone else?" The variable is 1 if the respondent answer alone/with child/with other female household member/with friend or relative and they have visited any of their bank accounts or the ATM within the past year ("How many times did you go to the any of your bank accounts or ATM to deposit, withdraw money, check the account balance or do any other transaction in the last year (365 days)?"). This variable is 0 if they typically visit with their spouse or other male household member or if they have not visited in the past year.
- *Feels comfortable conducting transactions at CSP* – derived from "Do you feel comfortable or uncomfortable conducting transactions such as depositing and withdrawing money at the CSP?" This variable is 1 if the respondent reports they are comfortable. If they report never doing a transaction at a CSP account or that they are uncomfortable, they are coded as 0. They are also coded as 0 if they have never heard of a CSP before.<sup>40</sup>
- *Feels comfortable visiting the CSP alone* – derived from "Do you feel comfortable or uncomfortable going to the CSP alone?" This variable is 1 if they say they are comfortable and 0 if they report being uncomfortable or if they have never heard of a CSP before.<sup>41</sup>
- *Believes women can visit a CSP without male supervision* – respondents were asked to say which statement they agree with: (a) Women can go to the CSP without the company of a male relative. (b) Women can only go to the CSP in the company of a male relative.<sup>42</sup> (c) Women cannot go to the CSP at all. This variable is coded as 1 if they agree with statement (a) and 0 otherwise or if they have never heard of a CSP before.<sup>43</sup>

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<sup>40</sup>This comes from the survey question "Have your heard about a CSP before?" We consider both "no" and "I don't know" as zero, and "yes" as 1.

<sup>41</sup>This comes from the survey question "Have your heard about a CSP before?" We consider both "no" and "I don't know" as zero, and "yes" as 1.

<sup>42</sup>For 381 individuals, the survey question was asked for agreement to either (a) Women can go to the CSP alone or (b) Women cannot go to the CSP alone. For these respondents, we code agreeing with (a) as 1 and otherwise (or if they have not heard of a CSP before) as 0.

<sup>43</sup>This comes from the survey question "Have your heard about a CSP before?" We consider both "no" and "I don't know" as zero, and "yes" as 1.

- *Prefers payment for work into own bank account* – respondents were asked "If you had a job where you earned money, would you prefer to receive payments in cash, in-kind, to my husband's account, to other household member's account, or to your own bank account?". The possible responses include cash to self, cash to husband, or cash to other family member; in-kind to self, in-kind to husband, or in-kind to other family member; account deposit to own account, account deposit to husband's account, or account deposit to other family member's account. This variable is coded to 1 if they say they would prefer to be paid into their own account, and 0 otherwise.
- *Prefers payment for work not to husband* – respondents were asked "If you had a job where you earned money, would you prefer to receive payments in cash, in-kind, to my husband's account, to other household member's account, or to your own bank account?". The possible responses include cash to self, cash to husband, or cash to other family member; in-kind to self, in-kind to husband, or in-kind to other family member; account deposit to own account, account deposit to husband's account, or account deposit to other family member's account. This variable is coded to 1 if they select any option with a recipient who is not the husband, and 0 otherwise.

### D.1.3 CSP Knowledge Index (LR survey only)

- *Have heard of CSP before* – respondents were asked "Have you heard about a CSP before?" A report of yes is coded as a 1; no or don't know is coded as a zero.
- *Number of transactions ever conducted at a CSP* – derived from question "Can you tell us what transactions you can do at a CSP?" Possible answers include deposit cash money, withdraw cash money, deposit a check, receive benefit transfers, check account balance, receive wages, receive transfers from family and friends, send money, or other (specify). This variable is the total number of transactions they report doing, not counting any "other (specify)" responses. If the respondent does not know, refuses, or selects "other (specify)" (and that is their only response), this variable is missing. This variable is coded to 0 if the respondent has never heard of a CSP before.<sup>44</sup>

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<sup>44</sup>This comes from the survey question "Have you heard about a CSP before?" We consider both "no" and "I don't know" as zero, and "yes" as 1.

## D.2 Women’s Aggregate Labor Supply Index

### D.2.1 General Labor Supply Sub-Index

- *If worked for pay in past month*: based on the household roster question "Has [NAME] worked for pay in the last 30 days?" In the short-run survey, we use the husband’s report of his wife’s work, and in the long-run survey we use women’s own reports.<sup>45</sup> It is recoded to zero if the respondent did not work for pay in the last year, and it is missing if the respondent does not know the answer.
- *Total earnings in past month*: "How much did [NAME] earn in total in the last 30 days?" Top-coded at the 99th percentile by gender. Missing if the respondent does not know the wage payments. Zero if they did not work for pay in the past 30 days. In the short-run survey, we use the husband’s report of their wife’s earnings, while in the long-run survey we rely on women’s own reports.<sup>46</sup>
- *Total months worked in past year* –
  - SR: "How many months in a year do you do this [work] activity?" Activities include agriculture on own land, agriculture on leased land, casual farm labor, casual non-farm labor, animal husbandry, self-employed in household business, employed in an enterprise, teaching, anganwadi work, bank job, paid domestic work in someone else’s home, and money-lending. To calculate months worked, we take the average of the upper and lower bound of months the respondent could have worked. The lower bound is the largest number of months reported for any activity and the upper bound is the sum of the months reported across all the activities. This variable is missing if the respondent reports not knowing the number of months worked for any activity.
  - LR: based on question asked for each month prior to the survey month "For how many days did you work for pay in [MONTH]?" This variable is missing if the respondent reports not knowing the number of days worked in any given month, and it is zero if the respondent reports never having worked for pay. This question asks about wage work and thus, unlike the SR survey, likely excludes work such as self-employment, animal husbandry, and agriculture on own and leased land.

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<sup>45</sup>This question was not included on women’s surveys in the short-run survey.

<sup>46</sup>We do not ask women about their earnings over the past month in the short-run survey.

## D.2.2 Public Labor Supply Sub-Index

- *If worked for MGNREGS in past month, self-report* – derived from "When was the last time you worked for NREGA or the Sarpanch, Sachiv or GRS?" and the survey date. If they report never working for MGNREGS, this variable is zero. This variable is missing if the respondent does not remember the date.
- *If worked for MGNREGS in past 12 months, self-report* – derived from "When was the last time you worked for NREGA or the Sarpanch, Sachiv or GRS?" and the survey date. If they report never working for MGNREGS, this variable is zero. This variable is missing if the respondent does not remember the date. This variable is coded to one if earlier in the survey they had answered yes to "Did you ever perform [MGNREGS work] at least once in the last 12 months (last 365 days)?"
- *If worked for MGNREGS in past month, MIS* – derived from latest recorded workspell in MIS data and the survey date. Missing if we cannot match our respondent to the MIS data.
- *If worked for MGNREGS in past 12 months, MIS* – derived from latest recorded workspell in MIS data and the survey date. Missing if we cannot match respondent to MIS data.
- *MGNREGS wages in past month, MIS* – total wages recorded in the MIS data over the 30 days prior to the survey date. Top-coded at the 99th percentile.
- *MGNREGS wages in past 12 months, MIS* – total wages recorded in the MIS data over the 365 days prior to the survey date. Top-coded at the 99th percentile.

## D.2.3 Private Labor Supply Sub-Index

- *Primary occupation over past year* –
  - SR: husband's reports of their wife's occupation.<sup>47</sup> Husbands are asked "What is the primary occupation of [NAME]?" for each person in the household roster. Possible answers include casual farm labor, casual non-farm labor, self-employment, employed in an enterprise, teaching, anganwadi work, student, and household work. We do not consider agriculture on own land, agriculture on leased land, or animal husbandry as work in order to match LR survey. All options except student and household work are considered work.

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<sup>47</sup>We did not ask women about their own occupation in the short-run survey.

- LR: women’s self-reports of their "usual principal activity over the past year." Possible answers follow the National Sample Survey (NSS). We code respondents as working if they indicate that their primary activity was working in a household enterprise as their own account worker or as an employee, working as a regular salaried/wage employee, working as a casual non-farm wage laborer in the private sector, or working as a casual farm wage laborer. Regardless, this variable is coded to zero if later in the survey they report not having done any work activities<sup>48</sup> in the past year.
- *If worked for pay in past year* –
  - SR: "Did you perform this activity at least once in the last 12 months?" The activities include agriculture on own land, agriculture on leased land, casual farm labor, casual non-farm labor, animal husbandry, self-employed in household business, employed in an enterprise, teaching, anganwadi work, bank job, paid domestic work in someone else’s home, money-lending, and other work. We do not count agriculture on own land, agriculture on leased land, animal husbandry, or self-employment as work for pay if the respondent reports only in-kind payments. We do not count any activity as work if the respondent says they did not earn compensation.
  - LR: "Can you tell me if you were ever paid/received your revenue for this activity in one of the following ways in the past 12 months (last 365 days)?" This activities include casual non-farm labor (non-MGNREGS), agriculture on own land, agriculture on leased land, casual farm labor, animal husbandry, self-employment in household business, salaried work, and other work. We do not count agriculture on own land, agriculture on leased land, animal husbandry, or self-employment as work for pay if the respondent reports only in-kind payments.
- *Total earnings from private work in past year* –
  - SR: "How often did you get paid for this time of work?" and "What is your wage rate over [THE SELECTED TIME PERIOD]?" Activities included are casual farm labor, casual non-farm labor, paid domestic work in someone else’s home, teaching, anganwadi work, and bank job. For consistency with the long-run survey, we exclude agriculture on own land, agriculture on leased land, self

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<sup>48</sup>These activities are an aggregation of the NSS codes plus some additional categories: agriculture on own land, agriculture on leased land, and animal husbandry. In order for these additional categories plus self-employment to be counted as having done a work activity in the past year, the respondent must have had to say they got paid with money. See "If worked for pay in past year" for more details.

employment, enterprise employment, lending, and other miscellaneous activities, which typically do not generate wage payments. Earnings are aggregated to a year and top-coded at the 99th percentile by gender. Earnings are recoded to zero if the respondent earlier reported that they did not work for pay in the last year. Earnings are missing if the respondent does not know their earnings for any of the included activities.

- LR: "What were the total wage payments you received in [MONTH]?", which was asked for each of the 12 months prior to the survey month. We sum the earnings over all 12 months, net out yearly MGNREGS wages, top-code at the 99th percentile by gender, then bottom-code at zero. Earnings are recoded to zero if the respondent earlier reported that they did not work for pay in the last year. Earnings are missing if the respondent reports not knowing their wages for any given month.

## D.3 Men’s Aggregate Labor Supply Index

### D.3.1 General Labor Supply Sub-Index

- *If worked for pay in past month*: based on the household roster question "Has [NAME] worked for pay in the last 30 days?" <sup>49</sup> It is recoded to zero if the respondent did not work for pay in the last year, and it is missing if the respondent does not know the answer.
- *Total earnings in past month*: "How much did [NAME] earn in total in the last 30 days?" Top-coded at the 99th percentile by gender. Missing if the respondent does not know the wage payments. Zero if they did not work for pay in the past 30 days. <sup>50</sup>
- *Total months worked in past year* –
  - SR: "How many months in a year do you do this [work] activity?" Activities include agriculture on own land, agriculture on leased land, casual farm labor, casual non-farm labor, animal husbandry, self-employed in household business, employed in an enterprise, teaching, anganwadi work, bank job, paid domestic work in someone else’s home, and money-lending. To calculate months worked, we take the average of the upper and lower bound of months the respondent could have worked. The lower bound is the largest number of months reported

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<sup>49</sup>This question was not included on women’s surveys in the short-run survey.

<sup>50</sup>We do not ask women about their earnings over the past month in the short-run survey.

for any activity and the upper bound is the sum of the months reported across all the activities. This variable is missing if the respondent reports not knowing the number of months worked for any activity.

- LR: based on question asked for each month prior to the survey month "For how many days did you work for pay in [MONTH]?" This variable is missing if the respondent reports not knowing the number of days worked in any given month, and it is zero if the respondent reports never having worked for pay. This question asks about wage work and thus, unlike the SR survey, likely excludes work such as self-employment, animal husbandry, and agriculture on own and leased land.

### D.3.2 Public Labor Supply Sub-Index

- *If worked for MGNREGS in past month, self-report* – derived from "When was the last time you worked for NREGA or the Sarpanch, Sachiv or GRS?" and the survey date. If they report never working for MGNREGS, this variable is zero. This variable is missing if the respondent does not remember the date.
- *If worked for MGNREGS in past 12 months, self-report* – derived from "When was the last time you worked for NREGA or the Sarpanch, Sachiv or GRS?" and the survey date. If they report never working for MGNREGS, this variable is zero. This variable is missing if the respondent does not remember the date. This variable is coded to one if earlier in the survey they had answered yes to "Did you ever perform [MGNREGS work] at least once in the last 12 months (last 365 days)?"
- *If worked for MGNREGS in past month, MIS* – derived from latest recorded workspell in MIS data and the survey date. Missing if we cannot match our respondent to the MIS data.
- *If worked for MGNREGS in past 12 months, MIS* – derived from latest recorded workspell in MIS data and the survey date. Missing if we cannot match respondent to MIS data.
- *MGNREGS wages in past month, MIS* – total wages recorded in the MIS data over the 30 days prior to the survey date. Top-coded at the 99th percentile.
- *MGNREGS wages in past 12 months, MIS* – total wages recorded in the MIS data over the 365 days prior to the survey date. Top-coded at the 99th percentile.

### D.3.3 Private Labor Supply Sub-Index

- *Primary occupation over past year* –
  - SR: Husbands are asked "What is the primary occupation of [NAME]?" for each person in the household roster. Possible answers include casual farm labor, casual non-farm labor, self-employment, employed in an enterprise, teaching, anganwadi work, student, and household work. We do not consider agriculture on own land, agriculture on leased land, or animal husbandry as work in order to match LR survey. All options except student and household work are considered work.
  - LR: Self-reports of respondent's "usual principal activity over the past year." Possible answers follow the National Sample Survey (NSS). We code respondents as working if they indicate that their primary activity was working in a household enterprise as their own account worker or as an employee, working as a regular salaried/wage employee, working as a casual non-farm wage laborer in the private sector, or working as a casual farm wage laborer. Regardless, this variable is coded to zero if later in the survey they report not having done any work activities<sup>51</sup> in the past year.
  
- *If worked for pay in past year* –
  - SR: "Did you perform this activity at least once in the last 12 months?" The activities include agriculture on own land, agriculture on leased land, casual farm labor, casual non-farm labor, animal husbandry, self-employed in household business, employed in an enterprise, teaching, anganwadi work, bank job, paid domestic work in someone else's home, money-lending, and other work. We do not count agriculture on own land, agriculture on leased land, animal husbandry, or self-employment as work for pay if the respondent reports only in-kind payments. We do not count any activity as work if the respondent says they did not earn compensation.
  - LR: "Can you tell me if you were ever paid/received your revenue for this activity in one of the following ways in the past 12 months (last 365 days)?" This activities include casual non-farm labor (non-MGNREGS), agriculture on own land, agriculture on leased land, casual farm labor, animal husbandry, self-employment in

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<sup>51</sup>These activities are an aggregation of the NSS codes plus some additional categories: agriculture on own land, agriculture on leased land, and animal husbandry. In order for these additional categories plus self-employment to be counted as having done a work activity in the past year, the respondent must have had to say they got paid with money. See "If worked for pay in past year" for more details.

household business, salaried work, and other work. We do not count agriculture on own land, agriculture on leased land, animal husbandry, or self-employment as work for pay if the respondent reports only in-kind payments.

- *Total earnings from private work in past year* –
  - SR: "How often did you get paid for this time of work?" and "What is your wage rate over [THE SELECTED TIME PERIOD]?" Activities included are casual farm labor, casual non-farm labor, paid domestic work in someone else's home, teaching, anganwadi work, and bank job. For consistency with the long-run survey, we exclude agriculture on own land, agriculture on leased land, self employment, enterprise employment, lending, and other miscellaneous activities, which typically do not generate wage payments. Earnings are aggregated to a year and top-coded at the 99th percentile by gender. Earnings are recoded to zero if the respondent earlier reported that they did not work for pay in the last year. Earnings are missing if the respondent does not know their earnings for any of the included activities.
  - LR: "What were the total wage payments you received in [MONTH]?", which was asked for each of the 12 months prior to the survey month. We sum the earnings over all 12 months, net out yearly MGNREGS wages, top-code at the 99th percentile by gender, then bottom-code at zero. Earnings are recoded to zero if the respondent earlier reported that they did not work for pay in the last year. Earnings are missing if the respondent reports not knowing their wages for any given month.

## D.4 Aggregate Empowerment Index

Variables are coded as missing if the respondent refuses to answer or does not know.

### D.4.1 Purchase Sub-Index

- *Makes purchases for [activity]* – based on question "Do you ever yourself make purchases for this activity?" A variable is generated for each activity: spending on daily food (which will be prepared and eaten within the home, not including special occasions), spending on clothing for yourself, children's health, spending on home improvement, spending on festivals, and food and drink outside the home.
- *Sometimes or always uses own funds for [activity]* – based on question "When making

this purchase who provides the money?"<sup>52</sup> Possible answers include "I always use money provided by other household members," "sometimes I ask for money, sometimes I use my own funds," and "I always use my own funds." A variable is generated for each activity: spending on daily food (which will be prepared and eaten within the home, not including special occasions), spending on clothing for yourself, children's health, spending on home improvement, spending on festivals, and food and drink outside the home. The latter two options are coded as one. This question is skipped for respondents who never make purchases for this activity, in which case they are coded to zero.

#### D.4.2 Mobility Sub-Index

- *Visited [location] in past year* – based on question "When was the last time that you visited the [location]?" and survey date. A variable is generated for each location: market in panchayat, market in district headquarters, natal home, anganwadi, and primary health center.
- *Visited [location] in past 30 days* – based on "When was the last time that you visited the [location]?" and survey date. A variable is generated for each location: market in panchayat, market in district headquarters, natal home, anganwadi, and primary health center.

#### D.4.3 Decision Making Sub-Index

- *Helps decide or decides how to spend earnings* – based on question "Who decides what you spend your own earnings (meaning income you yourself earn/money you receive for benefits) on?" Possible answers include "My husband mostly decides," "I mostly decide," and "We consult each other and decide together." The latter two answers are coded as one. In the short-run survey, there is the additional option "I decide and my husband also decides without consulting each other," which is also coded as one. Variable is missing if the respondent refuses to answer or selects "other (specify)".
- *Helps decide or decides whether to take employment* – based on question "Who decides whether you take employment outside the household?" Possible answers include "My husband mostly decides," "I mostly decide," and "We consult each other and decide together." The latter two answers are coded as one. In the short-run survey, there is

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<sup>52</sup>This is worded slightly differently in the short-run survey: "When making this purchase do you have to use money provided by another household member?"

the additional option "I decide and my husband also decides without consulting each other," which is also coded as one. Variable is missing if the respondent refuses to answer or selects "other (specify)".

## D.5 Aggregate Actual Norms Index (long-run survey only)

### D.5.1 Personal Beliefs Sub-Index

- *Believes women can work* – based on the survey question "People have different opinions about women going out to work. Some people feel that women in your caste and villages should not work outside the home to earn money and they should only look after their families, while others say that there is nothing wrong if women go out for work to earn money. What is your opinion?" Respondents who refuse to say are coded as missing.
- *Prefers a daughter-in-law who works for pay* – based on the survey question "Now assume that you have a son who is of a marriageable age and that you could choose between two wives for him. Both wives are from your caste and have the same education and the same financial status. However, only one of them wants to work outside for pay. Which wife would you prefer for your son?" The options include wife who wants to work for pay, wife who does not want to work for pay, and no preference, with the latter two being coded as zero's.
- *Prefers a son-in-law who lets daughter work for pay* – based on the survey question "Now assume that you have a daughter who is of a marriageable age and that you could choose between two husbands for her. Both husbands are from your caste and have the same education and the same financial status. However, only one of them would allow your daughter to work outside for pay. Which husband would you prefer for your daughter?" The options include husband who gives her the choice to work for pay, husband who does not give her the choice to work for pay, and no preference, with the latter two being coded as zero's.

### D.5.2 Working Women Acceptance Sub-Index

- *Believes working woman is the better wife* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who do you think is a better wife?" The options include the working woman, the housewife, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.

- *Believes working woman is the better mother* – based on a survey question after the surveyor reads a vignette about a working woman and housewife: "Who do you think is a better mother?" The options include the working woman, the housewife, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.
- *Believes working woman is the better caretaker* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who do you think cares more about the welfare of the household and its members?" The options include the working woman, the housewife, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.

### D.5.3 Husbands Acceptance Sub-Index

- *Believes working woman's husband is a better provider* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who is a better provider?" The options include the working woman's husband, the housewife's husband, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.
- *Believes working woman's husband is a better husband* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who do you think is a better husband?" The options include the working woman's husband, the housewife's husband, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.

## D.6 Aggregate Perceived Norms Index (Long-Run Survey Only)

### D.6.1 Perceived Working Women Acceptance Sub-Index

- *Fraction of community who will not think poorly of working women* – based on a survey question "Can you tell me how many people in your neighborhood would speak badly of a woman who works for pay on someone else's field?" Respondents were asked to give a value between 0 and 10, with 10 representing the entire community. Variable is missing when the respondent does not know the answer or refuses to answer.
- *Working woman is viewed with more respect* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who is viewed

with more respect in your community?" The options include the working woman, the housewife, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.

### D.6.2 Perceived Husbands Acceptance Sub-Index

- *Fraction of community who will not think working woman's husband is a bad provider* – based on a survey question "Can you tell me how many people in your neighborhood believe that the man is a bad provider if the wife is working for pay on someone else's field?" Respondents were asked to give a value between 0 and 10, with 10 representing the entire community. Variable is missing when the respondent does not know the answer or refuses to answer.
- *Working woman's husband is viewed with more respect* – based on a survey question asked after the surveyor reads a vignette about a working woman and housewife: "Who is viewed with more respect in your community?" The options include the working woman's husband, the housewife's husband, and no difference, with the latter two being coded as zero. Variable is missing when the respondent does not know the answer or refuses to answer.

## D.7 Daily Wages Outcomes

### D.7.1 Farm Labor

- SR: "What is your wage rate over [daily] time period [for farm labor]?" Coded as missing if zero. Topcoded at the 99th percentile.
- LR: "What was the usual daily wage for this activity [farm labor] during \*high\* season in the past 12 months (365 days)?" & "What was the usual daily wage for this activity [farm labor] during \*low\* season in the past 12 months (365 days)?" These two responses are then averaged to calculate an average daily wage rate. Coded as missing if zero. Topcoded at the 99th percentile.

### D.7.2 Non-Farm Labor

- SR: "What is your wage rate over [daily] time period [for non-farm labor]?" Coded as missing if zero. Topcoded at the 99th percentile.
- LR: "What was the usual daily wage for this activity [non-farm labor] during \*high\* season in the past 12 months (365 days)?" & "What was the usual daily wage for

this activity [non-farm labor] during \*low\* season in the past 12 months (365 days)?" These two responses are then averaged to calculate an average daily wage rate. Coded as missing if zero. Topcoded at the 99th percentile.

### D.7.3 MGNREGS

- SR: "What is your wage rate over [daily] time period [for MGNREGS labor]?" Coded as missing if zero. Topcoded at the 99th percentile.
- LR: "What was the usual daily wage for this activity [MGNREGS labor] during \*high\* season in the past 12 months (365 days)?" & "What was the usual daily wage for this activity [MGNREGS labor] during \*low\* season in the past 12 months (365 days)?" These two responses are then averaged to calculate an average daily wage rate. Coded as missing if zero. Topcoded at the 99th percentile.

## D.8 Construction of the KKL Index

1. If a component value in a sub-index is missing and therefore cannot be standardized, we replace it with the relevant treatment group's female average (female average is used for both male and female outcomes), as long as there is at least one non-missing observation for the individual's remaining components of the index. (I.e. even if all components in a sub-index are missing, we impute if there is a non-missing observation for a component in a different sub-index that feeds into the same aggregate index.)
2. For each component, standardize with respect to the female Accounts Only mean (subtract off the mean and divide by the standard deviation of the Accounts Only group; female mean is used for both male and female outcomes). In the case that an index contains components that are always equal to zero in the Accounts Only group, we standardize with respect to the entire sample.
3. Divide the standardized value by the number of components in the sub-index.
4. After completing steps 1-3 for each component, sum the values achieved in step 3 to obtain the sub-index value.
5. After doing 1-4 for all sub-indices, take the average to get the aggregate index.

## D.9 MGNREGS

### D.9.1 Identifying Individual Accounts in Administrative MGNREGS Data

We scraped data from the MGNREGS MIS periodically over the life of the project. Prior to October 2016, the scraped data included bank account numbers for all work spells. We assume an account number is individual if it is only associated with one unique job card number  $\times$  worker name combination.

After October 2016, account numbers were redacted from the main MIS dataset we scraped. However the last two digits of the bank account number were available in a second “payments order” dataset. This dataset included the job card number and account holder name, but not the worker name. We assume an account is individual if it is never used to pay more than one worker in any given payment spell. In cases where only one member of the job card worked, we hand checked worker names against account holder names, and coded an account as individual if the worker name matched the account name. We also hand checked names for cases where an account number was sometimes unique and sometimes not within a work spell. We were not able to classify roughly 11 percent of work spells in this period because payments orders had not been issued yet.

Overall, the two methods of classifying accounts deliver very similar results: we are able to compare classifications for 2,483 work spells captured during both scrape regimes and individual account classifications agree 97 percent of the time.

## D.10 Measuring Norms Through Vignettes

### D.11 Vignette Setup

The text below reproduces the vignettes module we used to help measure norms:

I am now going to tell you about the lives of two different women living in a village in your district. Please remember that this is not a test and there are no right or wrong answers for these questions. We just want to know what you think.

[ENUMERATOR: Lay out the pictures of two households]

Jyoti \_\_\_ and Aneeta \_\_\_ (use the respondent’s caste name) are neighbors from your caste living in your village (Point to their pictures). You see them daily as they go about doing their daily activities. Both were married seven years ago and have two kids (Point to their children).

This is Jyoti’s husband Jatin and this is Aneeta’s husband, Aman. (Point to their pictures) Both Jatin and Aman work together as agricultural daily wage workers and earn

250 rupees every day. Both the husbands earn the same income from their work and both households have the same financial needs (Point to their houses).

Although both households have the same financial needs, Jyoti and Aneeta have different occupations.

Jyoti, along with her mother in law takes care of the household (Point to her picture) while her husband, Jatin, works in the field.

Aneeta goes to work on other's field either with her husband or a female relative from her household (Point to her picture). Aneeta's mother-in-law takes care of her children and the household when Aneeta is at work. So in Jyoti and Jatin's household only Jatin earns an income of Rs. 250 per day. In Aneeta and Aman's household, both earn an income of Rs. 250 per day.

Which of the husbands do you think earns a higher income? [ENUMERATOR: use this question as a checkpoint to see that the respondent has understood the story. If they don't say that both husbands earn the same income, explain the story again]

Now we will ask you to compare few characteristics of Jyoti and Aneeta.

## D.12 Vignette Characteristics

The list below summarizes the ways in which respondents were asked to compare the two households. Here, we included norms-related questions as well as questions related to female empowerment, household conflict, and gender roles.

Comparing women (Jyoti and Aneeta):

- Who do you think has a greater say in important household decisions?
- Who do you think is more obedient?
- Who do you think is a better wife?
- Who do you think is a better mother?
- Who do you think cares more about the welfare of the household and its members?
- Who is viewed with more respect in your community?
- (Female survey only) If you could be one of these two women, who would you choose to be: Jyoti or Aneeta?
- (Male survey only) If you were unmarried and could had to choose between marrying one of these two women, who would you marry: Jyoti or Aneeta?

Comparing men (Jatin and Aman):

- Who do you think is a better husband?
- Who is a better provider?
- Whose family is more financially stable?
- Who do you think would have more control over his wife's life?
- Who has a more harmonious relationship with his wife?
- Who is viewed with more respect in your community?
- (Female survey only) If you were unmarried and had to choose between marrying one of these two men, who would you marry: Jatin or Aman?
- (Male survey only) If you could be one of these two men, who would you choose to be: Jatin or Aman

Comparing genders (Aneeta and Aman):

- Who do you think is more respected by the community: Aneeta or Aman?