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

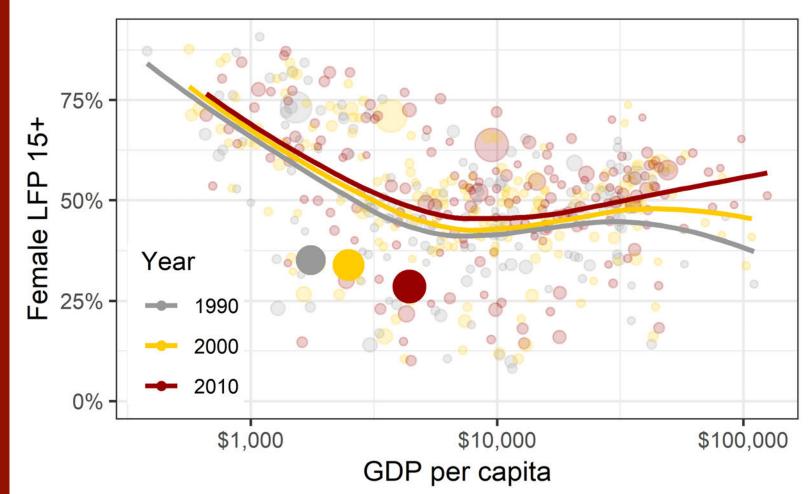Erica Field, Rohini Pande, Natalia Rigol, Simone Schaner, Charity Troyer Moore

NBER Summer Institute – Gender Study Group

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A Puzzle: Why Aren't More Indian Women Working?

India is Below Trend on FLFP Relative to Its GDP

Latent Labor Supply and Social Norms

Over **30%** of Indian housewives would like a job (Fletcher et al 2017)

Baseline FLFP of 21% (IL0 2020): bringing latent workers into the labor force would **double FLFP**

Norms costs (actual and perceived) may keep women from working
- *Directly internalized by women* (Akerlof and Kranton 2000)
- *Indirectly channel through men* (Bertrand et al 2015)

"Every man's responsibility is to take care of his family. A good husband can take care alone."

– man in rural Madhya Pradesh

RESEARCH QUESTIONS

Can public policy that **strengthens women's bargaining power** and **income control** help norms-constrained women work more?

Can this in turn **reshape social norms**?

Study Design and Conceptual Framework

Experimental Context

The Policy

Mahatma Gandhi National Rural Employment Guarantee Scheme (NREGS)

Guarantee **100 days of work** at a fixed wage to any household that requests employment

The People

197 gram panchayats (GPs) in **rural northern Madhya Pradesh**

Conservative gender norms (more later), limited female mobility

Couples where at least one member is a workfare beneficiary, **the woman is unbanked**

The Problem

Payments directly transferred to beneficiary-owned bank accounts

Wage payments for all household members sent to bank account owned by male household head

Women have little-to-no wage control

Experimental Context: Gender and Work

Measuring Norms: Aligning on Concepts

(1) **Actual norms:** beliefs held by a social group about what is or is not appropriate

(2) **Perceived norms:** individuals' *perceptions* of others' beliefs about what is or is not appropriate
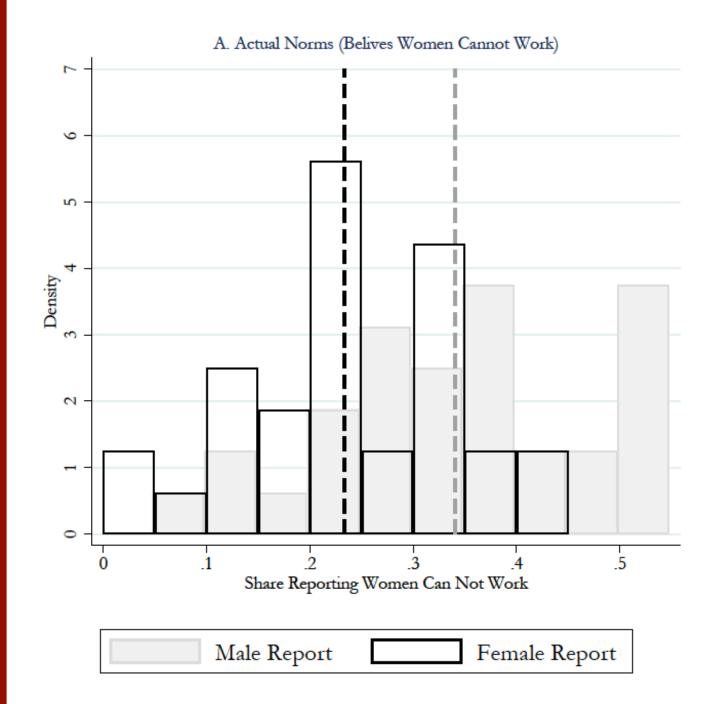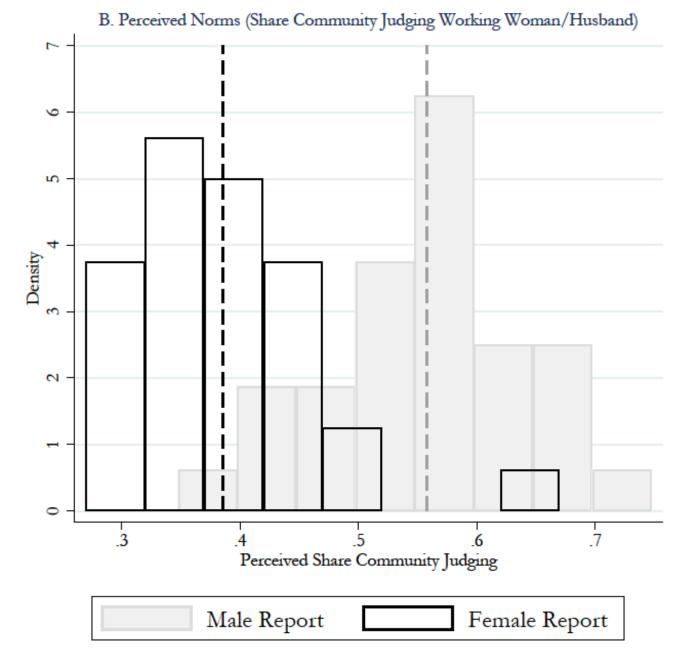
(!) *Actual and perceived norms may not align* (Bursztyn et al. 2018)

Innovation

We measure norms costs borne by men and women separately, to understand who bears cost of women working

Actual Norms in Sample

Men More Opposed to Female Work

A. Actual Norms (Belives Women Cannot Work)

Density

Share Reporting Women Can Not Work

Male Report   Female Report

B. Perceived Norms (Share Community Judging Working Woman/Husband)

Perceived Share Community Judging

Male Report   Female Report

Perceived Norms in Sample

Men See Greater Social Costs to Female Work

Intervention 1

Offer Women Village Bank Accounts

Intervention 2
Complement Accounts with Basic Training

Intervention 3
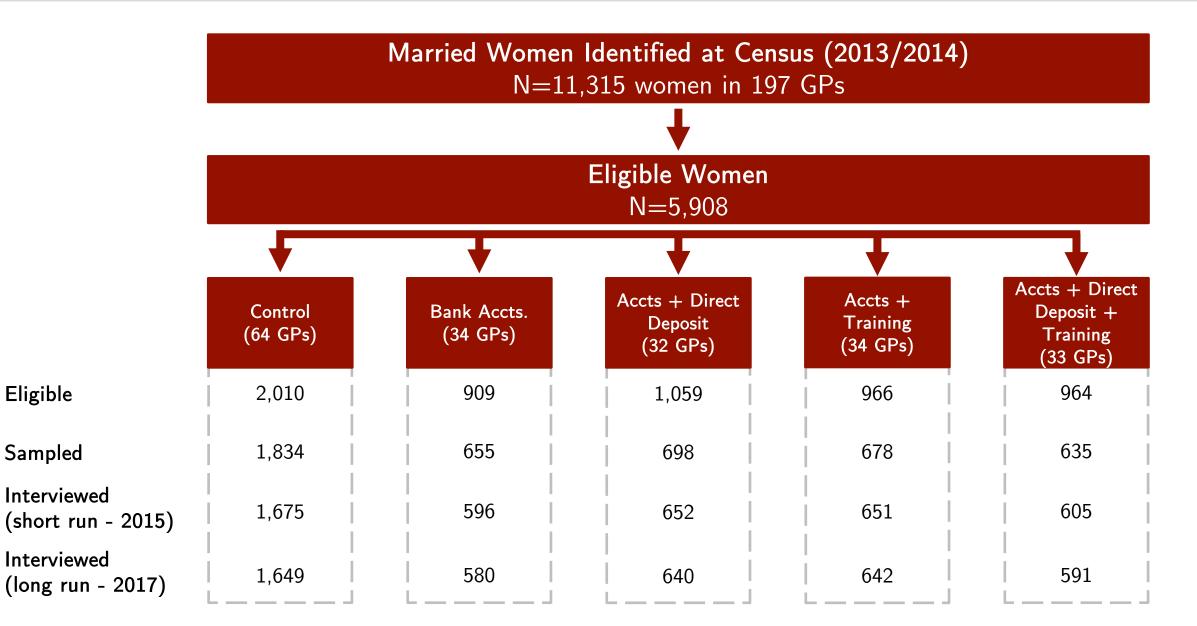## Sign Women Up for NREGS "Direct Deposit"

Submit paperwork to request new accounts get linked to women's wages in NREGS payment system
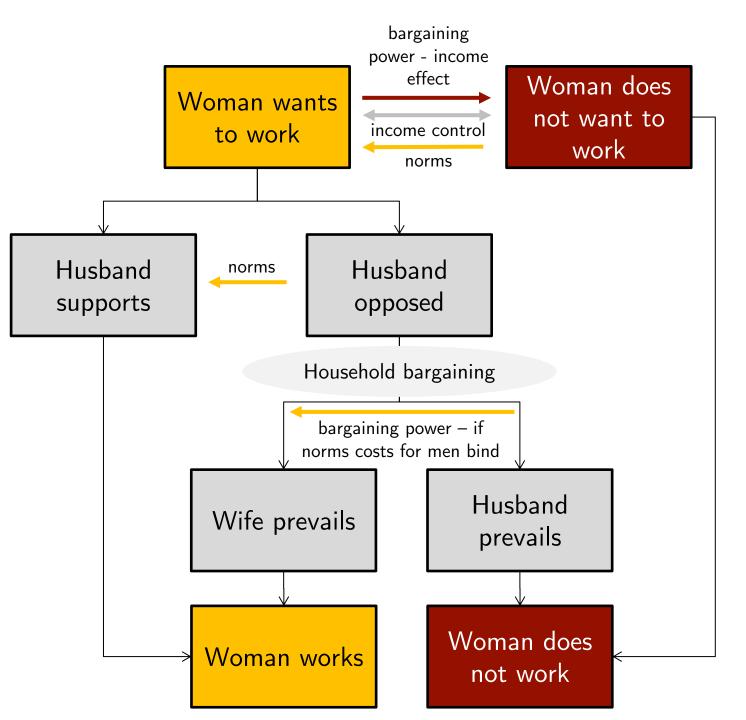
Follow-up with local officials to ensure request processed

No change to wage deposits for any other household members

Putting it All Together: Study Design

Married Women Identified at Census (2013/2014)
N=11,315 women in 197 GPs

Eligible Women
N=5,908

	Control (64 GPs)	Bank Accts. (34 GPs)	Accts + Direct Deposit (32 GPs)	Accts + Training (34 GPs)	Accts + Direct Deposit + Training (33 GPs)
Eligible	2,010	909	1,059	966	964
Sampled	1,834	655	698	678	635
Interviewed (short run - 2015)	1,675	596	652	651	605
Interviewed (long run - 2017)	1,649	580	640	642	591

Conceptual Framework: Bargaining, Income Control, and Norms Costs

Conceptual Framework: Positive Impacts Most Likely Among "Constrained" Non-Workers
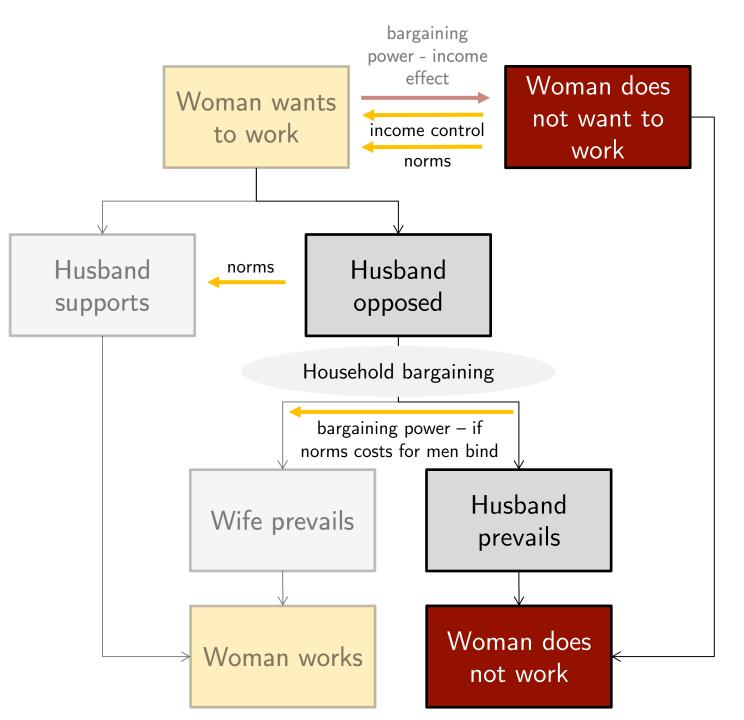
Empirical Results

Empirical Strategy

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

- All main effects relative to accounts only ("bare bones" financial inclusion)
- x_{ig} per PAP (+ survey round, survey month, and district FE)
- Cluster standard errors at the GP level
- Aggregate outcomes into standardized indices to address multiple testing concerns (Kling et al. 2007)

- Heterogeneous effects by baseline labor force attachment (best proxy: ever worked for MGNREGS)

First Stage: High Levels of Takeup

- *Non-control GPs*: 74% of eligible women opened accounts

- *Training GPs*: 75% of eligible women attended the training

- *Direct deposit GPs*: 82% of new account holders enrolled in direct deposit

Measuring Financial Inclusion and Autonomy

Account Use Index

- *Self reported*: individual account ownership, use in past 6 months, account balance
- *MGNREGS admin*: any, value deposits into individual account
- *Bank admin (subset)*: number transactions, average daily balances

Kiosk Knowledge Index

- *Self-reported (long run only):* Aggregates dummies for whether respondent has heard of the bank kiosk and what types of transactions she knows about

Banking Autonomy Index

- *Self-reported (long run only):* Aggregates dummies for whether woman visits bank alone or without male supervision and is comfortable doing so; whether woman believes women can visit bank kiosk without male supervision

Direct Deposit and Training Boosted Financial Inclusion and Autonomy

Treatment Effects on Long-Run Outcomes

	Aggregate Account Use			
	(1) Full Sample Index	(2) Bank Subsample Index	(3) Bank Kiosk Knowledge Index	(4) Banking Autonomy Index
Panel A: Treatment Effects				
β_1: Accounts + Direct Deposit + Training	0.286***	0.268***	0.163*	0.130**
	(0.049)	(0.050)	(0.090)	(0.057)
β_2: Accounts + Direct Deposit	0.109**	0.075	-0.065	-0.033
	(0.055)	(0.054)	(0.089)	(0.056)
β_3: Accounts + Training	-0.002	-0.041	-0.073	0.026
	(0.048)	(0.051)	(0.088)	(0.057)
β_4: Control	-0.198***		-0.513***	-0.224***
	(0.036)		(0.075)	(0.049)
Accounts Only Mean	-0.004	-0.023	0.000	-0.000
N	4118	2464	4118	4118
Panel B: P-values from F-Tests				
$\beta_1 = \beta_4$	0.000***	0.000***	0.000***	0.000***
$\beta_2 = \beta_4$	0.000***	0.164	0.000***	0.000***
$\beta_3 = \beta_4$	0.000***	0.427	0.000***	0.000***

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Public Labor Supply

- Worked in past month/year (self-report and admin data)
- Wages in past month/year (admin data)

Private Labor Supply

- Self-reported occupation as worker
- If worked for pay past year
- Annual private earnings

General Labor Supply

- If worked for pay in past month
- Earnings past month
- Months worked past year

Measuring Labor Supply

Direct Deposit and Training Increased FLFP

	Aggregate Labor Supply Index			General Labor Supply Sub-Index		
	(1) Pooled	(2) Short-Run	(3) Long-Run	(4) Pooled	(5) Short-Run	(6) Long-Run
Panel A: Treatment Effects						
β_1: Accounts + Direct Deposit + Training	0.108***	0.159***	0.058	0.101*	0.130**	0.112
	(0.036)	(0.043)	(0.049)	(0.053)	(0.058)	(0.072)
β_2: Accounts + Direct Deposit	-0.012	0.016	-0.042	0.021	0.066	-0.015
	(0.040)	(0.043)	(0.052)	(0.058)	(0.059)	(0.075)
β_3: Accounts + Training	0.017	0.026	0.006	0.009	0.029	0.016
	(0.044)	(0.049)	(0.054)	(0.051)	(0.058)	(0.066)
β_4: Control	0.009	0.050	-0.022	-0.005	-0.002	0.030
	(0.034)	(0.038)	(0.044)	(0.045)	(0.047)	(0.063)
Accounts Only Mean	-0.000	-0.000	-0.000	0.000	0.000	-0.000
N	8297	4179	4118	8297	4179	4118
Panel B: P-values from F-Tests						
$\beta_1 = \beta_4$	0.006***	0.010***	0.051*	0.023**	0.013**	0.179
$\beta_2 = \beta_4$	0.586	0.424	0.648	0.627	0.189	0.474
$\beta_3 = \beta_4$	0.844	0.608	0.570	0.759	0.573	0.792

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Work in the Private Sector Increased

	Public Labor Supply Sub-Index			Private Labor Supply Sub-Index		
	(1) Pooled	(2) Short-Run	(3) Long-Run	(4) Pooled	(5) Short-Run	(6) Long-Run
Panel A: Treatment Effects						
β_1: Accounts + Direct Deposit + Training	0.106	0.160*	0.025	0.117**	0.188***	0.035
	(0.064)	(0.081)	(0.078)	(0.049)	(0.052)	(0.070)
β_2: Accounts + Direct Deposit	-0.119**	-0.137**	-0.107	0.063	0.119**	-0.003
	(0.058)	(0.067)	(0.082)	(0.046)	(0.050)	(0.063)
β_3: Accounts + Training	-0.004	0.001	-0.034	0.047	0.046	0.037
	(0.086)	(0.085)	(0.113)	(0.041)	(0.046)	(0.060)
β_4: Control	-0.004	0.062	-0.078	0.036	0.089**	-0.018
	(0.061)	(0.077)	(0.077)	(0.039)	(0.038)	(0.055)
Accounts Only Mean	0.000	-0.000	0.000	-0.000	0.000	-0.000
N	8297	4179	4118	8297	4179	4118
Panel B: P-values from F-Tests						
$\beta_1 = \beta_4$	0.064*	0.248	0.084*	0.055*	0.047**	0.341
$\beta_2 = \beta_4$	0.032**	0.007***	0.644	0.479	0.502	0.775
$\beta_3 = \beta_4$	0.999	0.459	0.672	0.737	0.301	0.263

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.
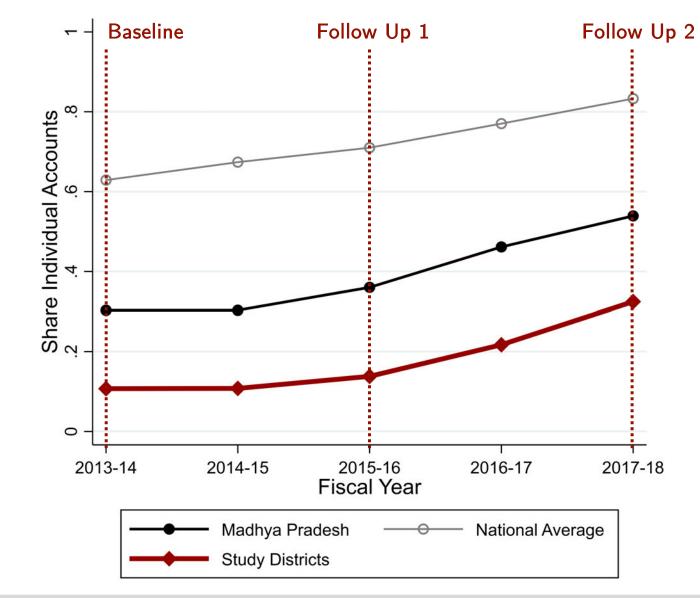
Other key results:

1. Impacts for constrained women persist in the long run (»see)

2. Male labor supply in *public sector* increased in direct deposit and training GPs (»see)

Intervention "Catch Up" May Explain Fade Out

Share NREGS Workers Paid Into Individual Accounts

Baseline   Follow Up 1   Follow Up 2

Share Individual Accounts (y-axis: 0 to 1)

Fiscal Year (x-axis: 2013-14, 2014-15, 2015-16, 2016-17, 2017-18)

Legend:
- Madhya Pradesh
- National Average
- Study Districts

Also consistent with an income effect (test: empowerment)

Measuring Empowerment

Economic Agency

Purchases of daily food, clothing for herself, children's health, home improvement, festivals, and food/drink outside the home (any purchase, with own money)

Mobility

Visited village market, market outside of village, natal home, anganwadi, and health center in the past year, past 30 days

Decision Making

Has a say in how to spend earnings

Has a say in whether she take employment

No Overall Impacts on Empowerment

But Constrained Women Benefit

[(»see)](#)

	Aggregate Empowerment Index		
	(1) Pooled	(2) Short-Run	(3) Long-Run
Panel A: Treatment Effects			
β_1: Accounts + Direct Deposit + Training	0.027	0.022	0.027
	(0.030)	(0.036)	(0.040)
β_2: Accounts + Direct Deposit	-0.006	-0.020	-0.001
	(0.029)	(0.040)	(0.033)
β_3: Accounts + Training	0.016	-0.026	0.049
	(0.033)	(0.038)	(0.040)
β_4: Control	-0.008	-0.018	-0.001
	(0.028)	(0.036)	(0.032)
Accounts Only Mean	0.001	0.000	0.002
N	8276	4179	4097
Panel B: P-values from F-Tests			
$\beta_1 = \beta_4$	0.119	0.112	0.410
$\beta_2 = \beta_4$	0.902	0.938	0.988
$\beta_3 = \beta_4$	0.345	0.763	0.127

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Personal Beliefs
- Should women be able to work
- Whether respondent wants sons/daughters to end up in households where woman works

Accepts Working Women
- Vignette judgements of whether the working woman is the better wife, better mother, cares more about the family

Accepts Husband of WW
- Vignette judgements of whether husband to housewife or working woman is better provider, better husband

Measuring Actual Norms

Direct Deposit and Training Liberalized Actual Norms for Women, But Not Men

	Female Reports			
	(1) Aggregate Actual Norms Index	(2) Personal Beliefs Sub-Index	(3) Working Women Acceptance Sub-Index	(4) Husbands Acceptance Sub-Index
β_1: Accounts + Direct Deposit + Training	0.101***	0.112***	0.084	0.107**
	(0.037)	(0.040)	(0.059)	(0.052)
β_2: Accounts + Direct Deposit	-0.030	0.018	-0.035	-0.072
	(0.037)	(0.048)	(0.057)	(0.049)
β_3: Accounts + Training	0.018	0.000	0.025	0.030
	(0.042)	(0.041)	(0.055)	(0.064)
β_4: Control	-0.015	-0.011	-0.031	-0.002
	(0.035)	(0.036)	(0.052)	(0.049)
Accounts Only Mean	-0.000	0.000	0.000	-0.000
N	4118	4118	4118	4118
P-values from F-Tests				
$\beta_1 = \beta_4$	0.000***	0.001***	0.008***	0.009***
$\beta_2 = \beta_4$	0.597	0.489	0.928	0.087*
$\beta_3 = \beta_4$	0.364	0.767	0.144	0.586

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Measuring Perceived Norms

Perceived Acceptance Women

- How many (out of 10) community members would not speak badly of working woman

- Thinks working woman gets less respect in vignette

Perceived Acceptance Husbands

- *How many (out of 10)* community members would not think husband of working woman is bad provider

- Thinks husband of working woman gets more community respect in vignette

Direct Deposit and Training Liberalized Perceived Norms Among Both Genders

	Female Reports			Male Reports		
	(1) Aggregate Perceived Norms Index	(2) Perceived Working Women Acceptance Sub-Index	(3) Perceived Husbands Acceptance Sub-Index	(4) Aggregate Perceived Norms Index	(5) Perceived Working Women Acceptance Sub-Index	(6) Perceived Husbands Acceptance Sub-Index
β_1: Accounts + Direct Deposit + Training	0.077**	0.075*	0.080*	0.086*	0.045	0.127**
	(0.037)	(0.041)	(0.043)	(0.045)	(0.054)	(0.054)
β_2: Accounts + Direct Deposit	-0.023	-0.039	-0.007	0.064	0.047	0.080
	(0.040)	(0.045)	(0.043)	(0.046)	(0.057)	(0.051)
β_3: Accounts + Training	0.049	0.065	0.032	0.086*	0.052	0.121**
	(0.040)	(0.042)	(0.047)	(0.044)	(0.052)	(0.054)
β_4: Control	0.021	-0.005	0.048	0.071*	0.058	0.084*
	(0.036)	(0.041)	(0.039)	(0.038)	(0.046)	(0.046)
Accounts Only Mean	-0.000	-0.000	0.000	-0.236	-0.138	-0.334
N	4116	4116	4116	3813	3813	3813
P-values from F-Tests						
$\beta_1 = \beta_4$	0.073*	0.022**	0.388	0.693	0.766	0.314
$\beta_2 = \beta_4$	0.210	0.393	0.170	0.826	0.794	0.912
$\beta_3 = \beta_4$	0.499	0.087*	0.717	0.626	0.853	0.319

Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Mechanisms We Rule Out

Savings Constraints

All get accounts

No meaningful effects on non-NREGS deposits

GE Wage Effects

No shifts in private sector wages for men or for women

Other Fixed Costs

No evidence that other fixed costs (childcare, finding work) matter

Final Thoughts

Insight into Household Decisions: Results not compatible with models of efficient household bargaining (absent fixed costs)

Norms matter: Women and men bear social costs when women work. Social costs to men may be larger, more binding (see also Bernhardt et al. 2018).
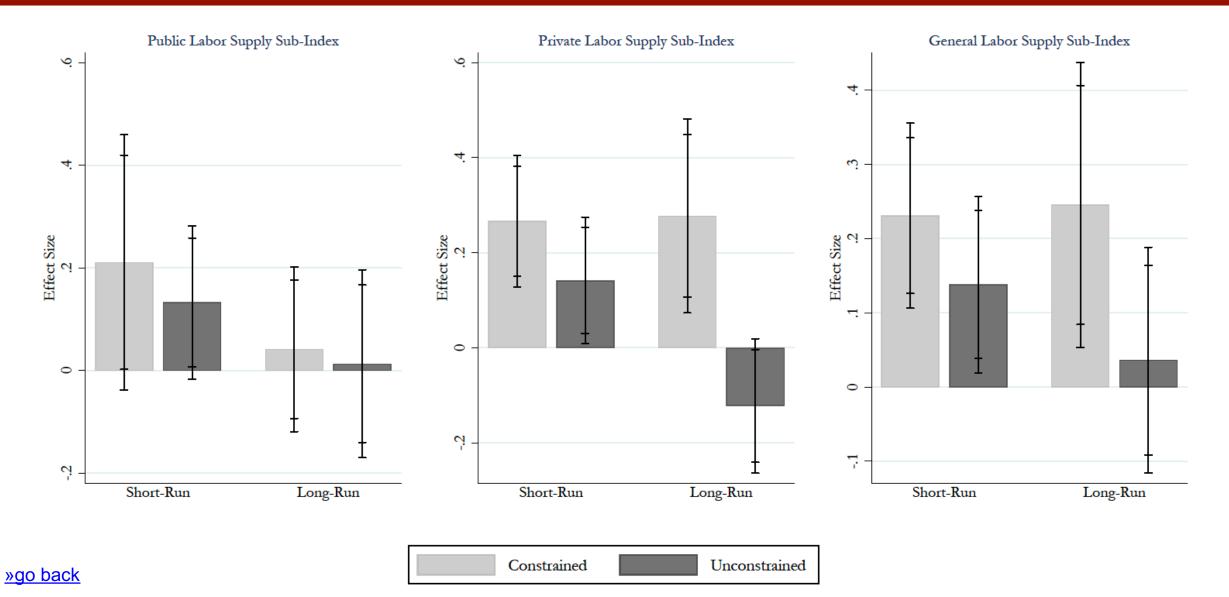
Changing behavior can change norms: our intervention changed norms without directly targeting them.

- Scope for sustained impact, Pareto improvements

Appendix Material

Direct Deposit and Training Has Persistent Impacts on Constrained Women's Labor Supply

Public Labor Supply Sub-Index

Private Labor Supply Sub-Index

General Labor Supply Sub-Index

Constrained   Unconstrained

Direct Deposit and Training Increased Male Labor Supply in the Public Sector

|	General Labor Sub-Index			Public Sector Sub-Index			Private Sector Sub-Index		
	(1) Pooled	(2) Short-Run	(3) Long-Run	(4) Pooled	(5) Short-Run	(6) Long-Run	(7) Pooled	(8) Short-Run	(9) Long-Run
Panel A: Treatment Effects									
β_1: Accounts + Direct Deposit + Training	-0.051	0.078	-0.103	0.173**	0.157*	0.166*	-0.024	0.047	-0.068
	(0.067)	(0.090)	(0.065)	(0.079)	(0.090)	(0.097)	(0.052)	(0.070)	(0.043)
β_2: Accounts + Direct Deposit	0.074	0.155	0.055	-0.132*	-0.142*	-0.131	0.062	0.107	0.034
	(0.077)	(0.099)	(0.073)	(0.072)	(0.080)	(0.100)	(0.063)	(0.087)	(0.049)
β_3: Accounts + Training	0.077	0.111	0.069	-0.038	-0.015	-0.073	0.068	0.108	0.024
	(0.082)	(0.098)	(0.074)	(0.088)	(0.095)	(0.111)	(0.062)	(0.087)	(0.051)
β_4: Control	-0.037	0.007	-0.058	-0.017	0.025	-0.040	0.043	0.096	-0.009
	(0.065)	(0.089)	(0.061)	(0.072)	(0.081)	(0.089)	(0.052)	(0.077)	(0.042)
Accounts Only Mean	0.648	0.690	0.605	0.173	0.159	0.188	0.647	0.641	0.652
N	7771	3957	3814	7771	3957	3814	7771	3957	3814
Panel B: P-values from F-Tests									
$\beta_1 = \beta_4$	0.830	0.422	0.474	0.016**	0.155	0.016**	0.175	0.500	0.110
$\beta_2 = \beta_4$	0.117	0.112	0.094*	0.095*	0.042**	0.291	0.718	0.885	0.299
$\beta_3 = \beta_4$	0.139	0.271	0.069*	0.795	0.662	0.740	0.647	0.884	0.432
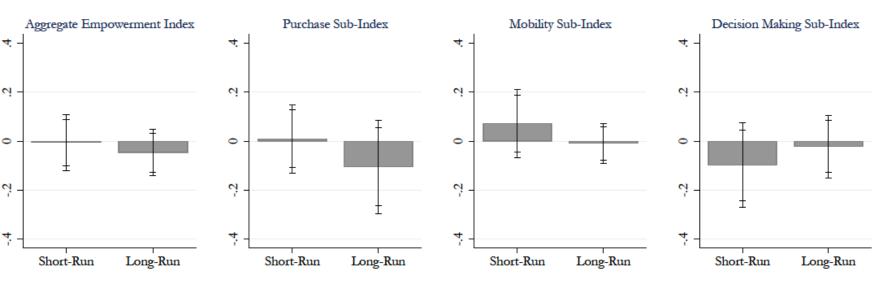
Notes: Robust standard errors clustered at the GP level in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.10$.

Direct Deposit and Training Boosts Empowerment Among Constrained Women