



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE



CGIAR
FOOD FRONTIERS
AND SECURITY



CGIAR
POLICY
INNOVATIONS

IFPRI Discussion Paper 2444

September 2026

**The Effects of a Multifaceted Graduation Model
on Intra-Household Dynamics**

Experimental Evidence from Ethiopia

Hiwot Mekonnen Mesfin

Kalle Hirvonen

Jessica Leight

Poverty, Gender, and Inclusion Unit

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

The International Food Policy Research Institute (IFPRI), a CGIAR Research Center established in 1975, provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition. IFPRI's strategic research aims to foster a climate-resilient and sustainable food supply; promote healthy diets and nutrition for all; build inclusive and efficient markets, trade systems, and food industries; transform agricultural and rural economies; and strengthen institutions and governance. Gender is integrated in all the Institute's work. Partnerships, communications, capacity strengthening, and data and knowledge management are essential components to translate IFPRI's research from action to impact. The Institute's regional and country programs play a critical role in responding to demand for food policy research and in delivering holistic support for country-led development. IFPRI collaborates with partners around the world.

AUTHORS

Hiwot Mekonnen Mesfin (hmesfin@worldbank.org) is an economist with the Africa Region Gender Innovation Lab at the World Bank.

Kalle Hirvonen (K.Hirvonen@cgiar.org) is a Senior Research Fellow in the Poverty, Gender, and Inclusion (PGI) Unit at the International Food Policy Research Institute (IFPRI), Washington, DC.

Jessica Leight (J.Leight@cgiar.org) is a Senior Research Fellow in the PGI Unit at IFPRI, Washington, DC.

Notices

¹ IFPRI Discussion Papers contain preliminary material and research results and are circulated in order to stimulate discussion and critical comment. They have not been subject to a formal external review via IFPRI's Publications Review Committee. Any opinions stated herein are those of the author(s) and are not necessarily representative of or endorsed by IFPRI.

² The boundaries and names shown and the designations used on the map(s) herein do not imply official endorsement or acceptance by the International Food Policy Research Institute (IFPRI) or its partners and contributors.

³ Copyright remains with the authors. The authors are free to proceed, without further IFPRI permission, to publish this paper, or any revised version of it, in outlets such as journals, books, and other publications.

Abstract

We provide evidence around the effectiveness of a gender-sensitive graduation model in shifting intrahousehold dynamics and empowering women in rural Ethiopia, drawing on a multi-arm cluster randomized trial. The bundled intervention centered around village economic and social associations, nurturing care groups, men's groups, and livelihood grants; one arm also provided a monthly cash transfer for pregnant and lactating women. Following two and a half years of implementation, we find evidence of increased savings for both men and women, a reduced gender gap in access to emergency funds, increased men's participation in chores and childcare, and increased men's and women's knowledge of infant and young child feeding practices. The results also show that the interventions increased women's decision-making power and shifted gender norms around intimate partner violence, but only in the arm receiving the maternal cash transfer. These results suggest that multifaceted interventions targeting multiple constraints are promising tools for transforming traditional gender norms and enhancing women's agency.

Keywords: Financial inclusion, Norm shifting, Social protection, Decision-making, Africa

JEL codes: D13, D14, D78

Acknowledgments

This study was funded by the U.S. government, award No. 72DFFP19LA00003, sub-award No. 999004127 and the World Bank Africa Gender Innovation Lab. We gratefully acknowledge financial support from the World Bank's Umbrella Facility for Gender Equality, in partnership with the Bill & Melinda Gates Foundation (INV-005620). It was also supported by the donors who fund the CGIAR's Science Programs on Food Frontiers and Security, and Policy Innovations through their contributions to the CGIAR Trust Fund. Ethical review and approval for the trial was provided by the International Food Policy Research Institute (IFPRI), Ethiopian Public Health Association (EPHA) and Ethiopian Society of Sociologists, Social Workers and Anthropologists (ESSSWA). We are also thankful to Clara Delavallade and colleagues at World Vision International for their excellent inputs.

1 Introduction

Enhancing women’s agency and empowerment in low- and middle-income countries is an important policy objective for at least two reasons. First, expanding women’s freedom to shape their own lives is valuable in its own right, a value reflected in international commitments such as the Sustainable Development Goals ([United Nations, 2025](#)). Second, increased bargaining power and agency for women is associated with improvement in a range of intergenerational human capital outcomes, particularly children’s nutrition, health, and education ([Duflo, 2012](#); [Jayachandran and Voena, 2026](#); [Duflo, 2003](#); [Thomas, 1990](#); [Qian, 2008](#); [Hoddinott and Haddad, 1995](#)). Yet in many low-income settings, traditional gender norms constrain women’s control over resources as well as their ability to make independent decisions.

Over the past two decades, multifaceted graduation models bundling interventions targeting multiple constraints trapping households in poverty have been deployed widely, with impressive short- and long-term effects in increasing consumption and enhancing households’ economic welfare ([Bandiera et al., 2017](#); [Banerjee et al., 2015](#); [Balboni et al., 2022](#); [Banerjee et al., 2021](#); [Barker et al., 2024](#); [Bossuroy et al., 2022](#)). Yet because these programs are primarily targeted at addressing capital and livelihoods constraints, their effects on the intra-household constraints faced by women (control over resources, decision-making, and gender norms) remain underexplored. There are multiple channels through which a graduation model intervention can shift intrahousehold dynamics: the introduction of new livelihoods activities and the associated increases in income may offer new opportunities for women’s engagement in work or control over income earned, and positive income effects may shift gender attitudes. At the same time, high-intensity interaction with a program that (explicitly or implicitly) promotes more egalitarian norms may also shift both attitudes and behavior, particularly if women participate directly.

To expand the evidence base around graduation models and women’s empowerment, we analyze a multi-arm cluster RCT of a multifaceted program embedded in Ethiopia’s flagship social protection program, the Productive Safety Net Program (PSNP). Clusters were randomly assigned to three arms. The control arm (T1) received the standard PSNP: cash or food

payments provided for a contribution of labor to public works. The second arm (T2) received the PSNP and bundled SPIR¹ programming: mixed-gender Village Economic and Savings Associations (VESAs) enrolling both spouses, Nurturing Care Groups (NCGs) providing behavioral change counseling to mothers of infants, male discussion groups, and livelihoods training, together with a one-time \$300 USD (or \$609 in 2021 \$PPP) livelihoods grant for the poorest third of households. The third arm (T3) received all T2 components plus a monthly maternal cash transfer of \$20 USD (or \$41 in 2021 \$PPP) delivered over 24 months (\$974 in total).² The interventions were designed to enable households to build more sustainable livelihoods, raising income and consumption while reducing undernutrition among young children. Our study includes 3,015 PSNP households in 234 clusters (kebeles; sub-districts), all of which included either a pregnant woman or an infant under nine months of age at baseline. Households were surveyed at baseline (2022) and at follow-ups one year (2023) and two and a half years later (2025), with 4% attrition across the full sample.

Effects on the pre-specified livelihoods and nutrition outcomes are reported separately ([Hirvonen et al., 2025](#)), and show that across all treatment arms, participation in the village savings groups raised household financial inclusion, primarily through increased savings, and caregivers exhibited enhanced knowledge of infant and young child feeding. The largest gains in child growth, diet quality, household assets, and consumption were concentrated in the poorest households, which received both the one-time livelihoods grant and the maternal cash transfer. In this paper, we generate complementary evidence by exploring how these household-level gains shift intrahousehold gender norms and the intrahousehold distribution of resources and decision-making: particularly, whether the gains in financial inclusion and nutrition knowledge accrued differently to women and men.³

¹ SPIR refers to Strengthening PSNP Institutions and Resilience, a graduation model program implemented by World Vision, CARE, and ORDA. This is the second phase of the SPIR program (SPIR II), implemented from 2021 to 2026.

² The purchasing-power-parity values of both transfers are computed consistently with the household consumption measures reported below: each nominal transfer is expressed in constant baseline prices (deflating by the relevant woreda-level food price index before applying the 2021 PPP conversion), so that transfers and consumption are denominated on a common basis.

³ The outcomes reported in this paper were not pre-specified and therefore, the analysis should be considered exploratory.

Our intention-to-treat effects show large increases in the probability of saving for both men and women, in formal and informal institutions, with substantially larger gains for women: among women, formal saving rose by up to 29 percentage points in the maternal cash transfer arm (T3). Women’s access to emergency funds also increased by six to eight percentage points with no shift observed among men, thus closing a gender gap observed in the control arm, where men reported greater access than women. On intrahousehold dynamics, men increased their participation in household chores and childcare, and both men and women gained knowledge of infant and young child feeding practices; these gains are generally observed symmetrically for both spouses. The clearly gendered shifts are concentrated among women in the maternal cash transfer arm (T3): women report increased participation in consequential household decisions (major expenses and children’s education), an increase of 12% relative to the control mean; a significant decline in their reported justification of intimate partner violence; and higher subjective well-being. Men’s attitudes linked to IPV, by contrast, do not change.

Our study builds on evidence from the first phase of the same program. [Alderman et al. \(2025\)](#) show that a men’s engagement intervention in SPIR I (2018–2021) increased men’s participation in household tasks and shifted attitudes to be more gender-equitable; at a three-year follow-up these gains persisted (reaching 0.26–0.29 standard deviations for men’s involvement in domestic tasks) only in the arms with dedicated men’s engagement groups, and they were corroborated by women’s reports of their husbands’ behavior. In related work from SPIR I, [Hirvonen et al. \(2026\)](#) show that the program’s savings gains buffered women and their households against weather shocks, fully offsetting the shock-induced rise in intimate partner violence.

Against this backdrop, this paper makes three contributions. First, we decompose the program’s household-level financial-inclusion gains by spouse and show these gains disproportionately benefit women: the increase in savings reported by women is much larger than the corresponding increase reported by men, and the program closes the gender gap in access to emergency funds that is otherwise observed (in the control arm). Second, and most distinctively, we identify the role of the monthly maternal cash transfer—absent from the first phase of SPIR programming—in shifting intrahousehold dynamics: layering the transfer onto the men’s-group and livelihoods programming increases women’s decision-making power and reduces

their propensity to justify intimate partner violence, with no comparable change for men.

We also contribute to a growing literature analyzing the effects of multifaceted graduation model interventions on women's decision-making power. In the original six-country study analyzed in [Banerjee et al. \(2015\)](#), the intervention produced only modest and inconsistent gains in women's decision-making relative to its large effects on livelihoods. Evidence on women's economic outcomes is more encouraging: [Bandiera et al. \(2017\)](#) show that a one-time transfer of assets and skills to ultra-poor women in Bangladesh shifted them out of casual wage labor and into self-employment, durably raising their earnings, and in Afghanistan a similar intervention led to increased women's labor participation, savings, and access to finance ([Bedoya et al., 2019](#)). A graduation model adapted to include a psychosocial dimension in Niger increased women's decision-making and economic activity and enhanced psychosocial well-being ([Bossuroy et al., 2022](#)). Yet studies that probe intrahousehold dynamics more closely find ambiguous effects on women's agency: [Das et al. \(2013\)](#) document that while transferred livestock remained under women's control in Bangladesh, new assets financed by the program accrued disproportionately to men, and women's mobility and control over income actually declined. Multifaceted programming targeted directly at women has also generated broad gains in agency: [Bandiera et al. \(2020\)](#) show that a program combining vocational and life-skills training for adolescent girls in Uganda raised their engagement in income-generating activities and shifted a range of empowerment outcomes, and a large literature suggests cash transfers and cash plus programming can reduce intimate partner violence ([Buller et al., 2018](#); [Roy et al., 2019](#); [Hidrobo et al., 2016](#); [Baranov et al., 2021](#)).

A distinct literature linked to the literature around cash transfers and intrahousehold gender dynamics focuses on the effects of transfer targeting within the household. Early evidence drawing on natural experiments shows that targeting transfers to women increases their bargaining power and their ability to control the transfer's allocation: [Thomas \(1990\)](#) and [Hoddinott and Haddad \(1995\)](#) find that a higher female income share raises spending on child health and nutrition, and [Duflo \(2003\)](#) finds that South African pensions improved granddaughters' anthropometric status only when received by women. Experiments that randomize the transfer recipient reinforce this pattern: [Armand et al. \(2020\)](#) show that

targeting a North Macedonian CCT to mothers rather than fathers raised the household food expenditure share by four to five percentage points. Yet the recipient-gender effect is neither automatic nor universal. [Akresh et al. \(2016\)](#) find that transfers to mothers in Burkina Faso did not improve child health or schooling relative to transfers to fathers, and [Benhassine et al. \(2015\)](#) show that a transfer *labeled* as education support drove large enrollment gains while switching the recipient from fathers to mothers made almost no difference. These mixed findings motivate our comparison of T2 and T3, where we can assess the marginal effect of channeling a regular, predictable transfer to mothers.

Taken together, this literature suggests that multifaceted programs and targeted cash transfers can expand women’s economic participation and shift the intrahousehold balance of decision-making power, but the pattern is not fully consistent. The SPIR program evaluated here was explicitly designed to be gender-sensitive (including, for example, male engagement groups and VESAs incorporating both men and women) in order to shift gender dynamics more effectively, and thus evaluating this intervention provides new insights around the potential of more tailored graduation models to empower women.

2 Study design

2.1 Interventions

This trial was conducted in rural areas served by the Productive Safety Net Program (PSNP) in the Amhara and Oromia regional states of Ethiopia. Launched in 2005 and covering nearly eight million people, the PSNP is one of the largest and longest-running safety net programs in Africa ([Beegle et al., 2018](#)). PSNP households receive six months of cash or food payments against labor-intensive public works.⁴ In our sample, the median annual transfer per PSNP household is \$587 in 2021 purchasing power parity (PPP) terms or about 12% of the mean annualized household consumption at baseline in 2022. Extensive quasi-experimental evaluations show that the PSNP has positive effects on household food security and asset levels

⁴ A small share of households with limited labor capacity or with pregnant or lactating women receive direct payments without a labor requirement.

(Hoddinott et al., 2024).

Strengthening PSNP Institutions and Resilience (SPIR II) was a 5-year program implemented from 2021 to 2026, building on the first phase (2016–2021). Implemented by World Vision, CARE, and ORDA and funded by the U.S. government, SPIR II supported the implementation of the PSNP in targeted woredas and delivered a supplementary graduation model to PSNP households including gender-sensitive livelihoods and nutrition interventions.⁵ The livelihood interventions centered around the establishment of village economic and social associations (VESAs) to promote savings and credit access; the VESAs were also used to deliver training on business skills, financial management, and nutrition and health. Unusually, the VESAs explicitly promoted the participation of both men and women to facilitate women’s inclusion in economic decision-making and new livelihoods activities; they also established social funds constituted with contributions from each member in every meeting, accessible in the case of emergencies. In addition to the establishment of VESAs, the poorest 33% of households in the sampled kebeles (sub-districts) received a lump-sum \$300 USD (\$609 in 2021 \$PPP) livelihoods grant, disbursed in March 2023. (The grant was targeted at the household level and households could generally choose the bank account, belonging to either the husband or the wife, into which the grant was disbursed; there was an organizational goal that at least half the grants be delivered to women, but we did not collect data on the identity of the recipient, and any such variation would be endogenous.)⁶

The primary nutrition intervention was the establishment of volunteer-led Nurturing Care Groups providing nutrition-focused behavioral change counseling (BCC) to pregnant women and mothers of infants.⁷ In addition, in one arm mothers received a top-up maternal cash transfer

⁵ SPIR-delivered interventions were supplemental to the base PSNP: thus for example, the base PSNP typically includes some soil and water conservation activities that are conducted as part of public works projects. SPIR provided additional engagement and resources for soil and water conservation activities.

⁶ Livelihoods grants for PSNP households are also delivered by the government directly in a separate set of woredas where the government directly delivers the PSNP, with no presence of non-governmental organizations such as SPIR. However, in the SPIR-served areas, there are no government-provided livelihoods grants.

⁷ Health extension workers (HEWs) also generally provide BCC, including around nutrition topics; it should be noted that the nurturing care groups are separate from and supplemental to standard HEW-provided services. Nurturing care groups are not delivered or managed by HEWs.

(\$20 a month, or \$41 in 2021 \$PPP), an unconditional transfer labeled as a child health and nutrition transfer and delivered monthly from November 2022 through October 2024 (\$974 in total). To facilitate shifts in potentially harmful gender norms, SPIR also established men's engagement groups to facilitate discussions among men around gender norms and men's role in their communities, and to discuss their role in caregiving and their knowledge of nutrition. The establishment of male engagement groups was another important dimension of gender-sensitive programming.

These components map onto the intrahousehold outcomes we analyze through several distinct channels that jointly articulate the program's theory of change. The VESAs, by enrolling both spouses and channeling savings through a mixed-gender institution, are expected to raise financial inclusion for women as well as men, and to narrow the gender gaps in savings and in access to emergency resources. The one-time livelihoods grant relaxes the capital constraint facing the poorest households, increasing assets and income and potentially shifting household gender dynamics. The Nurturing Care Groups deliver nutrition counseling while the male engagement groups draw fathers into these discussions and into demonstrations of caregiving, thus potentially raising nutrition knowledge among both spouses while shifting patterns of domestic task participation. Finally, the maternal cash transfer allows women to directly control a high-value and explicitly labeled resource. Because the treatment arms are nested—T2 delivers the full graduation package while T3 adds the maternal transfer—the comparison between the two arms is informative about the marginal role of placing resources directly in women's hands.

Table 1 provides a brief summary of the interventions and maps them against the three treatment arms.

Table 1: Interventions by treatment arm

Treatment arm	Core interventions	Number of clusters
T1 (comparison group)	Standard PSNP transfers	79 Kebeles
T2	PSNP transfers + SPIR II support such as establishing village economic and social associations (VESAs) + Nurturing Care Groups (NCGs) + mental health services + men’s groups + one-time livelihoods grant of \$300 USD (\$609 in 2021 \$PPP) to the poorest 33% (identified using as-set index) + WASH + soil and water conservation activities + agricultural value chains	79 Kebeles
T3	T2 + monthly maternal cash transfer of \$20 USD (\$41 in 2021 \$PPP) over 24 months for pregnant and lactating women	79 Kebeles

2.2 Sample and randomization

Our sample includes 3,015 PSNP households in 234 kebeles (sub-districts) in 15 woredas (districts). The 234 kebeles were selected from the broader area (around 450 kebeles in these two regions) served by SPIR and randomly assigned to the three experimental arms, as described above.⁸ Within kebeles, all PSNP households reporting the presence of either a pregnant woman in her second or third trimester, or an infant under nine months of age at baseline were eligible to be included in the sample.⁹ Thirteen eligible households were randomly selected from each kebele. A detailed description of the sampling process, power calculations, and any risk of bias induced by potential spillover effects (for the livelihood grants and maternal cash transfers) are presented in [Hirvonen et al. \(2025\)](#).

Kebeles were randomly assigned to one of three arms by the research team. We stratified

⁸ The main objective of the purposive selection was to exclude the kebeles that were in the control arm of a randomized trial conducted as part of SPIR I, to ensure that those kebeles would now receive a broader set of services. Note that SPIR II also expanded to provide services in Tigray, but this trial did not sample any households in Tigray.

⁹ Pregnancy was self-reported by respondents; no pregnancy tests were conducted.

based on the interaction of the following characteristics: *woreda*; a binary variable for whether a kebele is above or below the *woreda*-level median in the percentage of house-holds eligible for the PSNP; and a binary variable for whether the kebele is above or below the *woreda*-level median in distance from the *woreda* capital. Appendix Table [A1](#) shows observable characteristics are balanced across the three study arms.

Ethical review and approval for the trial was provided by the International Food Policy Research Institute (IFPRI), Ethiopian Public Health Association (EPHA) and the Ethiopian Society of Sociologists, Social Workers and Anthropologists (ESSWA).

2.3 Data and sample

The baseline survey was conducted in 2022, with follow-up surveys in 2023 and 2025. This study draws primarily on the 2025 survey, including gender and intrahousehold modules covering financial inclusion, labor supply, household task allocation, decision-making, freedom of movement, occupational aspirations for children, and attitudes toward intimate partner violence. These modules were administered separately to the primary male (PM) and the primary female (PF) in each household.¹⁰

Household-level attrition between the baseline and the second follow-up is low: 96% of the households interviewed at baseline were re-interviewed in 2025. In about a quarter of these households, however, one spouse (most often the primary male) was absent at the time of interview and could not be interviewed. We restrict the analysis to the 2,167 households in which both spouses were interviewed, to ensure that male and female outcomes are measured on a consistent set of households.

We also assess whether households in which both spouses are surveyed (and thus that enter the sample) are systematically different from households in which only one spouse is surveyed. In Tables [A2](#) and [A3](#), we regress a binary variable for incomplete survey status on baseline covariates, treatment assignment, and the interaction between the two; there is little evidence that treatment

¹⁰ These gender and intrahousehold modules build on the work of the Measures for Advancing Gender Equality (MAGNET) initiative, a collaboration between the World Bank's Africa Gender Innovation Lab and IFPRI that develops and validates measures of women's agency for use across contexts.

status or its interaction with baseline characteristics is correlated with the probability of a complete follow-up survey. This is consistent with the hypothesis that the sample restriction imposed does not introduce any bias.

2.4 Outcome variables and summary statistics

The outcomes analyzed in this paper are drawn from the supplementary gender modules included in the second follow-up and span the domains through which a multifaceted livelihoods program might reshape intrahousehold dynamics: financial inclusion, labor supply, the division of domestic work, norms around intimate partner violence, nutrition knowledge, and women’s decision-making power. Appendix Table A4 provides details around the construction of each measure. Table 2 uses these data to characterize the primary males and females in our sample. Because the gender modules were fielded only at follow-up, we report means for the *control* arm, exposed to the standard PSNP but no SPIR programming; this effectively captures the intrahousehold status quo absent the SPIR intervention.

Primary males are on average seven years older than their spouses (36 versus 29 years) and better educated (61% of men ever attended school, versus 45% of women). Across the substantive domains a consistent picture emerges: there is a substantial gender gap between men and women in control over money, decisions, and time, though attitudes around children are more egalitarian. On finances, men are far more likely than women to report any formal savings, defined as savings held in a financial institution (26% versus 9%) and to report access to emergency funds (33% versus 23%); the gap narrows or reverses for informal savings, savings held in informal savings’ clubs or at home (6% for men versus 8% for women). Both spouses work heavily in agriculture (49% versus 38%), but wage employment is almost exclusively male (14% versus 1%). (These labor measures use a seven-day recall and were collected during the agricultural slack season, so they likely understate engagement during peak periods.) On decision-making, men report input into most or all decisions in 3.1 of five domains against 1.9 for women, a gap that widens for personal autonomy (2.1 versus 1.2). Women are overwhelmingly responsible for domestic work and, strikingly, justify the use of intimate partner violence under certain hypothetical scenarios *more* than men do (0.48 versus 0.29 on

the 0–2 scale), consistent with internalized gender-inequitable norms. Knowledge of infant and young child feeding practices is modest and higher among mothers than fathers (13.6 versus 10.2 out of 34), and both spouses report similar, relatively high subjective well-being (about 77% describe themselves as very or rather happy).

Two domains, however, show little variation across men and women. Parents hold near-universal aspirations for their children to obtain professional skills, with no gap observed for the gender of the parent or the child: around 80% want a professional or government job for both their daughters and their sons. And almost no one (about 2% of both men and women) reports that women are prevented from visiting relatives or working outside the home. These patterns are consistent with the hypothesis that the binding constraints for women in this setting are resources, decision authority, and time, rather than aspirations or physical mobility.

Given that our analysis of gender-related outcomes was not pre-specified, we minimize any scope for selective reporting as follows. Table 2 reports the full set of gender-module items, and we analyze every item except those for which the very limited control-group variation leaves little scope to detect an effect (occupational aspirations and mobility). This exclusion is based on the descriptive distributions, not on estimated treatment effects.

Table 2: Summary statistics: primary males and females (control arm)

Variable	Primary male		Primary female	
	Mean	SD	Mean	SD
Demographics				
Age (years)	35.78	7.61	28.96	5.59
Has any formal schooling	0.61	0.49	0.45	0.50
Financial inclusion				
Saved, formal/semi-formal institution	0.26	0.44	0.09	0.29
Saved, informal (Iqub/person)	0.06	0.23	0.08	0.27
Could secure 3,500 ETB emergency fund	0.33	0.47	0.23	0.42
Labor / economic participation (last 7 days)				
Worked in agriculture	0.49	0.50	0.38	0.49
Wage/salary employment	0.14	0.35	0.01	0.12
Ran a non-farm business	0.02	0.15	0.08	0.27
Helped in HH non-farm business	0.02	0.14	0.03	0.17
Unpaid apprentice	0.12	0.33	0.02	0.14
Decision-making (0–5)				
Input into decisions (most/all)	3.11	1.82	1.88	1.81
Own personal decisions (high extent)	2.10	1.83	1.21	1.54
Domestic work & attitudes				
Chore-sharing index (higher = more PM), 3–15	5.10	2.01	4.39	1.94
Justifies IPV index, 0–2	0.29	0.62	0.48	0.79
<i>if wife burns food</i>	0.09	0.29	0.20	0.40
<i>if wife neglects children</i>	0.20	0.40	0.28	0.45
Mobility				
Prevented from visiting or working (12m)	0.02	0.15	0.02	0.14
Aspirations for children				
Aspires professional/govt job: sons	0.77	0.42	0.82	0.38
Aspires professional/govt job: daughters	0.84	0.37	0.85	0.36
Aspires family-farm/home-only: daughters	0.00	0.06	0.02	0.13
Nutrition knowledge & wellbeing				
IYCF knowledge score, 0–34	10.23	6.45	13.59	4.48
Very/rather happy	0.77	0.42	0.77	0.42

Note: Means and standard deviations for the control (standard PSNP) arm, among the 750 control households in which both spouses were interviewed at endline (2025). Values are endline, not baseline; the gender and intrahousehold modules were fielded only in 2025. Binary indicators are reported as proportions. Age is measured at baseline. The IYCF-knowledge score for primary females is the mother's score (n=597); all other cells have n=750.

2.5 Empirical strategy

Our estimation strategy exploits the random assignment of treatments at the kebele level to measure the intention to treat effects (ITT) using the following specification.

$$Y_{iks} = \beta_1 T^2_k + \beta_2 T^3_k + \gamma_s + \epsilon_{iks} \quad (1)$$

where Y_{iks} is the outcome of household i in kebele k and randomization stratum s ; T^2 and T^3 are binary variables for the treatment status of kebele k ; γ_s are stratum (randomization-block) fixed effects; and ϵ_{iks} is the error term. Randomization was stratified on the interaction of woreda with two kebele characteristics (above/below the woreda median in PSNP-eligible share and in distance to the woreda capital), yielding 60 strata; we include stratum fixed effects following the experimental design described in [Hirvonen et al. \(2025\)](#).¹¹ Standard errors are clustered at the kebele level, the unit of randomization.

The parameters of interest are β_1 and β_2 , the ITT effects of T2 and T3; for each outcome we also report the p-value for the test $\beta_1 = \beta_2$. Because we examine many outcomes, we report sharpened two-stage false discovery rate (FDR) q -values alongside conventional p -values ([Anderson, 2008](#)). We group outcomes into families defined by the interaction of respondent (primary male or primary female) with domain. The *economic* family comprises formal savings, informal savings, access to emergency funds, non-farm business participation, agricultural work, and wage employment; the *household-dynamics* family comprises the chore-sharing index, the justification of intimate partner violence, IYCF knowledge, the decision-making input index, and subjective well-being. Within each family, the set of p -values entering the FDR procedure comprises the estimates on both treatment indicators—T2 versus control and T3 versus control—for every outcome in that family, yielding twelve p -values in each economic family (six outcomes $\times$ two arms) and ten in each household-dynamics family (five outcomes $\times$ two arms). We note that this grouping is deliberately inclusive: every outcome for which we report a treatment effect enters the family for

¹¹ We do not include additional baseline covariates: the candidate controls are balanced across arms (Appendix Table A1) and explain little of the variation in outcomes, so a parsimonious specification with stratum fixed effects alone is both transparent and loses little precision.

its domain, so that the correction is not rendered less conservative by setting aside the outcomes on which we find little movement.

Finally, we explore whether effects differ for households that are or are not eligible for the one-time livelihoods grants, targeted to the poorest third of households in each cluster. We estimate the interacted specification

$$Y_{iks} = \delta_1 T_k^2 \times LG_i + \delta_2 T_k^2 \times NoLG_i + \delta_3 T_k^3 \times LG_i + \delta_4 T_k^3 \times NoLG_i + \gamma_{s,LG} + \epsilon_{iks}, \quad (2)$$

where LG_i and $NoLG_i$ are indicators for grant-eligible and non-eligible households and $\gamma_{s,LG}$ are stratum-by-eligibility fixed effects; the latter absorb the grant main effect. The coefficients δ_1 and δ_2 capture the T2 effect for grant-eligible and non-eligible households, respectively, and δ_3 and δ_4 the corresponding T3 effects.

For each outcome, we also report Wald tests of the equality of the grant and no-grant effects within each arm. However, since livelihood grant eligibility is determined by baseline asset poverty, comparisons between grant-eligible and non-eligible households *within* an arm are not experimentally identified.

3 Empirical findings

We organize the results around three figures. Figures 1 and 2 report effects on financial inclusion and labor supply, and Figure 3 reports effects on intrahousehold dynamics; each figure plots the T2 and T3 ITT estimates with 95% confidence intervals, separately for primary males (PM) and primary females (PF). The corresponding regression tables with clustered standard errors, FDR q -values, control means, and the test of $\beta_1 = \beta_2$ are reported in Appendix Tables A5 and A6. Because the same outcomes are measured for both spouses, we also report the PF–PM difference, which tests directly whether an effect is gendered.

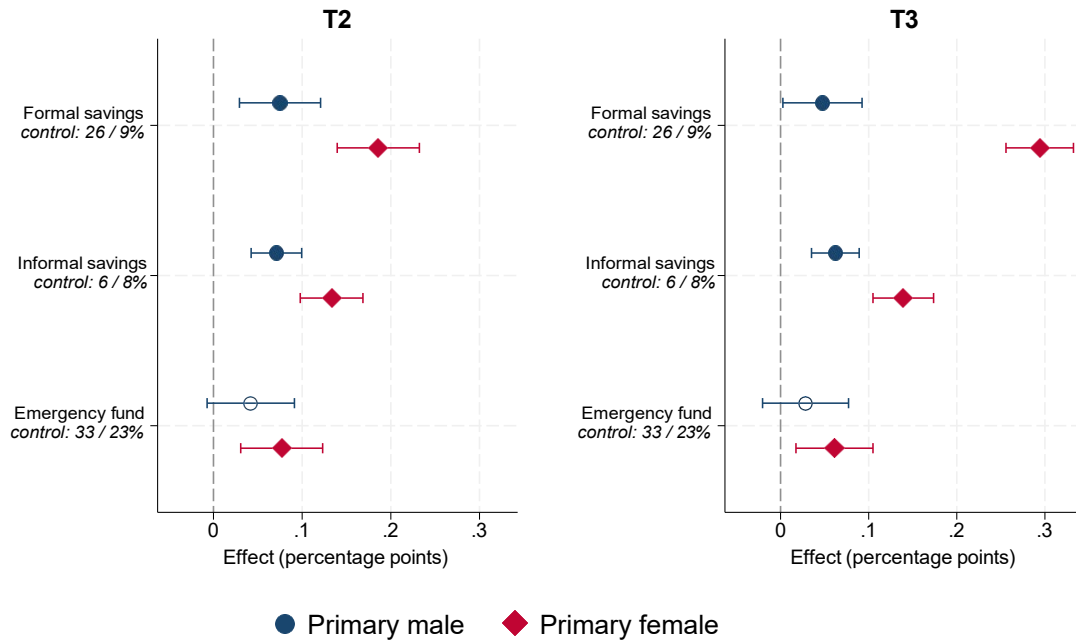
3.1 Financial inclusion and labor supply

The findings reported in Figure 1 suggest that there are large positive effects on the prob-

ability of savings for both men and women in both treatment arms, consistent with the household level effects reported in [Hirvonen et al. \(2025\)](#). Among men, the probability of reporting any formal savings rises by about 5–8 percentage points (from a control mean of 26%) and the probability of informal savings by 6–7 points (from 6%), with similar effects in T2 and T3. Among women, the gains are much larger: formal savings rises by 19 points in T2 and 29 points in T3 (from a control mean of 9%), and informal savings by 13–14 points (from 8%). The PF–PM difference is large and highly significant for both formal savings (0.11 in T2, 0.25 in T3) and informal savings. Access to emergency funds also increases for women (6–8 points, from a control mean of 23%) but only weakly shifts for men, who show a higher baseline probability of reporting access to emergency funds (33%). Accordingly, the treatment closes the control-arm gender gap in emergency-fund access, though the PF–PM difference in estimated treatment effects is not itself significant.

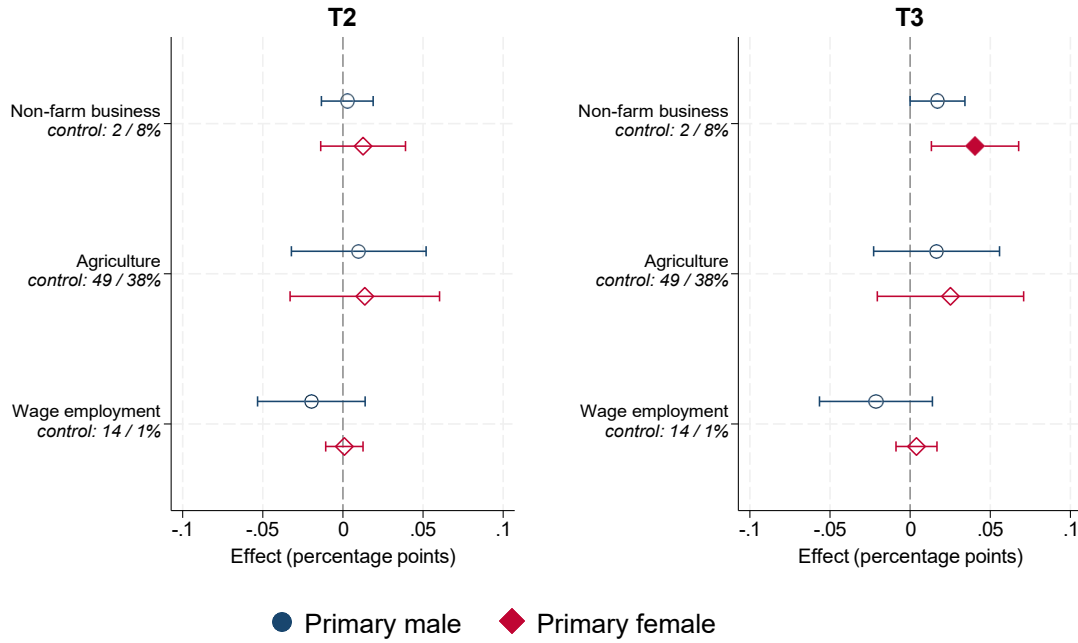
Labor supply, by contrast, is essentially unchanged (Figure 2). Neither agricultural work (reported by about half of men and 38% of women) nor wage employment (almost exclusively male) responds in either arm. Given that virtually all households are engaged in subsistence agricultural production (though active agricultural work in the season captured by this survey is limited, as noted above), and wage labor is extremely rare especially for women, movement on either margin may be unlikely. On the other hand, non-farm business participation shifts modestly for women in T3, who show a four percentage point increase. The increase in self-employment in the arm in which households receive a maternal cash transfer could be a signal that the provision of this transfer directly to women, even if framed as targeted for nutritional inputs, facilitates women’s shift into new income-generating activities; however, the modest magnitude of this increase may raise some questions around the long-term persistence of these effects. Note that we also observe a larger gain in formal savings among women in the maternal cash transfer arm, consistent with the hypothesis that the labeled cash transfer is facilitating some broader shifts in women’s economic outcomes.

Figure 1: Effects on financial inclusion



Note: ITT estimates of the T2 and T3 effects (percentage points) with 95% confidence intervals. N=2,167; households in which both spouses were interviewed. Each outcome is regressed on treatment indicators and strata fixed effects, with standard errors clustered at the kebele level. The italic line under each outcome reports the control-group shares for the primary male and primary female (PM/PF), in percent. Solid markers denote estimates that survive the sharpened two-stage false-discovery-rate correction ($q < 0.10$) within the economic outcome family; hollow markers do not. Full estimates, control means, and q -values are in Appendix Table A5.

Figure 2: Effects on labor supply



Note: IIT estimates of the T2 and T3 effects (percentage points) with 95% confidence intervals. N=2,167; households in which both spouses were interviewed. Each outcome is regressed on treatment indicators and stratum fixed effects, with standard errors clustered at the kebele level. The italic line under each outcome reports the control-group shares for PM/PF, in percent. Solid markers denote estimates that survive the sharpened two-stage FDR correction ($q < 0.10$) within the economic outcome family; hollow markers do not. Full estimates are in Appendix Table A5.

3.2 Intrahousehold dynamics and subjective well-being

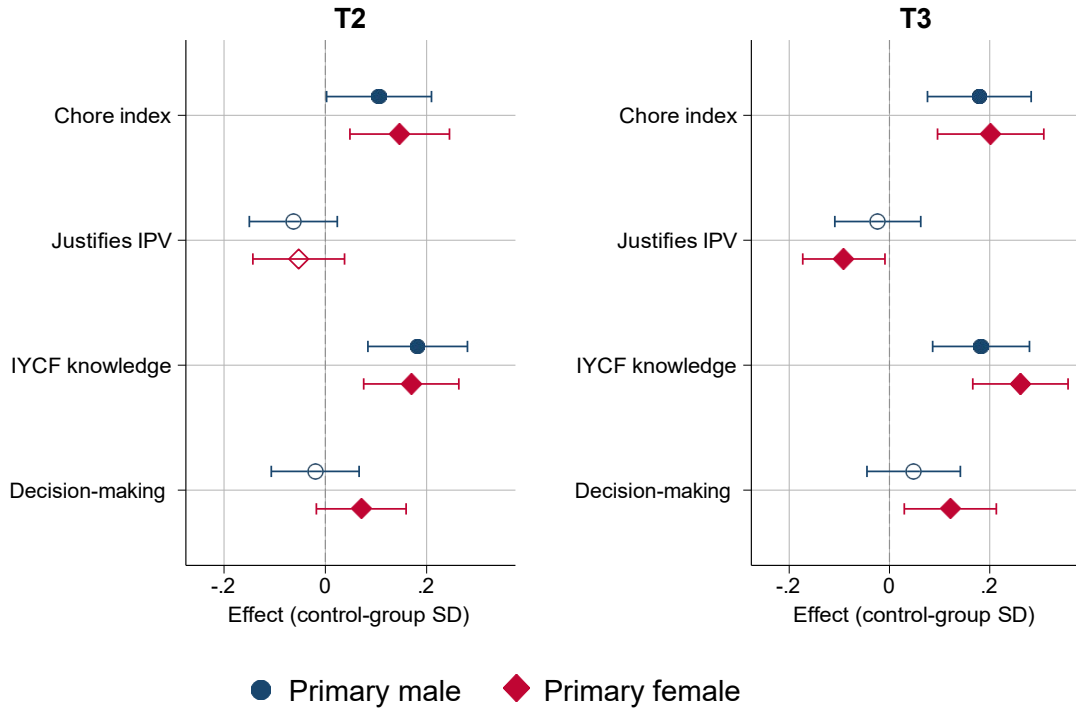
Figure 3 reports effects on engagement in domestic work, IPV attitudes, IYCF knowledge, and decision-making; all outcomes are expressed in control-group standard-deviations to render the units consistent. Two patterns stand out.

First, men’s engagement in cooking, cleaning, and childcare rises in both arms (reported by men and, independently and of similar magnitude, by their wives). The increase in men’s domestic-task involvement, corroborated by women’s independent reports, echoes the findings from the first phase of the program, in which dedicated men’s engagement groups produced sustained gains in men’s household-task participation as reported by both spouses (Alderman et al., 2025). IYCF knowledge also rises for both men and women, though the gain in knowledge is significantly larger for women vis-a-vis men in T3. Analyzing the same data, Hirvonen et al. (2025) documents that the program improved caregivers’ nutrition knowledge; our results show that this gain is not confined to the mothers but extends to fathers as well.

For attitudes around IPV, the effects are more limited. Women’s justification of IPV falls significantly in the maternal cash transfer arm T3 only (with a marginally significant PF–PM difference), while men’s attitudes do not change. While intimate partner violence itself was not measured in this trial, a reduction in economic stress could still facilitate a shift in violent behaviors even in the absence of shifting norms, consistent with the existing literature around cash transfers and intimate partner violence (Buller et al., 2018).

Similarly, for decision-making, women report a significant increase in decision-making authority in T3 only (about 0.22 points, or 12% of the control mean of 1.9) with no corresponding change for men. This decision-making result is more specific than a general gain in “empowerment,” in two respects (details provided in Appendix Table A7). It is concentrated in two of the five decision domains: major household expenses (in T3) and children’s education (in T2 and T3); women’s say over their own income, how income is spent, and childbearing does not change. It is also manifest in an increase in the probability women report input into decisions, but without any shift in the probability that women make decisions entirely on their own, a probability that is unchanged.

Figure 3: Effects on intrahousehold dynamics



Note: ITT estimates of the T2 and T3 effects, in control-group standard-deviation units, with 95% confidence intervals. N=2,167; households in which both spouses were interviewed. Each outcome is standardized by its control-group standard deviation; because this is a linear rescaling, significance is identical to the natural-unit estimates. The decision-making outcome is the input-based index. Solid markers denote estimates that survive the sharpened two-stage false-discovery-rate correction ($q < 0.10$) within the household-dynamics family; hollow markers do not. Full natural-unit estimates, control means, and q -values are in Appendix Table A6.

Finally, the program enhanced women’s subjective well-being in the cash arm: women in T3 are about three percentage points more likely to report being happy, and significantly more so than men (the PF–PM difference is significant), while men’s happiness does not change on average (Appendix Table [A6](#)).

3.3 Heterogeneity by grant eligibility

We can also further probe whether there is any heterogeneity in the primary experimental effects with respect to eligibility for livelihoods grants (restricted to the poorest third of households), as reported in Appendix Tables [A8–A9](#). In general, there is very limited evidence of any significant differences, and in particular, effects on financial inclusion and gender norms and task-sharing are all consistent across grant-eligible and non-eligible households. We do observe that some specific effects differ by grant eligibility; although the pooled labor effects are null, grant-eligible men in T3 reduce wage employment (the grant versus no-grant difference is significant), consistent with a move away from casual labor. Well-being also diverges sharply by grant status in T3: grant-eligible men become happier while non-grant men do not. These patterns suggest that the livelihoods grant, targeted at the poorest, shapes how the cash arm affects men’s economic choices and well-being. This mirrors the findings in [Hirvonen et al. \(2025\)](#): the program’s largest gains in child growth, assets, and consumption are concentrated among the poorest, grant-eligible households in the cash-transfer arm (T3).

4 Conclusion

In this study, we investigate the effects of a multifaceted livelihoods program on gendered patterns of financial inclusion and decision-making in rural Ethiopia. We exploit the exogenous exposure of households to the programs through a cluster randomized controlled trial (cRCT) design and estimate intention-to-treat effects.

Our findings show that the programs increase both men’s and women’s likelihood of saving in formal and informal institutions—with substantially larger gains for women—and help close the gender gap in access to emergency funds. On intrahousehold dynamics, the program in-creased

male engagement in domestic chores and symmetrically increased IYCF knowledge among both men and women. The most clearly gendered shifts are concentrated among women in the maternal-cash-transfer arm: women there report reduced justification of intimate partner violence, greater engagement in consequential household decisions around spending for major expenses and children's education, and higher subjective well-being.

All in all, this evidence sheds light on the effectiveness of multifaceted interventions that target multiple constraints facing the poor, and suggests that traditional norms can be changed through targeted programs that engage men. However, given the multifaceted intervention, we cannot attribute the observed effects to a single intervention element, and further research could beneficially unpack the relative effectiveness of each program component.

References

- Akresh, Richard, Damien de Walque, and Harounan Kazianga**, “Evidence from a Randomized Evaluation of the Household Welfare Impacts of Conditional and Unconditional Cash Transfers Given to Mothers or Fathers,” Policy Research Working Paper 7730, World Bank, Washington, DC 2016.
- Alderman, Harold, Daniel O Gilligan, Melissa Hidrobo, Jessica Leight, Michael Mulford, and Heleene Tabet**, “Men can cook: Effectiveness of a men’s engagement intervention to change attitudes and behaviors in rural Ethiopia,” *World Development*, 2025, 185, 106781.
- Anderson, Michael L**, “Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects,” *Journal of the American Statistical Association*, 2008, 103 (484), 1481–1495.
- Armand, Alex, Orazio Attanasio, Pedro Carneiro, and Valérie Lechene**, “The Effect of Gender-Targeted Conditional Cash Transfers on Household Expenditures: Evidence from a Randomized Experiment,” *The Economic Journal*, 2020, 130 (631), 1875–1897.
- Balboni, Clare, Oriana Bandiera, Robin Burgess, Maitreesh Ghatak, and Anton Heil**, “Why do people stay poor?,” *The Quarterly Journal of Economics*, 2022, 137 (2), 785–844.
- Bandiera, Oriana, Niklas Buehren, Robin Burgess, Markus Goldstein, Selim Gulesci, Imran Rasul, and Munshi Sulaiman**, “Women’s empowerment in action: Evidence from a randomized control trial in Africa,” *American Economic Journal: Applied Economics*, 2020, 12 (1), 210–259.
- , **Robin Burgess, Narayan Das, Selim Gulesci, Imran Rasul, and Munshi Sulaiman**, “Labor markets and poverty in village economies,” *The Quarterly Journal of Economics*, 2017, 132 (2), 811–870.
- Banerjee, Abhijit, Esther Duflo, and Garima Sharma**, “Long-term effects of the targeting the ultra poor program,” *American Economic Review: Insights*, 2021, 3 (4), 471–486.

– , – , **Nathanael Goldberg, Dean Karlan, Robert Osei, William Parienté, Jeremy Shapiro, Bram Thuysbaert, and Christopher Udry**, “A multifaceted pro-gram causes lasting progress for the very poor: Evidence from six countries,” *Science*, 2015, 348 (6236), 1260799.

Baranov, Victoria, Lisa Cameron, Diana Contreras Suarez, and Claire Thibout, “Theoretical underpinnings and meta-analysis of the effects of cash transfers on intimate partner violence in low-and middle-income countries,” *The Journal of Development Studies*, 2021, 57 (1), 1–25.

Barker, Nathan, Dean Karlan, Christopher Udry, and Kelsey Wright, “The fading treatment effects of a multifaceted asset-transfer program in Ethiopia,” *American Economic Review: Insights*, 2024, 6 (2), 277–294.

Bedoya, Guadalupe, Aidan Coville, Johannes Haushofer, Mohammad Isaqzadeh, and Jeremy Shapiro, “No household left behind: Afghanistan targeting the ultra poor impact evaluation,” NBER Working Paper 25981, National Bureau of Economic Research 2019.

Beegle, Katherine, A. Coudouel, and E. Monsalve, *Realizing the Full Potential of Social Safety Nets in Africa*, Washington D.C.: The World Bank, 2018.

Benhassine, Najy, Florencia Devoto, Esther Duflo, Pascaline Dupas, and Victor Pouliquen, “Turning a Shove into a Nudge? A “Labeled Cash Transfer” for Education,” *American Economic Journal: Economic Policy*, 2015, 7 (3), 86–125.

Bossuroy, Thomas, Markus Goldstein, Bassirou Karimou, Dean Karlan, Harounan Kazianga, William Parienté, Patrick Premand, Catherine C. Thomas, Christopher Udry, Julia Vaillant, and Kelsey A. Wright, “Tackling psychosocial and capital constraints to alleviate poverty,” *Nature*, 2022, 605 (7909), 291–297.

Buller, Ana Maria, Amber Peterman, Meghna Ranganathan, Alexandra Bleile, Melissa Hidrobo, and Lori Heise, “A mixed-method review of cash transfers and intimate partner violence in low-and middle-income countries,” *The World Bank Research Observer*, 2018, 33 (2), 218–258.

- Das, Narayan, Rabeya Yasmin, Jinnat Ara, Md. Kamruzzaman, Peter Davis, Julia A. Behrman, Shalini Roy, and Agnes R. Quisumbing**, “How do intrahousehold dynamics change when assets are transferred to women? Evidence from BRAC’s Challenging the Frontiers of Poverty Reduction—Targeting the Ultra Poor program in Bangladesh,” IFPRI Discussion Paper 1317, International Food Policy Research Institute 2013.
- Duflo, Esther**, “Grandmothers and granddaughters: Old-age pensions and intrahousehold allocation in South Africa,” *The World Bank Economic Review*, 2003, 17 (1), 1–25.
- , “Women empowerment and economic development,” *Journal of Economic literature*, 2012, 50 (4), 1051–1079.
- Hidrobo, Melissa, Amber Peterman, and Lori Heise**, “The Effect of Cash, Vouchers, and Food Transfers on Intimate Partner Violence: Evidence from a Randomized Experiment in Northern Ecuador,” *American Economic Journal: Applied Economics*, July 2016, 8 (3), 284–303.
- Hirvonen, Kalle, Daniel O Gilligan, Jessica Leight, Heleene Tabet, and Victor Villa**, “Do ultra-poor graduation programs build women’s resilience to weather shocks? Evidence from rural Ethiopia,” *Journal of Public Economics*, 2026, *Forthcoming*.
- , **Jessica Leight, Daniel O Gilligan, Hiwot Mekonnen Mesfin, Michael Mulford, and Haleluya Tesfaye**, “The impact of a nutrition-sensitive graduation model program on child nutrition: Experimental evidence from Ethiopia,” Technical Report, International Food Policy Research Institute 2025.
- Hoddinott, John and Lawrence Haddad**, “Does female income share influence house-hold expenditures? Evidence from Côte d’Ivoire,” *Oxford Bulletin of Economics and Statistics*, 1995, 57 (1), 77–96.
- , **Guush Berhane, Daniel Orth Gilligan, Kalle Hirvonen, Neha Kumar, Jeremy Lind, Rachel Sabates-Wheeler, and Alemayehu Seyoum Taffesse**, *Securing food, building livelihoods? A 15-year appraisal of Ethiopia’s Productive Safety Net Programme* number 2024/76, WIDER Working Paper, 2024.
- Jayachandran, Seema and Alessandra Voena**, “Women’s Power in the Household,”

Journal of Economic Literature, 2026, 64 (2), 447–497.

Qian, Nancy, “Missing women and the price of tea specific earnings on sex imbalance,” *The Quarterly Journal of Economics*, 2008, 123 (3), 1251–1285.

Roy, Shalini, Melissa Hidrobo, John Hoddinott, and Akhter Ahmed, “Transfers, behavior change communication, and intimate partner violence: Postprogram evidence from rural Bangladesh,” *Review of Economics and Statistics*, 2019, 101 (5), 865–877.

Thomas, Duncan, “Intra-household resource allocation: An inferential approach,” *Journal of Human Resources*, 1990, 25 (4), 635–664.

United Nations, “Goal 5: Achieve gender equality and empower all women and girls,” <https://www.un.org/sustainabledevelopment/gender-equality/> 2025. United Nations Sustainable Development Goals. Accessed 13 July 2026.

A Appendix

Table A1: Baseline balance

Variable	(1) Mean C	(2) Mean T2	(3) Mean T3	(4) T2 vs C	(5) T3 vs C	(6) T2 vs T3
Household size at baseline	5.407 (1.994)	5.375 (1.997)	5.401 (1.997)	-0.075 (0.092)	0.063 (0.094)	-0.093 (0.102)
Age of primary female at baseline	28.924 (5.865)	28.719 (5.839)	28.584 (5.592)	-0.359 (0.261)	-0.395 (0.257)	0.035 (0.257)
PF has 1 to 3 years of education	0.195 (0.396)	0.170 (0.376)	0.168 (0.374)	-0.031* (0.017)	-0.022 (0.017)	-0.000 (0.016)
PF has 4 to 7 years of education	0.167 (0.374)	0.198 (0.398)	0.186 (0.389)	0.027 (0.017)	0.015 (0.016)	0.003 (0.016)
PF has 8 or more years of education	0.082 (0.275)	0.055 (0.229)	0.075 (0.263)	-0.015* (0.009)	-0.009 (0.009)	-0.019** (0.009)
PM has any education	0.609 (0.488)	0.613 (0.487)	0.600 (0.490)	0.011 (0.023)	0.004 (0.026)	-0.003 (0.024)
Daily per capita consumption (2021 PPP USD)	2.591 (1.284)	2.568 (1.352)	2.610 (1.300)	0.030 (0.060)	0.026 (0.066)	-0.041 (0.064)
Observations	1,033	992	990			

Note: N = 3,015 households interviewed at baseline. Columns 1–3 report the control-, T2-, and T3-arm means, with standard deviations in parentheses. Columns 4–6 report pairwise mean differences between arms, estimated from regressions that include stratum fixed effects, with standard errors clustered at the kebele level in parentheses. All variables are measured at baseline; consumption is daily per capita expenditure expressed in 2021 purchasing-power-parity (PPP) US dollars. Asterisks *, **, and *** denote statistical significance of the difference at the 10%, 5%, and 1% levels, respectively.

Table A2: Correlates of an incomplete household at endline (one spouse not inter-viewed)

VARIABLES	(1) Incomplete HH	(2) Incomplete HH	(3) Incomplete HH
Treatment status = 2, T2	-0.0177 (0.0187)	-0.0166 (0.0185)	-0.1197 (0.1251)
Treatment status = 3, T3	0.0014 (0.0184)	0.0054 (0.0184)	0.0382 (0.1400)
Household size at baseline		-0.0313*** (0.0065)	-0.0288*** (0.0098)
Age of primary female at baseline		0.0058*** (0.0022)	0.0051 (0.0035)
PF has 1 to 3 years of education		-0.0217 (0.0196)	-0.0522* (0.0295)
PF has 4 to 7 years of education		0.0422* (0.0221)	0.0085 (0.0385)
PF has 8 or more years of education		0.0935*** (0.0359)	0.0828 (0.0644)
Consumption per capita per day (PPP USD)		-0.0175 (0.0107)	-0.0205 (0.0161)
T2 × Household size			-0.0063 (0.0141)
T2 × PF age			0.0037 (0.0048)
T2 × PF educ 1-3			0.0483 (0.0477)
T2 × PF educ 4-7			0.0671 (0.0547)
T2 × PF educ 8+			0.0231 (0.0892)
T2 × Consumption			0.0050 (0.0263)
T3 × Household size			-0.0021 (0.0136)
T3 × PF age			-0.0015 (0.0053)
T3 × PF educ 1-3			0.0451 (0.0458)
T3 × PF educ 4-7			0.0323 (0.0512)
T3 × PF educ 8+			0.0030 (0.0840)
T3 × Consumption			0.0040 (0.0237)
Strata FE	YES	YES	YES
Observations	2,902	2,902	2,902

Note: Linear probability models for whether a household is incomplete (one spouse not interviewed at endline), among endline-interviewed households. All models include stratum fixed effects; standard errors clustered at the kebele level. */**/** denote 10/5/1% significance.

Table A3: Correlates of an incomplete or attrited household (incl. baseline households not re-interviewed)

VARIABLES	(1) Incomplete/attrited	(2) Incomplete/attrited	(3) Incomplete/attrited
Treatment status = 2, T2	0.0154 (0.0263)	0.0156 (0.0262)	-0.1107 (0.1249)
Treatment status = 3, T3	0.0019 (0.0236)	0.0048 (0.0236)	0.0321 (0.1394)
Household size at baseline		-0.0313*** (0.0065)	-0.0264*** (0.0099)
Age of primary female at baseline		0.0052** (0.0022)	0.0040 (0.0036)
PF has 1 to 3 years of education		-0.0282 (0.0205)	-0.0571* (0.0312)
PF has 4 to 7 years of education		0.0349 (0.0218)	0.0061 (0.0376)
PF has 8 or more years of education		0.0830** (0.0371)	0.0776 (0.0654)
Consumption per capita per day (PPP USD)		-0.0150 (0.0109)	-0.0229 (0.0163)
T2 × Household size			-0.0114 (0.0140)
T2 × PF age			0.0044 (0.0047)
T2 × PF educ 1-3			0.0434 (0.0476)
T2 × PF educ 4-7			0.0406 (0.0535)
T2 × PF educ 8+			-0.0195 (0.0931)
T2 × Consumption			0.0271 (0.0288)
T3 × Household size			-0.0046 (0.0137)
T3 × PF age			-0.0005 (0.0053)
T3 × PF educ 1-3			0.0471 (0.0470)
T3 × PF educ 4-7			0.0456 (0.0505)
T3 × PF educ 8+			0.0195 (0.0860)
T3 × Consumption			-0.0040 (0.0231)
Strata FE	YES	YES	YES
Observations	3,015	3,015	3,015

Table A4: Outcome variable definitions

Outcome variable	Definition
Saved in formal (semi-formal) institutions	This indicator is generated such that it takes the value of one if the response to the following question is yes by the PM and PF; zero otherwise. <i>“In the past 12 months, have you, personally, saved or set aside any money by using an account at a bank, a credit union, savings and credit co-operative (SACCOs), or another type of formal or semi-formal financial institution?”</i>
Saved in informal institution	This indicator is generated such that it takes the value of one if the response to the following question is yes by the PM and PF; zero otherwise. <i>“In the past 12 months, have you, personally, saved or set aside any money by using an informal savings club like Iqub, or a person outside the family?”</i>
Can secure emergency fund	To capture access to emergency funds, we constructed the indicator using the response to the following question. <i>“Imagine that you have an emergency, and you need to pay 3500 birrs. How possible is it that you could come up with 3500 birrs within the next month?”</i> with response options being <i>“1 = Very possible, 2 = Somewhat possible, 3 = Not very possible, 4 = Not at all possible.”</i> The indicator takes the value one if the responses are very possible and somewhat possible and zero otherwise.
Participated in non-farm business	This indicator is generated such that it takes the value of one if the response to the following question is yes by the PM and PF; zero otherwise. <i>“In the last 7 days, did you run a non-farm business of any size for yourself or the household, even if for one hour?”</i>
Chore index	The chore index sums the responses to three questions on how the respondent and spouse divide (1) preparing food, (2) cleaning the house and washing clothes, and (3) childcare. The response options are <i>“1 = I do everything, 2 = Usually me, 3 = Shared equally or done together, 4 = Usually Partner, 5 = Partner does everything.”</i> We orient the index so that higher values indicate greater male engagement in chores. The index ranges from 3 to 15, where 3 means the primary female performs all three tasks (minimal male engagement) and 15 means the primary male performs all three.
Justifies IPV	The justification of IPV index is constructed from two categorical variables that show agreement to two statements: husband is justified to hit/beat his wife if she burns food and if she neglects the children. The index has values ranging from 0 to 2 where zero means not justifying IPV and two means justifies IPV across both burning food and neglecting children.

Outcome variable	Definition
IYCF knowledge score	The knowledge of Infant and Young Child Feeding (IYCF) practices is measured by the number of questions the respondent answered correctly on a knowledge module, with a maximum of 34 points.
Decision-making score (input)	The decision-making score measures the respondent's input across five decision domains: own earned income, how household income is spent, major household expenses, childbearing, and children's education. The question asks <i>"How much input do you have in making decisions about [Activity]?"</i> with response options <i>"1 = No input or input into few decisions; 2 = Input into some decisions; 3 = Input into most or all decisions."</i> For each domain we create an indicator equal to one if the response is 3 (input into most or all decisions) and zero otherwise, and sum across the five domains. The score ranges from 0 (no input in any domain) to 5 (input in all five). This is the main decision-making measure.
Decision-making (autonomy)	An alternative measure using the parallel question <i>"To what extent do you feel you can make your own personal decisions regarding [Activity]?"</i> (1 = Not at all; 2 = Small extent; 3 = Medium extent; 4 = High extent). We create an indicator equal to one if the response is 4 (high extent) for each of the five domains and sum, giving a score from 0 to 5. Reported as a robustness check.
Worked in agriculture	Indicator equal to one if the respondent reports having worked on household agricultural activities (farming, livestock, or fishing) in the last 7 days; zero otherwise.
Wage employment	Indicator equal to one if the respondent reports having worked as an employee for a wage, salary, or payment in kind (including paid apprenticeship, domestic work, or paid farm work) in the last 7 days; zero otherwise.
Happy	Indicator equal to one if the respondent reports being <i>very happy</i> or <i>rather happy</i> (versus <i>not very happy</i> or <i>not at all happy</i>) in response to <i>"Taking all things together, would you say you are..."</i>

Table A5: Effects on financial inclusion and labor supply: full estimates

Panel A						
	Saved in formal institutions			Saved in informal institutions		
	PM	PF	Diff	PM	PF	Diff
T2	0.076*** (0.023) [0.005]	0.186*** (0.024) [0.001]	0.110*** (0.029)	0.071*** (0.015) [0.001]	0.133*** (0.018) [0.001]	0.062*** (0.019)
T3	0.048** (0.023) [0.094]	0.294*** (0.020) [0.001]	0.246*** (0.025)	0.062*** (0.014) [0.001]	0.139*** (0.018) [0.001]	0.077*** (0.019)
p-value: T2 = T3	0.268	0.000		0.602	0.751	
Control mean	0.26	0.09		0.06	0.08	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Panel B						
	Possible to secure emergency fund			Worked in non-farm business		
	PM	PF	Diff	PM	PF	Diff
T2	0.042* (0.025) [0.142]	0.077*** (0.024) [0.003]	0.035 (0.024)	0.003 (0.008) [0.591]	0.013 (0.013) [0.244]	0.010 (0.014)
T3	0.027 (0.025) [0.240]	0.061*** (0.022) [0.007]	0.035 (0.022)	0.017* (0.009) [0.103]	0.040*** (0.014) [0.005]	0.023 (0.015)
p-value: T2 = T3	0.548	0.514		0.134	0.053	
Control mean	0.33	0.23		0.02	0.08	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Panel C						
	Worked in agriculture			Wage employment		
	PM	PF	Diff	PM	PF	Diff
T2	0.010 (0.021) [0.552]	0.014 (0.024) [0.347]	0.004 (0.020)	-0.020 (0.017) [0.236]	0.001 (0.006) [0.579]	0.020 (0.018)
T3	0.017 (0.020) [0.301]	0.025 (0.023) [0.214]	0.008 (0.019)	-0.021 (0.018) [0.236]	0.004 (0.007) [0.347]	0.025 (0.019)
p-value: T2 = T3	0.705	0.584		0.923	0.661	
Control mean	0.49	0.38		0.14	0.01	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Note: ITT estimates on the sample of households in which both spouses were interviewed (N=2,167). Each outcome is regressed on treatment indicators and stratum fixed effects, with standard errors clustered at the kebele level (in parentheses). The Diff column is the PF–PM difference, estimated jointly by seemingly unrelated estimation. Sharpened two-stage FDR q -values in brackets. */**/** denote 10/5/1% significance.

Table A6: Effects on intra-household dynamics: full estimates

Panel A						
	Chore index			Justifies IPV		
	PM	PF	Diff	PM	PF	Diff
T2	0.215** (0.106) [0.085]	0.284*** (0.097) [0.007]	0.070 (0.100)	-0.039 (0.027) [0.236]	-0.041 (0.036) [0.115]	-0.003 (0.038)
T3	0.363*** (0.106) [0.003]	0.391*** (0.105) [0.002]	0.027 (0.107)	-0.014 (0.027) [0.496]	-0.072** (0.033) [0.027]	-0.057* (0.035)
p-value: T2 = T3	0.133	0.304		0.363	0.356	
Control mean	5.10	4.39		0.29	0.48	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	
Panel B						
	IYCF knowledge			Decision-making score		
	PM	PF	Diff	PM	PF	Diff
T2	0.778*** (0.219) [0.003]	0.763*** (0.216) [0.002]	-0.014 (0.183)	-0.035 (0.081) [0.499]	0.128 (0.082) [0.063]	0.163* (0.096)
T3	0.795*** (0.214) [0.003]	1.175*** (0.218) [0.001]	0.380** (0.185)	0.087 (0.087) [0.435]	0.220** (0.085) [0.013]	0.133 (0.109)
p-value: T2 = T3	0.931	0.059		0.167	0.262	
Control mean	12.84	13.59		3.11	1.88	
Observations	1,726	1,726	1,726	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	
Panel C						
	Self-reported happiness					
	PM	PF	Diff			
T2	0.017 (0.019) [0.435]	0.023 (0.020) [0.115]	0.006 (0.019)			
T3	-0.016 (0.020) [0.456]	0.033* (0.019) [0.054]	0.049*** (0.019)			
p-value: T2 = T3	0.074	0.619				
Control mean	0.77	0.77				
Observations	2,167	2,167	2,167			
Strata FE	YES	YES				

Note: ITT estimates on the both-interviewed sample. Outcomes in natural units: chore index (3–15, higher = more male engagement), IPV justification (0–2), IYCF knowledge (0–34), decision-making input index (0–5), and an indicator for being very/rather happy. Standard errors clustered at the kebele level in parentheses; sharpened two-stage FDR q -values in brackets; the Diff column is the PF–PM difference. */**/** denote 10/5/1% significance.

Table A7: Decision-making effects by activity: input versus autonomy measures

Decision domain	Primary male		Primary female	
	T2	T3	T2	T3
<i>Panel A. Input into most/all decisions</i>				
Own earned income	0.010 (0.021)	0.039* (0.020)	0.011 (0.023)	0.034 (0.023)
How household income is spent	-0.018 (0.022)	-0.006 (0.021)	0.015 (0.021)	0.032 (0.022)
Major household expenses	-0.016 (0.022)	0.014 (0.023)	0.030 (0.020)	0.065*** (0.021)
Childbearing	-0.019 (0.022)	0.023 (0.025)	0.020 (0.025)	0.027 (0.022)
Children's education	0.007 (0.022)	0.018 (0.022)	0.052** (0.023)	0.061*** (0.022)
<i>Panel B. Can make own decision (high extent)</i>				
Own earned income	-0.028 (0.021)	0.017 (0.021)	-0.001 (0.018)	-0.011 (0.018)
How household income is spent	-0.004 (0.023)	-0.009 (0.021)	-0.038** (0.018)	0.004 (0.019)
Major household expenses	-0.005 (0.021)	-0.016 (0.020)	-0.015 (0.018)	0.004 (0.018)
Childbearing	-0.034 (0.023)	-0.001 (0.023)	-0.007 (0.023)	0.009 (0.023)
Children's education	0.000 (0.029)	0.003 (0.026)	-0.003 (0.024)	0.041* (0.022)

Note: ITT estimates for each decision domain, on the both-interviewed sample. Panel A uses an indicator for having input into most or all decisions in the domain; Panel B uses an indicator for being able to make the decision on one's own (high extent). Each cell is a separate regression on treatment indicators and stratum fixed effects, with standard errors clustered at the kebele level. */**/** denote 10/5/1% significance.

Table A8: Heterogeneity by grant eligibility: financial inclusion and labor supply

Panel A						
	Saved in formal institutions			Saved in informal institutions		
	PM	PF	Diff	PM	PF	Diff
T2 – No grant	0.054* (0.028)	0.174*** (0.028)	0.120*** (0.032)	0.063*** (0.018)	0.134*** (0.020)	0.071*** (0.022)
T2 – Grant	0.138*** (0.041)	0.219*** (0.040)	0.081* (0.048)	0.090*** (0.028)	0.136*** (0.037)	0.047 (0.034)
T3 – No grant	0.054* (0.028)	0.299*** (0.024)	0.245*** (0.028)	0.060*** (0.017)	0.152*** (0.020)	0.093*** (0.022)
T3 – Grant	0.037 (0.043)	0.283*** (0.040)	0.247*** (0.046)	0.059** (0.025)	0.112*** (0.032)	0.053 (0.033)
p-value: T2 = T3	0.271	0.000		0.549	0.741	
p-value: T2 grant = no grant	0.076	0.344		0.407	0.958	
p-value: T3 grant = no grant	0.742	0.750		0.986	0.278	
Control mean	0.26	0.09		0.06	0.08	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	
Panel B						
	Possible to secure emergency fund			Worked in non-farm business		
	PM	PF	Diff	PM	PF	Diff
T2 – No grant	0.038 (0.029)	0.067** (0.028)	0.028 (0.032)	-0.004 (0.010)	0.018 (0.018)	0.022 (0.018)
T2 – Grant	0.053 (0.042)	0.101** (0.041)	0.047 (0.038)	0.023 (0.016)	-0.003 (0.024)	-0.026 (0.025)
T3 – No grant	0.019 (0.027)	0.063** (0.025)	0.043 (0.027)	0.014 (0.011)	0.040** (0.017)	0.026 (0.017)
T3 – Grant	0.043 (0.046)	0.056 (0.041)	0.013 (0.038)	0.022 (0.015)	0.037 (0.024)	0.015 (0.027)
p-value: T2 = T3	0.536	0.541		0.202	0.069	
p-value: T2 grant = no grant	0.757	0.478		0.161	0.501	
p-value: T3 grant = no grant	0.635	0.894		0.705	0.899	
Control mean	0.33	0.23		0.02	0.08	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	
Panel C						
	Worked in agriculture			Wage employment		
	PM	PF	Diff	PM	PF	Diff
T2 – No grant	-0.001 (0.027)	-0.004 (0.027)	-0.003 (0.022)	-0.020 (0.018)	-0.002 (0.007)	0.018 (0.018)
T2 – Grant	0.034 (0.044)	0.043 (0.049)	0.009 (0.037)	-0.026 (0.040)	0.009 (0.013)	0.035 (0.039)
T3 – No grant	0.018 (0.025)	0.016 (0.027)	-0.002 (0.021)	0.004 (0.018)	0.009 (0.008)	0.005 (0.019)
T3 – Grant	0.015 (0.042)	0.047 (0.043)	0.032 (0.034)	-0.085** (0.039)	-0.013 (0.009)	0.072* (0.039)
p-value: T2 = T3	0.696	0.473		0.954	0.772	
p-value: T2 grant = no grant	0.518	0.385		0.886	0.466	
p-value: T3 grant = no grant	0.961	0.531		0.027	0.062	
Control mean	0.49	0.38		0.14	0.01	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Note: Interaction model with treatment $\times$ grant-eligibility terms and stratum $\times$ eligibility fixed effects, on the both-interviewed sample. Standard errors clustered at the kebele level. The reported p-values test equality of the grant and no-grant effects within each arm. */**/** denote 10/5/1% significance.

Table A9: Heterogeneity by grant eligibility: intra-household dynamics

Panel A						
	Chore index			Justifies IPV		
	PM	PF	Diff	PM	PF	Diff
T2 – No grant	0.177 (0.127)	0.276** (0.116)	0.099 (0.125)	-0.029 (0.036)	-0.043 (0.042)	-0.014 (0.042)
T2 – Grant	0.315* (0.174)	0.272 (0.171)	-0.043 (0.140)	-0.068 (0.054)	-0.041 (0.080)	0.027 (0.075)
T3 – No grant	0.322** (0.124)	0.356*** (0.119)	0.034 (0.122)	-0.024 (0.033)	-0.092** (0.040)	-0.067* (0.041)
T3 – Grant	0.509*** (0.170)	0.468*** (0.176)	-0.041 (0.165)	0.007 (0.057)	-0.044 (0.074)	-0.051 (0.071)
p-value: T2 = T3	0.113	0.287		0.384	0.277	
p-value: T2 grant = no grant	0.505	0.983		0.578	0.983	
p-value: T3 grant = no grant	0.337	0.567		0.651	0.590	
Control mean	5.10	4.39		0.29	0.48	
Observations	2,167	2,167	2,167	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Panel B						
	IYCF knowledge			Decision-making score		
	PM	PF	Diff	PM	PF	Diff
T2 – No grant	0.729*** (0.265)	0.603** (0.276)	-0.126 (0.222)	-0.033 (0.101)	0.074 (0.094)	0.107 (0.117)
T2 – Grant	0.942** (0.405)	1.323*** (0.394)	0.381 (0.359)	-0.029 (0.168)	0.274* (0.159)	0.303* (0.183)
T3 – No grant	0.501** (0.227)	0.860*** (0.247)	0.359 (0.219)	0.101 (0.104)	0.255** (0.100)	0.154 (0.124)
T3 – Grant	1.636*** (0.438)	2.169*** (0.413)	0.533 (0.357)	0.065 (0.184)	0.150 (0.154)	0.085 (0.205)
p-value: T2 = T3	0.906	0.061		0.171	0.247	
p-value: T2 grant = no grant	0.662	0.159		0.984	0.266	
p-value: T3 grant = no grant	0.018	0.007		0.867	0.553	
Control mean	12.84	13.59		3.11	1.88	
Observations	1,726	1,726	1,726	2,167	2,167	2,167
Strata FE	YES	YES		YES	YES	

Panel C			
	Self-reported happiness		
	PM	PF	Diff
T2 – No grant	0.012 (0.025)	0.016 (0.026)	0.004 (0.023)
T2 – Grant	0.050 (0.042)	0.058 (0.044)	0.008 (0.038)
T3 – No grant	-0.052** (0.025)	0.022 (0.023)	0.075*** (0.022)
T3 – Grant	0.093** (0.039)	0.080** (0.039)	-0.013 (0.035)
p-value: T2 = T3	0.061	0.591	
p-value: T2 grant = no grant	0.483	0.439	
p-value: T3 grant = no grant	0.003	0.225	
Control mean	0.77	0.77	
Observations	2,167	2,167	2,167
Strata FE	YES	YES	

ALL IFPRI DISCUSSION PAPERS

All discussion papers are available [here](#)

They can be downloaded free of charge

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

www.ifpri.org

IFPRI HEADQUARTERS

1201 Eye Street, NW
Washington, DC 20005 USA
Tel.: +1-202-862-5600
Fax: +1-202-862-5606
Email: ifpri@cgiar.org