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Global Development

Women's Agency and Women's Employment:  
How Women's Sense of Agency Affects Their  
Labor Supply

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January, 2021

Working Paper No. 1083

# Women’s Agency and Women’s Employment: How Women’s Sense of Agency Affects Their Labor Supply \*

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January 30, 2021

## Abstract

Women in poor countries exercise little agency. I investigate whether agency is constrained by women’s beliefs in their general ability to reach goals, beliefs referred to as generalized self-efficacy (GSE). I study agency in decisions about women’s labor supply in India, a setting where women’s employment is low, women have little say over their labor supply, and many women are interested in working. My experiment offered women a psychosocial intervention to raise GSE. I cross-randomized a video promotion of women’s work for women’s family members. The GSE intervention produced a persistent increase in GSE. The promotion made family members see more financial value in women working, but reduced women’s interest in working. Effects on women’s employment in the short-run are consistent with GSE treatment leading women to advocate in their households for their preferred outcome; GSE treatment had a positive effect when the promotion was not given but a negative effect when it was. There are no effects on long-run employment, perhaps because household chores made women’s work unsustainable. I do find effects of GSE treatment on another economic outcome - saving - did persist. Taken together, my results suggest a key constraint to women’s agency is women’s own sense of agency.

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\*An earlier version of this paper was circulated under the title “Vicious and Virtuous Cycles: Self-Efficacy and Employment of Women in India.” I am immensely grateful to my advisors, Esther Duflo, Abhijit Banerjee, and Frank Schilbach, for invaluable guidance and support throughout this project. This paper also benefitted from feedback from Arun Chandrasekhar, Jane Choi, Mert Demirer, Pascaline Dupas, Eric Edmonds, Marcel Fafchamps, Chishio Furukawa, Colin Gray, Ryan Hill, Allan Hsiao, Gabriel Kreindler, Matt Lowe, Ben Olken, Tamar Oostrom, Christina Patterson, Gautam Rao, Otis Reid, Cory Smith, Carolyn Stein, Pierre-Luc Vautrey, Heidi Williams, and numerous seminar and conference participants. I thank CorStone, Kate Sachs Leventhal, and John Reich for indispensable inputs on elements of this project related to psychology. I am grateful for my partnership with Obeetee, without which this project would not have been possible. Erin Grela, Baba Prasad Nath, Bijoyetri Samaddar, Sankalp Sharma, Krishna Prasad Srinivasan, and Ayushi Srivastava provided superb research assistance. Project funding was generously provided by The Weiss Fund for Research in Development Economics, Wellspring Philanthropic Fund, J-PAL Project Development Funds, and The George and Obie Shultz Fund. This project has human subjects approval from MIT COUHES and IFMR, and is registered in the AEA RCT Registry (AEARCTR-0002399).

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# 1 Introduction

A striking feature of the lives of women in poor countries is their lack of agency. Formally, agency is defined as “the ability to define one’s goals and act upon them” (Kabeer, 1999). Many women across the developing world are constrained in their ability to influence outcomes that matter to them, like education, marriage, fertility, or employment. Relative to both men in poor countries and to women in wealthy countries, women in poor countries report little freedom of choice and control over their lives, and little influence over household decisions (Jayachandran, 2015). Increasing women’s agency is widely seen as a key step towards achieving gender equality (World Bank, 2012).

A key prerequisite for acting on one’s goals, and thus a key component of agency, is that one believes the actions would have the desired effects. The life experiences of women in poor countries - the low education, regressive gender attitudes, and other inequities these women face (Duflo, 2012; Jayachandran, 2015) - may conspire to give them a sense that they are not agents capable of taking actions that would allow them to reach desired outcomes. There are of course real barriers women in these settings face in pursuing their goals, but there may be some actions women could take which they do not because they lack this “sense of agency.” A large literature in economics has documented the effects of expanding women’s actual abilities to reach goals, by shifting bargaining power or developing skills for example, but less is known about policies that might expand women’s sense of agency and to what effect.

I operationalize sense of agency using the generalized self-efficacy (GSE) concept from psychology. Self-efficacy refers to one’s beliefs in one’s ability to execute the actions required to reach a particular goal (Bandura, 1977), and GSE describes one’s sense of self-efficacy across goals in life (Eden, 1988; Scholz et al., 2002; Sherer et al., 1982).<sup>1</sup> Much work in psychology establishes the importance of self-efficacy in motivating effort to reach goals (see Bandura (1982, 1997) for summaries). Consistent with constraints on women’s sense of agency, psychologists have found that women’s GSE is lower than men’s in some countries (Scholz et al., 2002).

I study low GSE as a constraint to women’s agency in the context of women’s employment in India. India’s female labor force participation (LFP) rate is notoriously low; it is 20%, versus 47% worldwide and 46% across low- and middle-income countries (World Bank, 2020*a*), and a stark contrast to India’s male LFP rate of 76% (World Bank, 2020*b*). Women’s agency is also especially low in India; India’s male-female gap in freedom of choice is one of the lowest in the world, and even conditional on GDP per capita, the country is an outlier (Jayachandran, 2015). Many women in India who are not working report interest in doing so (Fletcher et al., 2017), and a lack of agency might explain why they do not. Indeed, women in India report their husbands have a great deal of control over their labor supply (Field et al., 2020), and women’s husbands report less support for women’s employment than women do (Bernhardt et al., 2018; Field et al., 2020; Lowe and

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<sup>1</sup>Self-efficacy and GSE are closely related to self-confidence, a key topic in behavioral economics (DellaVigna, 2009). Self-confidence is a broader concept than the other two; when self-confidence is about one’s own ability to reach a particular goal, it is synonymous with self-efficacy, but self-confidence is often used in relation to other beliefs about the self that are not necessarily linked to a particular goal (e.g. beliefs about IQ, as in Möbius et al. (2014)).

McKelway, 2019). Low agency in labor supply decisions may reflect women’s lack of bargaining power (Field et al., 2020), but it may also reflect women not taking actions available to them in household decision processes because they lack a sense of agency.

I conducted a field experiment in rural Uttar Pradesh, one of India’s poorest states and one that adheres strongly to gender norms of traditional Indian culture. I partnered with one of India’s largest carpet manufacturers. The firm, Obeetee, offers paid training followed by employment in carpet weaving to women in this setting. My sample consists of 1,022 women who would be eligible for the program when it opened in their villages several months later. At baseline, just 14.3% of women assigned to the control group were working for income off their own households’ farms.

The key experimental intervention was a psychosocial intervention to increase GSE. The intervention was designed in consultation with CorStone, an organization that provides evidence-based programs in psychology to similar populations. It entailed nine meetings with groups of women held over four weeks. The meetings were facilitated by trained surveyors. Employing instruction, group discussion, and other activities, the meetings had women recognize how their abilities could enable them to reach their goals. Early meetings asked women to recognize their abilities, the middle of the curriculum developed an understanding of goals, later meetings helped women see paths to reaching their goals, and the end of the curriculum tied these elements together by having women recognize abilities they possess that would help them reach their goals. The curriculum considered many areas of women’s lives and had very little focus on employment, which minimized the scope for demand effects. While the intervention targeted GSE, the nature of the GSE concept and of psychosocial interventions means it likely shifted related aspects of psychology and soft skills as well. To control for effects of meeting attendance unrelated to GSE, I used an active control group; women assigned GSE control also attended group meetings, but in these meetings, women completed group surveys about aspects of daily life in their villages.

It was not clear *ex ante* whether GSE would be enough to raise women’s employment if women faced opposition to their work from their families; I therefore cross randomized whether women’s husbands and parents-in-law were given a promotion for the firm’s program. Following the GSE intervention, I gave all women, regardless of treatment status, details about the job as well as a promotion for it. Over the same week, I gave all family members job details but only those assigned promotion treatment were also given the promotion. The promotion featured a six-minute video with testimonials from individuals affiliated with the program interspersed with shots of the workplace. The testimonials highlighted merits of the program, with a focus on points that would make women’s families more interested in women’s participation.<sup>2</sup>

Sign-up for the program opened days after the job details and promotion were delivered (two weeks after the GSE intervention ended). The program’s training phase began several weeks later.

I find the GSE intervention produced a persistent increase in GSE. I measure GSE using the widely-used Schwarzer and Jerusalem (1995) scale with slight modification for my setting. On a survey done one week after the GSE intervention ended, I find GSE treatment increased GSE by

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<sup>2</sup>E.g. it stressed that the workplace was all female and that participants had time to manage household chores.

0.155 standard deviations. Remarkably, an effect of similar magnitude (0.122 standard deviations) was present one year after the intervention ended. The effects of GSE treatment on GSE did not differ by promotion treatment status, and the promotion on its own did not affect GSE. Further, GSE treatment made women more likely to choose in an incentivized task to take an action in which success was a function of ability with the goal of earning higher compensation.

Next, I consider family members' and women's interest in signing up for the firm's program. Reports of interest were taken immediately after job details and, if applicable, the promotion were delivered. Family members of women assigned neither treatment reported interest 54.9% of the time. GSE treatment increased family interest by 5.2 percentage points (or by 9.5%). I find no effect of the promotion on this outcome, though I do find the intervention made family members see more financial value in the program on a survey done in the following week. To explore effects on women's interest, I restrict the sample to women who happened to be asked about their interest after job details and any promotion were delivered to their families. 79.2% of the women assigned neither treatment in this subsample were interested. GSE treatment did not affect women's interest. Surprisingly, giving families the promotion reduced women's interest by 15.1 percentage points (or by 19.1%). Promotion treatment erased the gap in interest between women and family members, significantly reduced the fraction of households in which the woman was interested but her family was not, and significantly increased the fraction in which the family was interested but the woman was not. Perhaps by making family members more enthusiastic about the financial value of the program, the promotion made women expect to have less control over their earnings if they participated.

I then turn to effects on employment in the short run. I consider effects on participation in the firm's program, measured using official data, and on doing any work for income off own farm, measured on surveys done six weeks after the experiment began (two weeks after the GSE intervention ended and one week after the promotion) and at five months. There are no overall effects of either treatment on these outcomes, but this masks important interactions between the two. 22.1% of women assigned neither treatment signed up for the firm's program and 8.5% ever attended in the first two months of training.<sup>3</sup> The GSE intervention given alone increased sign-up by 4.8 percentage points and attendance by 3.5 percentage points (or by 21.7% and 41.2%), though neither effect is significant at conventional levels ( $p$ -values = 0.169 and 0.152). GSE treatment alone produced significant increases in general employment. At six weeks, it increased the number of women who were working off their own farms by 6.1 percentage points, a 46.6% increase from the level of 13.1% in the control group. The effect at five months is 8.7 percentage points off a base of 18.7% (a 46.5% increase).<sup>4</sup> Promotion treatment alone produced significant increases on all four short-run employment outcomes; it increased sign-up and attendance by 9.6 and 5.5 percentage points (or by 43.4% and 64.7%), and general employment at the two endlines by 6.1

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<sup>3</sup>Attendance is lower than sign-up partly because of dropout but largely because more women signed up than there were slots for. Oversubscribed slots were allocated randomly amongst those who signed up for them.

<sup>4</sup>Levels of employment in the control group are higher at five months than at six weeks because the firm's program began between the two endlines.

and 7.6 percentage points (or by 46.6% and 40.6%). However, program participation and general employment under both interventions were no different than under neither. For three of the four outcomes, I can reject at the 85 percent level or higher that the effect of both interventions equals the effect of the promotion alone. Thus when the promotion was not given, GSE treatment tended to raise employment, but when it was, it tended to lower employment.

Reports on how sign-up decisions were made shed light on the channels driving these effects. GSE treatment alone led women's family members to see more financial value in the program and, according to both family members and women, reduced discord within the household about the sign-up decision; when the promotion was not given - when women's interest in signing up was relatively high - GSE treatment seems to have led women to successfully advocate for their labor supply in their households. I find no effects of GSE treatment only on women's perceptions of financial value or of their weaving ability, which suggests the intervention led women to convey information they already had. Promotion treatment alone increased both family members' and women's assessments of the financial value and also reduced reports of discord, perhaps reflecting women with low GSE succumbing to their families' opinions. Assignment to both treatments (rather than neither) increased family members' perceived value, had no effect on women's perceived value, and had no effect on discord, resulting in more discord than under either treatment alone. Perhaps GSE treatment gave women the confidence to veto sign-up when they were not interested in it.

I find no effects on employment in the long run. On a survey done 13 months after the experiment began, 19.0% of women assigned neither treatment were working off their own households' farms, and this level was no different in any of the treatment groups. The survey data also reveal no effects on participation in the firm's program at this long-run endline. Why did the short-run effects not persist? Household chores are by far the most common reason women dropped out of the firm's program. Questions on the five-month endline asked family members and women whether they thought that a woman's main role should be to tend to household chores; in the control group, 85.6% of family members and 83.2% of women agreed, and there are no treatment effects on these outcomes. Raising women's sense of agency did not change their self-identification as homemakers, and raising family members' support for employment did not loosen the norm that women's main role should be homemaking. Household chores are particularly onerous in this setting: households have many members and few modern home appliances. It may be that women can do both chores and work for several months, but this becomes unsustainable over longer periods.

The effect of GSE treatment on GSE did, however, persist. Given this, and given the intervention targeted women's lives in general and not employment in particular, were there persistent effects on other economic outcomes? I consider effects on saving behavior. In both the short and the long run, GSE treatment made women more likely to report household members had contributed to savings and more likely to have savings goals. Effects on the contributed to savings outcome are, for the most part, not present on family members' reports. It could be that GSE treatment made women more involved in household decisions about saving but did not make households more likely to save, or that GSE treatment made women more likely to save independently what resources were

in their control.

My results suggest agency of women in poor countries may be constrained by women’s own sense of agency, an important contribution to literature on women’s agency. My paper also contributes to four additional bodies of research. First is literature on women’s empowerment, which agency is a key component of (Kabeer, 1999). My paper is closest to studies in this literature that evaluate economic effects of training programs to boost female empowerment (Bandiera et al., 2020*b,a*; Buchmann et al., 2018; Edmonds et al., 2020). These programs tend to be multifaceted, teaching multiple hard and/or soft skills, providing knowledge on topics pertinent to females, developing relationships between participants, and/or offering access to all female “safe spaces.” My intervention is more narrowly focused at raising women’s sense of agency; the curriculum targets GSE in particular and the active control group holds fixed network and safe space effects.

My intervention has much in common with psychological counseling programs evaluated elsewhere; my paper also contributes to literature that finds such interventions can not only be implemented effectively and at low cost in poor settings, but also produce meaningful economic improvements for the poor (Baranov et al., 2020; Blattman et al., 2017; Campos et al., 2017; Ghosal et al., 2019; Haushofer et al., 2019; Heller et al., 2017; Rojas Valdes et al., 2018). Though self-efficacy has important implications for poverty (Wuepper and Lybbert, 2017) and GSE interventions appear to improve employment outcomes in developed settings (Eden and Aviram, 1993), my paper is the first to study economic effects of a GSE intervention amongst the poor. GSE is closely related to other aspects of psychology so one cannot say other interventions did not affect GSE, but mine is the first to target it in particular.

The third literature I contribute to is the large body of research on determinants of FLFP. There is evidence on the effects of labor-intensive home production (de V. Cavalcanti and Tavares, 2008; Dinkelman, 2011), fertility and childcare (Angrist and Evans, 1998; Gelbach, 2002; Halim et al., 2019), women’s education (Andrabi et al., 2012; Erten and Keskin, 2018; Keats, 2018), access to jobs suitable for women (Carranza, 2014; Heath and Mobarak, 2015; Jensen, 2012), and social norms (Alesina et al., 2013; Bursztyn et al., 2020) on women’s employment. There also exist studies on the employment effects of women’s agency (Angrist, 2002; Chiappori et al., 2002; Field et al., 2020; Heath and Tan, 2020; Rangel, 2006), but the aspect of agency these papers consider is women’s intra-household bargaining power as opposed to women’s sense of agency. More broadly, existing evidence tends to focus on determinants of work external to women’s psychology, in contrast to my focus on psychological determinants. An exception is Baranov et al. (2020), who find employment effects of cognitive behavioral therapy for depressed mothers in Pakistan.

Finally, results contribute to empirical literature on intra-household decision-making. Much of this literature studies how factors external to the household that shift the intra-household balance of power affect outcomes (e.g. Duflo (2003); Qian (2008); Thomas (1990)). My findings suggest the psychology of individual household members can have important effects on household decisions. These findings are closely related to evidence that suggests individuals’ soft skills (Ashraf et al., 2020) and mental health (Baranov et al., 2020) matter for household decision-making.

## 2 Background and Conceptual Framework

### 2.1 Agency

Following Kabeer (1999), I define agency as “the ability to define one’s goals and act upon them.” This is the definition adopted by Donald et al. (2017) and is similar to definitions provided elsewhere.<sup>5</sup> Donald et al. (2017) provide a framework for conceptualizing agency in which three components are necessary for an individual to have agency: the individual must set goals, see him or herself as capable of reaching the goals, and act on the goals. Much of the economics literature on development and gender, and much of the policy effort to raise women’s agency, has focused on the third component, evaluating or implementing interventions that might enhance women’s ability to act on their goals, for example by raising their intra-household bargaining power or expanding their skillsets. This component is no doubt important for women’s agency but is only one necessary component for it. In this paper, I focus on the second dimension. This dimension, which has been referred to as a “sense of agency” or “the power within” component of agency (Kabeer, 1999), represents an important prerequisite for one to act on one’s goals. Conceptualizing this dimension is not easy, and the following subsection details the concept I use to operationalize sense of agency.

Acting on one’s goals may take a variety of forms; exercising agency may look different for different people and in different situations. Many examples of agentic behavior Sen (1985) provides involve individual actions or decisions, but agency often involves influence in decisions made with others Donald et al. (2017). Within this class of relational agency, influence may take a variety of forms; it might include bargaining power or more subtle forms of influence like persuasion or manipulation (Kabeer, 1999).

A final point on the agency concept to highlight is the difference between agency and empowerment. The two are closely related but empowerment is broader. In Kabeer’s (1999) conceptualization, empowerment consists of resources and achievements as well as agency; agency is the process linking resources and achievements, and empowerment includes all three.

### 2.2 Generalized Self-Efficacy (GSE)

I use the concept of generalized self-efficacy (GSE) from psychology to operationalize sense of agency. Self-efficacy is a concept in psychology that was initially proposed by Albert Bandura (1977) and became enormously influential. In his textbook on self-efficacy, Bandura (1997) provides the following definition: “perceived self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p.3). A vast literature in psychology suggests self-efficacy in a particular task is central in motivating effort in that task (see

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<sup>5</sup>Chang et al. (2020) augment this definition, defining women’s agency as “their ability to define goals and act on them, to make decisions that matter to them, and to participate in the economy and public life.” Sen (1985) defines an individual’s “agency freedom” as “what the person is free to do and achieve in pursuit of whatever goals or values he or she regards as important.” Alkire (2008) modifies Sen’s definition, defining agency as “a person’s ability to act on behalf of what he or she values and has reason to value.” The 2012 World Development Report (World Bank, 2012) provides another definition, referring to agency as “an individual’s (or group’s) ability to make effective choices and to transform those choices into desired outcomes.”



Bandura (1982, 1997) for summaries). According to Bandura (1997), “beliefs of personal efficacy constitute the key factor of human agency” (p.3).

Bandura thought of self-efficacy as domain-specific, but others built on his work by conceptualizing a sense of self-efficacy that pervades domains in life (Eden, 1988; Scholz et al., 2002; Sherer et al., 1982). Generalized self-efficacy (GSE) describes one’s sense of self-efficacy across domains in life; it refers to one’s general beliefs in one’s ability to execute the actions required to reach goals in life. Further understanding of the concept can be gained by looking at questionnaires designed to measure it. Table 1 presents the questionnaire I used to measure GSE in my setting. This questionnaire is the Schwarzer and Jerusalem (1995) scale, a widely-used scale to measure GSE, with some modifications for use in my setting.<sup>6</sup> The items ask for beliefs of one’s ability to succeed in tasks in life, but ask about generic tasks. For example, the sixth asks “Can you solve most problems if you invest the necessary effort?” and the fourth asks “Are you confident that you could deal efficiently with unexpected events?”

I view GSE as synonymous with sense of agency. The congruence of these concepts is evident in their definitions; both refer to one’s belief in one’s capacity to reach goals. Moreover, psychology literature and practice offer approaches for measuring GSE and intervening in it. It has been argued that sense of agency comprises both self-efficacy and locus of control (Donald et al., 2017). One’s locus of control describes the extent to which one believes own ability and effort, as opposed to external factors like luck or powerful other people, influence outcomes in life. There is a natural connection between this concept and sense of agency; one must believe outcomes are contingent upon one’s actions to have a sense of agency. However, I view GSE as encompassing this aspect of locus of control. The belief that one can reach goals, the definition of GSE, implies both a belief in one’s competence and a belief in the contingency of outcomes upon actions one takes. Indeed, the items on the GSE scale encompass both beliefs about competency and contingency.

Before turning to the conceptual framework, I discuss several other relevant aspects of GSE. First is the distinction between GSE and similar aspects of psychology. We have just discussed the relationship between GSE and locus of control. Another closely related concept is self-esteem. Self-esteem is similar to GSE in that it describes an overall assessment of oneself, but self-esteem describes one’s evaluation of one’s own worth whereas GSE describes beliefs about one’s abilities to attain desired outcomes. Self-confidence, a key topic in behavioral economics (DellaVigna, 2009) and a term often used colloquially, is also related to GSE. GSE is focused on a more narrow category of self-beliefs than self-confidence; GSE refers to beliefs about own ability to reach goals, whereas self-confidence might refer to these beliefs or to other self-beliefs not linked to particular goals (e.g. beliefs about IQ, as in Möbius et al. (2014)).

While GSE is distinct from other psychological constructs, there is a sense in which GSE and related constructs are nonseparable. GSE scales are validated in part through their correlations with self-esteem, locus of control, and other constructs (Schwarzer and Jerusalem, 1995; Sherer et al., 1982). My intervention aimed to increase GSE but it likely affected these related aspects of

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<sup>6</sup>See Appendix Section D.1.1 for details on the difference between the original scale and the version I used.

psychology as well.

It is illuminating to explore correlates of GSE. Scholz et al. (2002) find GSE varies with gender in some countries, with women having lower GSE. Hackett and Betz (1981) discuss a number of aspects of women’s socialization that could constrain their career-related self-efficacy, and in a separate paper, Betz and Hackett (1981) document that, relative to their male counterparts, female undergraduates have significantly lower self-efficacy in traditionally male occupations and significantly higher self-efficacy in traditionally female occupations.<sup>7</sup>

Appendix Table A.1 presents relationships between GSE and other characteristics in my sample of women in rural Uttar Pradesh at baseline.<sup>8</sup> Education relates positively with GSE (column (9)) but negatively with age (column (1)). Women who work for income off their own households’ farms have higher GSE than those who do not (column (10)), though this difference is not significant at conventional levels ( $p$ -value = 0.197). Interestingly, women who reported a household member had recently contributed to savings have significantly higher GSE than those who did not (column (11)); this could reflect associations between GSE and income, GSE and the propensity to save, or GSE and women’s involvement in household savings decisions.

## 2.3 Conceptual Framework

The conceptual framework provides a more concrete definition of GSE. It discusses women’s GSE in the context of household decisions about women’s labor supply.

### 2.3.1 Set-Up

Consider many households, each choosing whether or not a woman in them will supply labor. Each woman chooses between the labor supply her family members want for her and advocating for a different outcome. Advocating to change her household’s decision could take a number of forms - persuasion, manipulation, insistence, refusal, etc. - and I do not take a stance here on exactly what form it takes.<sup>9</sup> Only some women have the ability to succeed in changing the household’s decision, and for those who do not, trying will not only fail to change the outcome but also produce conflict. The abilities required to succeed could take a variety of forms: skills in persuasion, negotiation, or communication, or a power structure within one’s household that confers women a say. Importantly, the woman does not know if she has the ability to succeed and her GSE determines her beliefs.

More precisely, let  $h$  be an indicator for the woman supplying labor.  $h_w^*$  and  $h_f^*$  denote the labor supply outcomes preferred by the woman and by her family.  $h_f^*$  is known to the woman. Let  $d$  be an indicator for conflict in the household decision, which occurs if women try to change the

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<sup>7</sup>The relationships between gender and GSE, and gender and self-efficacy, echo findings from economics literature that women tend to be less self-confident than men. This is discussed in the reviews of Bertrand (2011) and Niederle (2015), and also explored in more recent work of Bordalo et al. (2019).

<sup>8</sup>See Appendix Section D.1.2 for details on how GSE is defined from responses to the GSE questionnaire.

<sup>9</sup>Laszlo et al. (2020) argue women’s agency in intra-household settings can be thought of as her bargaining weight in the collective model (Chiappori, 1992). Agency in my framework is similar in that it can bring household outcomes closer to women’s preferences, but my framework focuses on the process through which this happens whereas the collective model is a characterization of final outcomes.

decision and do not have the ability to succeed. The woman gets utility from  $h$  and  $d$ ,  $U_w(h, d)$ . Women dislike conflict; I assume  $U_w(h, 1) < U_w(h, 0)$  for all women. There is heterogeneity across women in their preferred labor supply outcome; for some women,  $U_w(1, d) > U_w(0, d)$ , and for others,  $U_w(1, d) < U_w(0, d)$ . Whether or not she succeeds, each woman incurs an effort cost of  $c$  utils by trying to change her household's decision.

Woman  $w$ 's ability to advocate for labor supply  $h$  is

$$\theta_{w,h} = \gamma_h \theta_w + \tilde{\theta}_{w,h}$$

where  $\theta_w$  is her general ability across tasks in life,  $\gamma_h$  describes how influential general ability is in determining ability in advocating for  $h$ , and  $\tilde{\theta}_{w,h}$  captures all other determinants of  $\theta_{w,h}$ .  $\theta_w$  and  $\tilde{\theta}_{w,h}$  are drawn from two independent distributions.  $w$  can succeed if  $\theta_{w,h} > \underline{\theta}_h$ .

$\theta_{w,h}$ ,  $\theta_w$ , and  $\tilde{\theta}_{w,h}$  are unknown to the woman, but she holds beliefs about the likelihood they take particular values. I define the woman's GSE as her expected value of  $\theta_w$  and her self-efficacy in this particular activity as her expected value of  $\theta_{w,h}$ .<sup>10</sup> Importantly, GSE affects women's beliefs of their ability to perform a number of actions in life and not only to advocate for labor supply  $h$ . As discussed in Section 2.1, Donald et al. (2017) conceptualize agency as consisting of three components;  $w$ 's expected value of  $\theta_w$  (her GSE) corresponds to their second component and the actual value of  $\theta_w$  to their third.<sup>11</sup>

The last piece of the set-up is gains from experimentation. Women who try observe how  $\theta_{w,h}$  compares to  $\underline{\theta}_h$ . This provides information on  $\theta_w$  and  $\tilde{\theta}_{w,h}$  that could be useful to the woman in future decisions. Denote the gains from experimentation by  $\pi_{w,h}$ .

She will advocate to change the household's decision if it maximizes her expected utility. This occurs when

$$[1 - F_w(\underline{\theta}_{h'_f})]U_w(h'_f, 0) + F_w(\underline{\theta}_{h'_f})U_w(h_f^*, 1) + \pi_{w,h'_f} - c > U_w(h_f^*, 0)$$

where  $h'_f$  is the labor supply outcome unpreferred by the family and where  $F_w(\cdot)$  is the distribution that summarizes the woman's beliefs of  $\theta_{w,h}$ .

### 2.3.2 How Does Women's GSE Affect Their Labor Supply?

How women's GSE affects their labor supply depends crucially on the distributions of women's and families' preferences. Consider the following four cases:

1.  $h_w^* = 1$  and  $h_f^* = 1$ . In this case, learning is the only motive to advocate; advocating makes women worse off according to  $U_w$  and incurs an effort cost. Provided gains from

<sup>10</sup>These definitions have parallels in existing models that describe self-efficacy (Lybbert and Wydick, 2018) and self-confidence (Bénabou and Tirole, 2002) as the perceived returns to effort.

<sup>11</sup>Their first component is absent from my framework but could be added by allowing women to be uncertain of their preferred employment outcome. Greater agency in this first component would correspond to greater precision in beliefs of one's preferred outcome.

experimentation are not too large, i.e.  $\pi_{w,0} < U_w(1, 0) + c - \max\{U_w(0, 0), U_w(1, 1)\}$ , women choose not to advocate. This is true regardless of their ability beliefs.

2.  $h_w^* = 1$  and  $h_f^* = 0$ . Here, women prefer a different labor supply outcome than their families, which incents them to try to change the outcome. Gains from experimentation are an additional motive. Whether women choose to advocate for themselves depends on how likely they think they are to succeed in changing the household's decision as opposed to not changing the decision and creating conflict. Women will advocate for themselves as long as  $F_w(\theta_1) < \frac{U_w(0,0)+c-U_w(1,0)-\pi_{w,1}}{U_w(0,1)-U_w(1,0)}$ . Raising women's GSE would reduce  $F_w(\theta_1)$  and make them more likely to advocate.
3.  $h_w^* = 0$  and  $h_f^* = 1$ . As in the second case, holding a different preference for the labor supply outcome than their families incents women to try to change the household's decision. The learning motive also remains. Women will advocate for themselves if their beliefs in their ability are sufficiently high, in particular, if  $F_w(\theta_0) < \frac{U_w(1,0)+c-U_w(0,0)-\pi_{w,0}}{U_w(1,1)-U_w(0,0)}$ . Increasing GSE lowers  $F_w(\theta_0)$ , making women more inclined to advocate.
4.  $h_w^* = 0$  and  $h_f^* = 0$ . This case is similar to the first in that learning is the only motive to advocate. As long as  $\pi_{w,1} < U_w(0, 0) + c - \max\{U_w(1, 0), U_w(0, 1)\}$ , women will not advocate, no matter their ability beliefs.

If all households were in case 1 or 4, and if the gains from experimentation in each of those cases were not too large, raising GSE would have no effect on women's labor supply. The more households in case 2, the more a given increase in GSE will tend to increase women's labor supply; the more in 3, the more a given GSE increase will tend to decrease women's labor supply. The sizes of the labor-supply effects would depend on the number of women moved over the threshold for advocating by the increase in GSE and on how many of those women have the ability to succeed.

### 3 Experimental Design

My experiment was conducted in rural Uttar Pradesh. Uttar Pradesh is a state in northern India. It is one of India's poorest states, and it adheres strongly to the norms of traditional Indian culture, including traditional gender norms.

#### 3.1 Partner Firm

I partnered with a company that manufactures carpets in this setting. The firm, Obeetee, is one of India's largest carpet manufacturers. Carpet weaving is a common occupation in the area and, given the firm's scale, many weavers are affiliated with it. Like many occupations in the setting, carpet weaving is typically done by men.

Obeetee recently began a program to train and employ women as carpet weavers. The program occurs in newly constructed weaving centers, each of which employs 20 women from surrounding

village neighborhoods; participating women would work in a new workspace, would live a relatively short walk from their centers, and would only work with other women. The construction of these centers is undertaken through a partnership between Obeetee and a village loom owner. Women that enroll sign up for four months of training. Those who complete training may work as weavers in the center or elsewhere. Obeetee ensures women are paid a stable and respectable wage throughout the training period. After training, Obeetee orders carpets from the loom owner, who then distributes assignments and payments to the weavers. Post-training payments are determined by loom owners and are typically at least as high as training pay.

### 3.2 Sample Recruitment and Baseline Characteristics

The experiment was conducted amongst women in the catchment areas for six new women’s weaving centers. The centers were set to open on November 1, 2017 and the interventions to be delivered in the months prior. Figure 2 visualizes the study’s timeline.

Catchment areas were defined as a group of bastis (i.e. neighborhoods within villages that typically consist of households from the same subcaste) from which the loom owner would recruit women for the program in absence of the study. Loom owners selected bastis in close proximity to the loom center and where weaving is a common occupation amongst men living in the basti. The latter condition meant bastis where the wealthiest (“general”) subcastes live were excluded.

In August of 2017, surveyors went door-to-door in the catchment areas to recruit women for the study. Based on questions asked of household heads, surveyors identified women who might be eligible to participate in the study. If they were part of the household and available to speak, the surveyor then asked such women’s husbands, mothers-in-law, and fathers-in-law for permission for the women to participate.<sup>12</sup> Finally, surveyors asked to speak to any of the women whose family members had not denied permission. Women who were available were invited to participate in the study, and the sample consists of any who agreed.

In total, women living in the catchment areas needed to meet seven criteria to be eligible to participate in the study: (i) were at least 18 years of age and no more than 40, (ii) were not disabled, (iii) were available to speak in person when the surveyor visited their home, (iv) had no plans to leave the village for an extended period anytime in the following six months, (v) were married, widowed, divorced, or separated, (vi) had not had permission to participate in the study denied by family members, and (vii) were not the mother or mother-in-law of another eligible woman in their household. (i) and (ii) are requirements from the partner firm for the women to be eligible to participate in their weaving program; (iii) eased logistics of inviting women to participate in the study and of completing baseline surveys; (iv) and (v) were imposed to minimize attrition; (vi) helped to prevent future issues with women’s households; and (vii) prevented individuals from participating in the study as both women and mothers-in-law. Across 1,385 households the

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<sup>12</sup>The vast majority of women in the sample (99.2% of the control group) were living in their in-laws’ villages at baseline. For those living in their own natal villages, parents replaced parents-in-law in study activities. Throughout the paper, for brevity, I say “parents-in-law” to refer to both parents-in-law of women in their in-laws’ villages and parents of women in their natal villages.

surveyors spoke with, 1,039 women were deemed eligible. This represents 41.7% of all adult women on household rosters, and 62.8% of all women in the age range on household rosters.

The final sample consists of 1,022 women. This is the group of eligible women who agreed to participate in the study, which included the vast majority (98.4%) of eligible women. The 1,022 women come from 927 households.

During study recruitment, the research team introduced themselves as part of a J-PAL/IFMR team working to understand the daily lives of younger adult women from subcastes like theirs in rural India. Importantly, the team’s affiliation with the partner firm and the women’s weaving opportunity were not mentioned. This kept participants from selecting into or out of the sample based on their attitudes towards the opportunity or the firm, and from interpreting the GSE intervention as motivated by the partner firm.<sup>13</sup>

Baseline characteristics are in Table 2. The average age at baseline of women in the control group was 29.5. 98.4% of them were married and they had 2.7 children on average. 41.9% had no education. Baseline employment was low; just 14.3% were working for income off their own households’ farms.

### 3.3 Treatment Assignment and Balance

All women in the sample were given GSE and promotion treatment assignments. Figure 1 visualizes the cross-randomized design. As the GSE intervention was delivered in meetings with groups of women, I randomly assigned women to meeting groups and meeting groups to GSE treatment or control. There were 177 meeting groups in total, each of which consisted of roughly six women from the same basti. Assignment held GSE treatment status fixed within households but put women from the same households in different meeting groups when possible. Randomization of meeting groups to treatment or control was stratified by geographic unit.<sup>14</sup> I then assigned promotion treatment. Assignment was at the household level and randomization was stratified by GSE treatment and geographic unit.

Table 2 also tests for balance on baseline characteristics by GSE and promotion treatment assignment. Most tests suggest balance but, as one might expect with many characteristics and multiple comparisons for each, there are several imbalances. I use the post-double-selection Lasso method of Belloni et al. (2014) to select control variables when estimating treatment effects, which should address important imbalances.

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<sup>13</sup>Regardless of their beliefs about the research team’s involvement in it, villagers were likely aware that the women’s weaving opportunity would soon become available given loom centers were under construction and loom owners were from local families.

<sup>14</sup>The geographic units were roughly equal to bastis. Large bastis were divided into smaller geographic units. Small bastis that had only enough women for one meeting group were pooled with all other such bastis in their catchment areas to form a single geographic unit. If a catchment area contained only one basti with one meeting group, the pooled stratum included all bastis with one or two meeting groups in that catchment area.

### 3.4 GSE Intervention

The GSE intervention was delivered in September 2017. Women were invited to meetings with their assigned groups every three to four days for four weeks, for a total of nine meetings. Groups met in private and in locations within their participants' bastis. In these meetings, groups assigned GSE treatment received a psychosocial intervention to increase GSE, while those assigned GSE control took group surveys.

The GSE intervention was designed in consultation with CorStone. CorStone ([corstone.org](http://corstone.org)) is an organization that offers programs in resiliency, an aspect of psychology related to GSE, in disadvantaged communities worldwide. CorStone's programs are guided by research from psychology and related fields, and a randomized evaluation of one of their programs documented positive effects on psychological outcomes (Leventhal et al., 2015).<sup>15</sup> The GSE curriculum was based on a resiliency program CorStone offers women in Bihar, India. With guidance from CorStone, I selected content from the resiliency program most relevant for GSE; identified conceptual gaps and created new content to fill them, modeling structure, language, and activities after the resiliency program; and adapted stories and examples to fit my context. I piloted an initial version of the curriculum in a seventh catchment area and finalized the version for the experiment based on feedback from the pilot.

The curriculum asked women to recognize abilities they possess that would enable them to reach goals they have throughout their lives. This was done with a story and a discussion in the eighth meeting. Meetings leading up to this one built knowledge of concepts required to understand the penultimate meeting. Early meetings developed an understanding of abilities and had women recognize their own. In particular, the second and third meetings taught women about talents and character strengths and asked women to recognize talents and strengths they possess. The fourth meeting asked women to recognize successes in their lives and identify the talents and strengths of theirs that contributed to those successes. Meeting five developed an understanding of what goals are and why they matter. The next meetings helped women see paths they could follow to reach their goals. This was done by teaching women a strategy for planning to reach goals in meeting six, and by promoting problem-solving mindsets for facing obstacles that might arise in meeting seven. Meeting eight tied these elements together, asking women to recognize talents and strengths they possess that would help them reach their goals. The first and ninth meetings introduced and concluded the curriculum. Appendix Table B.1 provides additional details on the content of each meeting. Content was delivered via instruction, story-telling, group discussion, personal reflection, and activities. Appendix Figure B.1 provides an example of one of the activities.

The curriculum was designed to enhance GSE but it likely affected soft skills and related aspects of psychology. Soft skills that may have been affected include goal setting, planning, and problem solving. It is also possible that group discussions improved communication skills. As discussed below, meetings with control women also featured group discussions, so for improved

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<sup>15</sup>Leventhal et al. (2016) find this program produced positive effects on some physical health outcomes and amplified the effects of a health curriculum on these outcomes.

communication skills to explain treatment effects, it would need to be that the sort of discussions treated women had were more beneficial for communication skills than those control women had. The intervention may also have affected aspects of psychology aside from GSE, such as self-esteem, locus of control, grit, or hope.

Concepts were illustrated with references to specific areas of life and participants considered many areas across the nine meetings. To reduce demand effects, the curriculum had no mention of carpet weaving employment and very few mentions of other forms of employment. Of course these topics may have arisen organically in group discussion.

In their meetings, women assigned GSE control took group surveys on aspects of daily life in their bastis and villages such as men’s employment, health, and agriculture. The full list of survey topics is provided in Appendix Table B.1. The questions were meant to be purely descriptive, and groups were encouraged to discuss answers for each question before landing on a single answer for the group. Comparisons between GSE-treated women and women assigned to this active control group hold fixed effects of meeting attendance unrelated to GSE such as social connections and mobility.

Both treatment and control meetings were facilitated by female surveyors assigned to particular groups. Surveyors were assigned either treatment or control groups based on their performance in an initial training for facilitating GSE intervention meetings. Two research team leaders received training in facilitation from CorStone’s India team, and trained the surveyors who were assigned to deliver the intervention.

Columns (1)-(9) of Appendix Table A.2 present levels of meeting attendance and test for balance in meeting attendance by treatment status.<sup>16</sup> The attendance rate of women assigned neither treatment was roughly 65% at each of the nine meetings. There are little to no differences in attendance across treatment groups and across the nine meetings, which suggests comparisons across treatment groups do indeed hold fixed effects of meeting attendance unrelated to the content of the meetings. Appendix Figure A.1 presents distributions of the number of meetings attended, separately for women assigned GSE treatment and GSE control. The two distributions look virtually identical. The distributions are bimodal; they imply many women never attended a meeting, but many who did attend attended most or all of the meetings.

### 3.5 Promotion Intervention

In early October 2017, surveyors delivered information about the firm’s program in individual meetings with each woman and separate meetings with each woman’s family member(s). Family members eligible to participate were husbands of married women, and mothers-in-law and fathers-in-law who lived in women’s households.<sup>17</sup> To reduce demand effects on program sign-up, women were never informed about the program by the surveyor who facilitated their GSE intervention

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<sup>16</sup>The promotion intervention was delivered after all GSE meetings ended, but I include promotion treatment, and interactions between promotion and GSE treatment, in the regressions so as to use a consistent set of empirical specifications throughout the paper.

<sup>17</sup>All but seven of the 1,022 women had at least one eligible family member.



meetings.

The research team had not mentioned its affiliation with the partner firm up to this point in the study. Prior to giving job information, surveyors said the firm had asked the research team to provide information on the program and the research team was interested in opinions on the program as part of its goal of understanding daily lives of women.

All women, regardless of treatment status, were given both job details and a promotion for the job. Promotion treatment assignment determined information given to family members; those in treated households received the job details and the promotion, while those in control households received only job details.<sup>18</sup> Job details were basic facts about the job including the location, the training period, the pay, the hours, and instructions on how to sign up. Those given the promotion were given a few additional details that were promotional in nature and then shown a six-minute, promotional video. The video featured a message from a partner firm official and testimonials of loom owners, female participants, and the husband of a female participant. The testimonials highlighted merits of the program from the individuals' perspectives, with an emphasis on points that would make women's family members more supportive of women's participation (e.g. testimonials stress that only women work in the loom center and that participants have time to do their usual household chores). Shots of the speakers were interspersed with shots of women's weaving centers. Appendix C includes the transcript of the video and a screenshot from it.

Meetings with roughly 85% of women were held. About 78% of family member meetings were held. These levels do not differ by treatment status (columns (10) and (11) of Appendix Table A.2).

### 3.6 Job Sign-Up

The research team orchestrated sign-up in the six weaving centers. The official sign-up day was in mid October 2017. Women wishing to sign up came to their catchment area's loom center that day and completed a 10-minute sign-up process administered by a surveyor. I required women be accompanied by their husbands, mothers-in-law, fathers-in-law, or household heads so as to ensure they were signing up with the support of their households.<sup>19</sup> I verified the age of any women wishing to sign up, either with an identification card she presented at sign-up or later with her village's head, and only those who met the partner firm's age requirement for participation (i.e. at least 18 and no more than 40) could sign up.<sup>20</sup>

Some women completed the sign-up process without attending the official sign-up day. This occurred primarily through an alternate sign-up day, held two weeks after the official sign-up day.<sup>21</sup>

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<sup>18</sup>Women were not told whether their family members would be given the promotion.

<sup>19</sup>In a few cases, none of these family members could attend so surveyors accepted permission from one of them over the phone.

<sup>20</sup>Being in this age range was an eligibility requirement for study participation, but the data used to determine whether women met this requirement was less official and women who were in this age range at the start of the study could have aged out of it by sign-up.

<sup>21</sup>I asked women who had not initially signed up and their family members if they were interested in an alternate sign-up day; if both a woman and her family member(s) expressed interest (or if only one of the two was contacted

There were also a few cases of individuals completing the sign-up process informally after both sign-up days, having contacted the research team about their interest in the program.

In total, 272 of the 1,022 women signed up for the program. In five of the six centers, more women signed up than there were slots for; for each of these five, I randomly determined which 20 women could begin the program on its first day as well as a random waitlist ordering for the remaining women.<sup>22</sup> In the final days of October 2017, surveyors visited households of women who had signed up and told them whether the woman could begin the program or was on a waitlist.<sup>23</sup> The program began as scheduled on November 1, 2017 in all but one center, where construction delays postponed the start of the program by two weeks. The research team monitored retention during the first three months of training and drew women from the waitlist when participants dropped out.

## 4 Data and Empirical Strategy

### 4.1 Data

Data come from official records of participation in the firm’s program and several rounds of surveys. This subsection describes these two sources of data. The timeline of data collection is visualized in Figure 2. Appendix D provides additional information on the data and details each outcome.

#### 4.1.1 Program Participation Data

I observe official sign-up decisions for all women in the sample from records I kept during the sign-up process. Once training began, loom centers kept paper records of trainee attendance and performance. Surveyors digitized this data for the first months of training.<sup>24</sup> In addition, surveyors recorded dropouts from the program and the reasons for them.

#### 4.1.2 Survey Data

Data on general employment, GSE, and channels come from surveys. There were six waves of surveys. The first occurred during study enrollment and provides baseline data. I have baseline data both from women and from their family members. The second wave of surveys was done with women at the end of the final GSE treatment or control meeting, which occurred four weeks after the GSE intervention began. I also collected survey data at five weeks, during the meetings with women and family members when job details and/or the promotion were delivered. The fourth

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and expressed interest), the woman was invited to sign up on the alternate day.

<sup>22</sup>I do not present effects of being randomly selected to participate because the “first stage” effect (the effect of selection on participation) is not robust. This is partly due to high dropout rates and partly due to the small sample size.

<sup>23</sup>Surveyors attempted to convey that slot allocation was random, but data suggest many participants did not understand this.

<sup>24</sup>I aimed to collect three months of data and did so for four centers. The surveyor assigned the fifth center entered extra data so I have three months and 10 days of data for this center. I have 2.5 months of data for the final center as this is the center that opened two weeks late.

and fifth waves occurred at six weeks and five months, and both women and family members were surveyed during these waves. The final wave was done at 13 months and provides long-run endline data. Only women were surveyed at this time.

The family members surveyed were husbands of married women as well as women’s mothers-in-law and/or fathers-in-law if they were part of women’s households. Whenever a woman had multiple family members who were eligible to be surveyed, the group was invited to complete the surveys, and if multiple family members agreed to be surveyed, each question was asked of one family member in particular. The exception was the five-month endline survey, which was taken with just one family member. Surveyors prioritized having husbands complete these surveys, then mothers-in-law, and finally fathers-in-law. The baseline survey also had a module for household heads, who were likely but not necessarily husbands or in-laws.

Surveys were administered verbally, in person, and in private, with either only a surveyor and woman present, or only a surveyor and family member(s) present.<sup>25</sup> Surveys were of varying length; for example, the average length of women’s four-week surveys was 15 minutes, while the average lengths for women’s and family members’ five-month surveys were 48 and 28 minutes. Surveys included both questionnaires and incentivized tasks.

Surveyor assignments to endline participants sought to minimize experimenter demand. For the five-week and all subsequent endlines, surveyors were randomly assigned to catchment areas where they had not worked during the GSE intervention. For logistical reasons, women were very often interviewed at four weeks by the surveyors who had facilitated their group meetings; I therefore interpret data from this endline with caution. For endlines that occurred after the promotion intervention, surveyors were almost always assigned catchment areas where they had not worked during that intervention.<sup>26</sup>

Appendix Table A.3 presents levels of attrition on the endline surveys and tests for balance in attrition across treatment groups.<sup>27</sup> Around 80% of women assigned neither treatment were surveyed at five weeks, six weeks, and five months. The level is lower at four weeks (63.2%) as very few women who had not attended the final GSE treatment or control meeting were surveyed. The level is also lower at 13 months (67.4%), likely due to the longer amount of time elapsed between study enrollment and this final survey. Family member surveys were done for about 75% of the control group at each of the three family-member endlines. Attrition is balanced across treatment groups with one exception: GSE treated women, and GSE treated women assigned promotion control in particular, were more likely to be surveyed at six weeks. Reassuringly, this difference is small in magnitude and the vast majority of comparisons in the table are not significant. Nevertheless, attrition and imbalances in it are limitations of the survey data.

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<sup>25</sup>There were a few exceptions to these rules for family member surveys. Some family member baseline and five-month endline surveys were taken over the phone, and at baseline, surveyors did not require that only the family members being surveyed were present.

<sup>26</sup>The only exceptions occurred at five months for logistical reasons.

<sup>27</sup>The four-week endline was done before the promotion intervention was delivered, and the five-week endline as that intervention was being delivered, but I consider differences in attrition on these surveys across both GSE and promotion treatments so as to use a consistent set of specifications throughout the paper.

## 4.2 Empirical Specifications

I first consider the effects of the GSE and promotion treatments overall and irrespective of the other treatment assignment. In particular, I estimate the following regression, which I refer to as the unsaturated specification:

$$Y_{i,h,m} = \gamma_1 GSE_{h,m} + \gamma_2 Promo_h + \mu_s + X_{i,h,m}\delta + \varepsilon_{i,h,m} \quad (1)$$

Each observation is a woman  $i$  from household  $h$  and meeting group  $m$ , and  $Y_{i,h,m}$  is the outcome of interest for that woman.  $GSE_{h,m}$  is an indicator for assignment to GSE treatment and  $Promo_h$  an indicator for assignment to promotion treatment. The subscripts on the treatment indicators reflect the fact that GSE treatment was fixed at both the household and the meeting group levels, while promotion treatment was fixed at the household level. I cluster standard errors by both household and meeting group when estimating this specification.<sup>28</sup>  $\mu_s$  denote strata fixed effects.<sup>29</sup>  $X_{i,h,m}$  is a set of baseline covariates selected from 438 potential covariates using the post-double-selection (PDS) Lasso method of Belloni et al. (2014).<sup>30</sup>

The treatments were cross-randomized so I also estimate saturated specifications of the form

$$Y_{i,h,m} = \beta_1 GSEOnly_{h,m_P} + \beta_2 PromoOnly_{h,m_P} + \beta_3 Both_{h,m_P} + \mu_s + X_{i,h,m}\delta + \varepsilon_{i,h,m} \quad (2)$$

where  $GSEOnly_{h,m_P}$  is an indicator for assignment to GSE treatment and promotion control,  $PromoOnly_{h,m_P}$  an indicator for assignment to promotion treatment and GSE control, and  $Both_{h,m_P}$  an indicator for assignment to both treatments. An indicator for a particular GSE and promotion treatment combination takes the same value for all women in a household and for all women in a meeting group with the same promotion treatment assignment ( $m_P$  denotes the latter). I cluster standard errors at both the household level and the meeting group  $\times$  promotion treatment level when estimating this specification.

## 5 Effects on GSE

### 5.1 Effects on GSE

I begin the empirical analysis by investigating effects on GSE. I define GSE as the percent of questions in Table 1 the respondent agreed with. As discussed above, the questionnaire in Table 1 is the Schwarzer and Jerusalem (1995) scale, a widely-used scale for measuring GSE, with slight modification for use in my setting. Appendix Section D.1 provides further information on the

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<sup>28</sup>I allow for two-way clustering using the stata `reghdfe` package of Correia (2014).

<sup>29</sup>Strata are geographic units, as discussed in Section 3.3. For certain outcomes, endline survey attrition means some strata do not have at least one individual from each of the four treatment cells. In regressions that consider effects on such outcomes, I pool these “incomplete” strata with the strata in their villages consisting of the group of small bastis that had been pooled for GSE treatment assignment. If this pooled strata is still incomplete, I pool it with the smallest (in terms of number of observations) complete strata in its village.

<sup>30</sup>I implement the method in stata using the `pdslsso` command written by Ahrens et al. (2018).

questionnaire and on the measure of GSE. Note this measure is neither of the two I pre-specified. The three versions differ in their handling of don't know responses, and Appendix Section D.1.2 explains why I prefer this third version. Reassuringly, the key results are invariant to which of the three I use.

The GSE treatment produced a persistent increase in GSE (Panel A of Table 3). At the four-week endline, women assigned neither treatment agreed with 70.429% of the GSE questions on average. GSE treatment produced an increase of 9.572 percentage points that is highly significant (p-value = 0.000). The standard deviation of GSE at baseline was 32.005 percentage points, so this effect represents a 0.299 standard deviation increase in the baseline GSE distribution. Recall that the four-week survey was done at the end of the final GSE treatment or control meeting; this introduces two caveats to this result. First, participants in this survey were very often interviewed by the surveyor who facilitated their GSE intervention meetings, so experimenter demand may be a concern. Second, the women who took this survey were almost exclusively women who attended the final session, and the treatment effect is likely to be higher amongst women who attended sessions than in the sample at large. Reassuring for the experimenter demand concern, I find a positive and significant effect on the survey that occurred in the following week, though as might be expected, it is smaller: 4.959 percentage points, or 0.155 standard deviations, with a p-value of 0.015. There are also effects at each of the subsequent endlines, with the GSE treatment increasing GSE by 3.230, 3.123, and 3.890 percentage points (0.101, 0.098, and 0.122 standard deviations) at six weeks, five months, and 13 months (p-values = 0.074, 0.065, and 0.049). The GSE intervention therefore had a remarkably persistent effect on GSE, producing an effect at 13 months very similar in magnitude to the effect at six weeks.

The promotion intervention had no effect on GSE and there are no GSE gains from combining it with the GSE intervention. At each of the five endlines, the coefficient on the promotion treatment indicator in the unsaturated specification is small and not statistically different from zero (Panel A of Table 3). In the saturated specification, I find no effect of promotion treatment alone at any of the five endlines, and the effect of GSE treatment on GSE did not differ by promotion treatment assignment at any of the endlines (Panel B of Table 3). On the one hand, we might expect no effects of the promotion on GSE given the intervention did not directly target it, but on the other, we will see below that the promotion on its own raised employment and we might expect employment to raise GSE given the empowerment effects often ascribed to women's work. It could be that succeeding in the workplace and earning an income tend to increase GSE, but other aspects of employment decrease it. Employment may come at the cost of success in other areas of women's lives, which could offset factors that would tend to raise GSE. It is also possible that managers in this setting are discouraging towards their female employees, which could tend to decrease GSE. Moreover, results in McKelway (2020) suggest women's employment in this context may have limited effects on women's empowerment; employment appears to allow women to make some independent decisions, perhaps using their own earnings, but not to grant them more power over joint household decisions.

The effects of GSE treatment only and of both treatments in the saturated specification are positive at all endlines, but I do not always have power in this specification to say these effects are significant (Panel B of Table 3). These two coefficients are generally similar in magnitude to the effect of GSE treatment in the unsaturated specification at the corresponding endline. However, I do not always have power to detect these effects; while each of the two coefficients are significant at four weeks, only one of the two is significant at five and six weeks (the both treatment coefficient is significant at five weeks and the GSE treatment only coefficient at six weeks), and neither of the two are significant at five and 13 months.

Appendix Tables A.4-A.8 present effects on indicators for agreeing with each of the 10 GSE questions at each of the five endlines. The pattern of effects on individual questions is similar to the pattern of effects on GSE overall.

Effects on the second question of the scale - “If someone opposes you, can you find some way to get what you want?” - merit further discussion (columns (2) in Appendix Tables A.4-A.8). GSE treatment made women more likely to agree with this question at four, five, and six weeks. There are positive effects at five and 13 months, though neither is statistically significant (p-values = 0.239 and 0.165). This foreshadows results below that suggest GSE treatment led women to advocate for their preferred outcomes in household decisions about their labor supply.

## 5.2 Effects in Effort Task

In the conceptual framework of Section 2.3, the channel through which GSE may affect women’s employment and other outcomes is by leading women to take actions to reach outcomes they desire. I used an incentivized task to test this channel. This task also provides “objective” outcomes to complement the self-reported GSE outcomes discussed previously.<sup>31</sup>

During the five- and 13-month surveys, I asked women to choose to either (i) receive a prize worth Rs.20, or (ii) attempt a timed puzzle, and win a prize worth more than Rs.20 if successful and worth Rs.10 if not. A randomization determined whether the prize a woman was offered for successfully completing the puzzle was worth Rs.30 or Rs.40. At the five-month endline, the puzzle was a small jigsaw puzzle, and at 13 months, it was assembly of small, plastic blocks to build a toy house. The key feature of these puzzles is that success in them is largely a function of ability. Choosing to attempt the puzzle represents a decision to take an action to reach a desired outcome driven by a favorable evaluation of one’s own ability. Of course it could also reflect a willingness to take risks, a concern I return to momentarily.

Effects on puzzle choice are in Appendix Table A.9 (columns (1)-(4)). GSE treatment made

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<sup>31</sup>Self-reports are susceptible to experimenter demand and other reporting biases. Experimenter demand is certainly a concern for the four-week endline, when participants were very often surveyed by the surveyor who had facilitated their meetings, but it could have arisen at later endlines when participants had different surveyors if the demand was from the research team as a whole. Another concern is that participants could have become accustomed to responding a certain way at early endlines and effects at later endlines reflect participants repeating their answers rather than persistent effects on GSE. A subtle issue related to both concerns is that the first endline may have been the one when participants were becoming habituated to responding a certain way and also the one when experimenter demand was highest.

women more likely to choose to attempt the puzzle at five months. The effect at five months is 5.4 percentage points, which is a relatively small effect off a base of 61.0% but is nevertheless significant (p-value = 0.077). The effect is slightly higher amongst women assigned the high prize but not significantly so. The effect of GSE treatment at 13 months is 4.0 percentage points though it is not significant (p-value = 0.280). At this later endline, the overall effect is driven by the group of women offered the low prize; the GSE treatment effect amongst women assigned the low prize is 9.6 percentage points and significant (p-value = 0.053), while the effect is about zero amongst those assigned the high prize. At each endline, a similar percentage of women chose the puzzle in the GSE treatment only group and the both treatment group. There are some positive effects of the promotion on puzzle choice at five months but no effects at 13 months. Effects of GSE treatment on puzzle choice are consistent with the channel outlined in the conceptual framework. They also suggest the effects of GSE treatment on GSE reflect actual changes in perceptions of own ability and are not entirely driven by biases in self-reports.

While effects on puzzle choice may reflect higher assessments of own ability, they are also consistent with a greater willingness to take risks. To separate these two explanations, I asked women to make another decision on the 13-month endline. This decision was identical to the puzzle decision with one exception: instead of attempting a puzzle, participants could try to draw out a winning ball from a canvas bag. This task is one in which success is purely a function of luck and thus isolates risk taking from ability beliefs. I find no effects on the choice to draw a ball (columns (5) and (6) in Appendix Table A.9). This suggests that effects of GSE treatment on puzzle choice, at least at 13 months, were driven by changes in ability beliefs rather than changes in risk taking.

## 6 Effects on Women’s Employment

### 6.1 Preferences for Women’s Employment

Before presenting effects on employment, I explore women’s and family members’ preferences for women’s employment. Immediately after women and family members were given details about the firm’s program and, if applicable, the promotion, they were asked about their interest in the women signing up. Reports from this time are attractive because they were made prior to sign-up and are thus not subject to ex-post rationalization of sign-up decisions.

GSE treatment made women’s family members more interested in the women signing up, but I find no effect of the promotion on family interest (column (1) in Table 4). Family members of women assigned neither treatment expressed interest in women signing up 54.9% of the time. GSE treatment increased this percentage by 5.2 points or by 9.5% (p-value = 0.081). The effect is similar in both GSE treated cells; assignment to GSE treatment only has a 6.4 percentage point effect (an 11.7% increase, p-value = 0.164) and assignment to both treatments has a 7.9 percentage point effect (a 14.4% increase, p-value = 0.069). These effects suggest women assigned GSE treatment

had been advocating for their employment in the preceding days and weeks.<sup>32</sup> In contrast, there is no effect of the promotion overall, on its own, or when the GSE intervention was given. As discussed below, data from the survey done in the week following sign-up (the six-week endline) suggest the promotion made family members see more financial value in the program. Perhaps individuals had difficulty assessing their own overall opinions about the opportunity, or maybe effects on overall interest had not yet manifested immediately after the promotion was given.

A challenge in assessing effects on women's interest pre-sign-up is that the woman and family-member job information meetings, when job details and/or promotion were delivered and when pre-sign-up interest was assessed, happened in the same week. If I am to capture effects of giving the promotion to family members on women's pre-sign-up interest, I must restrict the sample to women whose meetings happened to begin after their family members' meetings ended. This was the case for 205 women.

In this subsample, the GSE intervention had no effect on women's interest but promotion treatment lowered it (column (2) in Table 4). 79.2% of women assigned neither treatment in this subsample expressed interest in signing up. There was no effect of GSE treatment overall, alone, or when given with the promotion on women's interest. Promotion treatment, however, lowered the percentage of women interested by 15.1 points or by 19.1% (p-value = 0.012). Assignment to promotion treatment only and to both treatments produce similar reductions (-19.9 percentage points, or -25.1%, with a p-value of 0.021, and -16.6 percentage points, or -21.0%, with a p-value of 0.029).

I explore these results further by examining the distribution of interest within the household. There are four possible combinations of interest within the household: neither the family member(s) nor the woman were interested, the family was interested but the woman was not, the woman was interested but the family was not, and both were interested. In Figure 3, I visualize the fraction of households in each of these four groups for each of the four treatment cells. I again restrict to the subsample of 205 to capture effects of promotion treatment on women's interest. In the neither treatment and GSE only treatment cells, disagreement within the household predominantly took the form of women being interested but their families not. But when the promotion was given, in the promotion only and both treatment cells, it appears more likely that families are interested and women not. In this case, the two combinations that represent disagreement in the household look roughly equally likely; in fact, disagreement in the form of families being interested but women not was slightly more common. Appendix Table A.10 presents a regression version of this figure with associated standard errors and p-values. It uses the two regression specifications (equations (1) and (2) to estimate effects on each combination of interest within the household. The key findings from this table are that promotion treatment, irrespective of GSE treatment assignment, reduced the fraction of households in which women were interested and families not, and raised the fraction of households in which families were interested and women not.

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<sup>32</sup>Section 6.3 below further explores women's advocacy and how it might have changed direction when the promotion was given.



Why did the promotion reduce women’s interest? One explanation is that the promotion made women expect to have less control over their earnings if they were to participate. Below, I find the promotion increased family members’ assessments of the financial value of the program; perhaps family members’ interest in the financial returns to women’s work made women feel they would have less control over their earnings were they to work.<sup>33</sup>

## 6.2 Effects on Employment in the Short Run

Neither treatment affected short-run employment overall and irrespective of the other (Panel A of Table 5), but this masks important interactions between the two (Panel B of Table 5): the GSE intervention raised short-run employment when the promotion was not given to families, but lowered short-run employment when it was.

There is suggestive evidence that assignment to GSE treatment only increased participation in the firm’s program in the short-run and strong evidence that it increased general employment in the short-run (Panel B of Table 5). 22.1% of women assigned neither treatment signed up for the firm’s program and 8.9% of them ever attended the program in the first three months of training.<sup>34</sup> The GSE intervention on its own increased sign-up by 4.8 percentage points and attendance by 3.1 percentage points. These effects are relatively large, representing increases of 21.7% and 34.8%, though neither is statistically significant (p-values = 0.169 and 0.206). Turning to general employment, 13.1% of women assigned neither treatment had worked off their own households’ farms in the two weeks prior to the six-week survey,<sup>35</sup> and 18.7% had done so at five months.<sup>36</sup> GSE treatment alone increased these outcomes by 6.1 and 8.7 percentage points. These effects represent increases of 46.6% and 46.5%, and both are statistically significant (p-values = 0.039 and 0.009). At both endlines, the effect of GSE treatment only on general employment is driven by work in agriculture and driven by work in an other sector category (Appendix Tables A.11 and A.12).

Promotion treatment alone increased short-run program participation and general employment (Panel B of Table 5). The effects on sign-up and attendance are 9.6 and 5.8 percentage points. These effects represent 43.4% and 65.2% increases, and both are statistically significant (p-values = 0.012 and 0.024). Promotion treatment alone also raised the likelihood that women had worked

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<sup>33</sup>Another explanation is that women value agency intrinsically, as in Afzal et al. (2020), and the promotion reduced their agency in the sign-up decision. Several arguments seem to rule this explanation out. First, family members in promotion control households were not uninvolved in recruitment for the firm’s program; they were approached and informed about the opportunity, but were given a less persuasive message than those in promotion treatment households. This makes it seem unlikely that the promotion would have meaningfully increased family members’ agency in the decision. Second, if women’s interest reflected their agency over the decision, we might expect GSE treatment to have increased interest. Finally, Afzal et al. (2020) argue demand for agency is higher amongst women who have less of it, yet the negative effect of the promotion is not lessened by GSE treatment.

<sup>34</sup>Attendance levels are much lower than sign-up levels in part because of oversubscription for the program which meant not all women who signed up could participate.

<sup>35</sup>While work on one’s own farm is certainly labor, I exclude it because such work is likely to be closer to an unpaid household chore than paid work for many women and may have been inconsistently reported as work for income.

<sup>36</sup>The increase in control group employment between six weeks and five months can be explained by the opening of new jobs in the partner firm’s program.

off their own farms in the two weeks prior to the six-week survey by 6.1 percentage points, a 46.6% increase (p-value = 0.030). This is particularly remarkable given the promotion intervention was delivered over a week within this two-week window. Further, the partner firm’s program had not yet begun at six weeks so this effect cannot reflect participation in the program; it is instead driven by work in agriculture and in women’s households’ microenterprises (Appendix Table A.11). Perhaps messages in the promotion that encouraged participation in the firm’s program were applicable to women’s employment in general. Assignment to promotion treatment alone also increased general employment at five months, when it raised employment by 7.6 percentage points or by 40.6% (p-value = 0.027). This effect does appear to be driven by work in the firm’s program (Appendix Table A.12).<sup>37</sup>

Program participation and general employment under both interventions were no different than under neither (Panel B of Table 5). Assignment to both treatments (rather than neither) had no effect on sign-up, attendance, or general employment at six weeks or five months. The effects of assignment to both interventions on the two participation outcomes differ significantly from the effects of the promotion alone (p-values = 0.087 and 0.074), though not from those of the GSE intervention alone (p-values = 0.593 and 0.399). There are significant differences between the effect of both treatments and the effects of either treatment alone on general employment at six weeks (p-values = 0.032 and 0.026) but not at five months (p-values = 0.188 and 0.321). The null effects of assignment to both treatments on general employment do not mask strong effects on work in particular sectors (Appendix Tables A.11 and A.12).

Thus when the promotion was not given to families, the GSE intervention tended to increase short-run employment, but when the promotion was given to families, GSE treatment tended to lower short-run employment. These results, and the negative effect of the promotion on women’s interest, are consistent with a greater sense of agency empowering women to advocate in their households for the employment status they preferred. It is worth noting that the analyses of initial interest did not reveal lower interest of women than family members under the promotion but rather similar levels of interest; the negative effect of GSE treatment when the promotion was given could be because women were more effective at advocating against employment than for it or because more women became opposed over time. The next subsection further explores channels in household decision-making.

Before examining channels, I investigate the concern that the “marginal” women induced to work by either treatment alone are not the types of women who can succeed in the workplace. In Appendix Table A.13, I compare performance in the firm’s program - measured by attendance, achievement of knots targets, and pay (which is a function of attendance and meeting knots targets) in the first three months of training - across treatment cells. I restrict to the subsample of women

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<sup>37</sup>The effects of the promotion alone on short-run employment are remarkable effects for such a simple intervention in a setting with strong norms against women’s work. These effects parallel results of Bursztyn et al. (2020), who find short-run effects of a light-touch intervention targeting husbands’ preferences for women’s employment. My results may seem to contrast Dean and Jayachandran (2019) finding no effects of a similar video intervention, but Dean and Jayachandran study effects over a longer time horizon; as discussed below, I also find no effects over a comparable, longer-run horizon.

who signed up and were allowed to begin at the start of the program. I find no evidence that women who entered the program having been assigned GSE or promotion treatment only perform worse than those assigned neither. Women in one of these treatment cells actually tend to perform better, though differences are imprecise and none statistically significant given the small sample size. It could be that any negative selection effects were overcome by treatment effects; a greater sense of agency may lead women to work harder, and more family support for women’s employment may allow women to miss less work and perform better as a result.

### 6.3 Effects on Sign-Up Decision-Making Process

Reports on how sign-up decisions were made provide a deeper understanding of short-run employment effects. Reports come from the six-week surveys, which occurred in the week following the official sign-up day but before the program began. The sign-up decision was of course only one decision about women’s labor supply, but effects on sign up are similar to effects on other employment outcomes; the sign-up decision-making process may have been similar to the process through which other labor supply decisions were made.

Data suggest GSE treatment alone raised family members’ assessments of the financial value of the firm’s program and reduced discord within the household about the sign-up decision (columns (1), (3), and (4) in Panel B of Table 6). The financial value outcomes are indices that include indicators for saying that the household earning extra money and that the woman acquiring a valuable skill were reasons to sign up. The discord outcomes are also indices and include indicators for saying that the woman and family members disagreed about whether the woman should sign up, and for saying that discussions within the household were argumentative.<sup>38</sup> GSE treatment alone increased family members’ assessments of the program’s financial value. This suggests women assigned GSE treatment only tried and succeeded in convincing their family members of the merits of their employment. According to both women and family members, GSE treatment alone reduced discord within the household about the sign-up decision. This suggests women’s advocacy for their employment was subtle and careful, not producing more discord but actually resulting in less.

It appears that information women assigned GSE treatment only used to persuade their families did not come from an intervention but rather was information women already had but lacked the confidence to try to convey. I find no effects of GSE treatment alone on women’s perceptions of financial value (column (2) in Panel B of Table 6)<sup>39</sup> or on women’s beliefs of their weaving ability, which is measured with an indicator for women predicting their weaving ability would be at or above the ability of the average woman weaver if they were to participate in the program (column (11) in Panel B of Appendix Table A.15). This suggests there was no effect on the mean

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<sup>38</sup>Effects on the individual components of the discord and financial value indices are in Appendix Table A.14.

<sup>39</sup>Note that the level of perceived financial value amongst women assigned neither treatment is higher than the level amongst family members in this treatment group. It could be that women see more financial value in their work in general or because they saw the promotion. Reporting differences are another explanation, especially given the way the corresponding survey question was asked; both items in the financial value index came from a single question that asked respondents about the reasons they considered for signing up, and it may be that women gave a lengthier response that made them more likely to provide the two reasons in the index.

of women's beliefs about their workplace ability, but it remains possible the variance was reduced and this made women more persuasive. Note, however, that don't know responses were coded as 0 in this indicator, and many women said don't know when asked to predict their weaving ability. A reduction in the variance should have made women less likely to say don't know and thus should have produced a positive effect on this outcome. Thus it appears GSE treatment only did not give women information to convey but gave them the confidence to convey information they acquired elsewhere. Recall that all women were given the promotion so it is possible the information came from that. This is challenging to study using data from six weeks, at which point all women had been given the promotion. Instead I use the interest data from five weeks (explored in Section 6.1) and make use of the fact that some family members' interest was assessed before women had been given the promotion and some after. Recall that GSE treatment increased family members' interest at five weeks. If this was because women used messages in the promotion to persuade their families, the effects on family interest should be driven by family members of women who had already been given the promotion when family members' interest was assessed. But I find no effects of GSE treatment on family member interest in this subsample (column (12) in Appendix Table A.15). This suggests information women assigned GSE treatment only used to persuade their families did not come from the promotion but was information they had absent any intervention.

Assignment to promotion treatment only raised both family members' and women's assessments of the financial value of the program and reduced assessments of discord in the household about the sign-up decision (columns (1)-(4) in Panel B of Table 6). The effect on family members' perceptions of financial value seems likely to be a direct effect of the promotion; perhaps the video made family members visualize the women working, leading them to see the women's employment as a real option that would make a lot of financial sense for their households. The positive effect on women's perceptions of financial value despite the initial drop in women's interest this treatment assignment produced might reflect women with a low sense of agency succumbing to their families' opinions. The reduction in discord could reflect the resulting joint enthusiasm for work.

Relative to being assigned neither treatment, assignment to both treatments increased family members' assessments of the program's financial value, had no effect on women's perceptions of financial value, and had no effect on reports of intra-household discord about the sign-up decision (columns (1)-(4) in Panel B of Table 6). The effect on family members' perceptions of financial value is likely in part a direct effect of the promotion. The null effect on women's assessments of financial value contrasts the positive effect of promotion treatment alone on this outcome. This is consistent with women who have a high sense of agency not succumbing to their families' opinions. But how did these women advocate for their own preferences in their households? The effects of promotion treatment only and both treatments on family members' perceptions of financial value are statistically identical, meaning GSE treatment had no effect on this outcome when the promotion was given. Assignment to both treatments had no effect on women's or family members' reports of discord, and resulted in more discord than assignment to either treatment alone. Perhaps women who chose to advocate against their employment did not try to persuade their families that

this was the right decision but instead vetoed working, and this resulted in a more disagreeable decision process than when women persuaded their families that working was the right decision.<sup>40</sup>

I probe two additional aspects of the effects on perceived financial value of the firm's program. First, I ask whether effects reflect differences in knowledge of basic facts about the program. In particular, positive effects could reflect more positive beliefs about the wage the program offered or awareness that the program offered training in weaving. There is evidence suggesting some of the effects on perceived financial value are driven by higher perceptions of the program's wage, but I find no effects on knowledge that ability to weave was not required to sign up for the program (columns (1)-(4) in Appendix Table A.15). Next, I consider whether effects on perceived financial value represent more enthusiasm about the program in general and not its financial value in particular. Contrary to this explanation, I find no effects on family members' or women's reports that an issue with this particular opportunity, that the woman having too many duties at home, or that it not being appropriate for a woman to work outside the home were reasons to not sign up for the firm's program (columns (5)-(10) in Appendix Table A.15).

I also consider effects on whether households discussed the opportunity. I find that a large majority of households discussed it but neither treatment affected whether they did so (columns (5) and (6) in Table 6). In the control group, 79.3% of families and 85.5% of women said they discussed the opportunity with each other. I find no treatment effects on either outcome. Appendix Table A.16 probes these findings further, considering effects on the number of discussions, on the length of each discussion, and on whether women initiated the discussions. These outcomes were largely unaffected by the treatments. Moreover, I designed an incentivized task to observe women's choices to discuss with their husbands, possibly at a price, a consumption decision about which men's and women's preferences were likely to differ. The task was done during the five-month endline. I find no effects of GSE treatment on women's choices (Appendix Table A.17).<sup>41</sup> These results suggest that raising women's agency does not change whether conversations between households members happen but instead change what is conveyed in conversations that would anyway occur.

Finally, I consider effects on who made the final sign-up decision (columns (7) and (8) in Table 6). I asked family members and women who made the final decision, and create indicators for reporting the woman alone or the woman with others made the decision. The percentage of women involved in the final decision was relatively high by Indian standards (76.6% according to family members and 77.6% according to women), and there were little to no effects on it. It could be that households ensure women consent to the final decision, but that a sense of agency affects decision processes leading up to the final decision.

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<sup>40</sup>The effects on initial interest in Section 6.1 suggest similar numbers of women would have been advocating for and against employment in the both treatment cell. We might expect to find some positive effect on family members' assessments of financial value from the women advocating for. It could be that the number advocating for was too small to produce a detectable effect on family members' assessments, or that more women became opposed over time.

<sup>41</sup>Interestingly, assignment to promotion treatment, and in particular to promotion treatment alone, made women more likely to discuss when there was no price for doing so and less likely to discuss at the highest price. These effects were likely caused by the employment the promotion treatment on its own produced.

## 6.4 Effects on Employment in the Long Run

I find no effects on employment in the long run. 19.0% of women assigned neither treatment worked off their own farms in the two weeks prior to their 13-month surveys, and there are no differences in this level across treatment groups (column (1) in Table 7). Effects on this measure of overall employment do not mask strong patterns of effects in particular employment sectors (Appendix Table A.18). I do not have data from the partner firm’s records on participation in its program in the long run, but I find no effects on program participation at 13 months in survey data (column (4) in Appendix Table A.18).

Why do the short-run employment effects not persist? By far the most common reason for dropping out of the partner firm’s program in the first three months (the months for which I have data) was that the woman had too many household chores; nearly 50% of dropouts were for this reason and each of the other reasons accounted for less than 15% of the dropouts (Figure 4). A natural question is why these chores were not allocated to other household members when women began working, especially for women with a high sense of agency who might have been able to advocate for this and for women whose family members were more supportive of them working. It may be that women’s completion of household chores is such a strong part of women’s identity and such a strong social norm that women do not want to give up doing chores and even family members who support women’s employment are not on board with women no longer doing household chores. On the five-month surveys, I asked family members and women whether they thought that a woman’s main role should be to tend to household chores; in the control group, 85.6% of family members and 83.2% of women agreed, and there are no treatment effects on these outcomes. Thus both the norm that women should perform household chores and women’s internalization of this norm are widespread. This is not changed by raising women’s agency or by making family members more supportive of women’s employment, even at a time when the two interventions alone had positive effects on women’s employment. Household chores are particularly onerous in this setting: households have many members and few modern home appliances. Perhaps women can both work and manage chores for a few months but not for longer.<sup>42</sup>

## 7 Effects on Saving

The effect of GSE treatment on GSE did, however, persist. Given this, and given the intervention could have affected many areas of women’s lives aside from employment, there may have been persistent effects on other economic outcomes. I collected some data on household saving behavior

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<sup>42</sup>This does not necessarily mean households’ decisions to have women start work were mistaken. They may have anticipated this and only planned for the women to work for a few months; this would have provided the household some extra money, could have provided some additional autonomy to women (in McKelway (2020) I do find evidence that work in this setting even over a short time horizon does give women some autonomy) and thus have made women interested in this, but would not have made it impossible for women to do the chores. In the case of the firm’s program, households may have only planned for women to complete the four-month training, at which point households would have the pay from the training period and the women would know how to weave in case the household ever needed her to work in the future.

and now turn to effects on these outcomes. One caveat is that unlike employment, saving was discussed (and encouraged) in the GSE curriculum, so any changes in these outcomes could reflect demand effects or channels distinct from sense of agency (e.g. preferences for saving).

GSE treatment increased women’s reports of saving and this effect persisted at least 13 months (columns (1)-(3) in Panel A of Table 8). I asked women at six weeks, five months, and 13 months whether they or anyone else in their households had contributed money to savings in the preceding two weeks. At these three endlines, 17.3%, 22.8%, and 21.8% of women assigned neither treatment said yes. GSE treatment increased these levels by 4.3 percentage points (a 24.9% increase, p-value = 0.091), 5.6 percentage points (a 24.6% increase, p-value = 0.044), and 9.0 percentage points (a 42.3% increase, p-value = 0.008). GSE treatment thus increased women’s reports of saving in the weeks immediately following the intervention and this effect persisted - and may actually have increased - over the year I tracked it. The GSE treatment effect does not differ by promotion treatment (columns (1)-(3) in Panel B of Table 8), though the GSE treatment only and both treatment effects are not always significant in the less-powered, saturated specification.

The promotion had no effect on these outcomes; there was no effect when the GSE intervention was not given, when it was, or overall (columns (1)-(3) in Table 8). On the one hand, this is not surprising given the promotion focused exclusively on women’s employment, but on the other hand, we might have expected women’s employment to affect savings. The findings that the treatment assignments that increased employment differ from the ones that increased savings, and that the savings effects persist while the employment ones do not, suggest employment did not affect these outcomes. It appears to be the GSE intervention itself and not employment that affected women’s reports of savings contributions.

Data also suggest GSE treatment made women more likely to have savings goals (columns (6) and (7) in Panel A of Table 8). At five and 13 months, I asked women whether they were saving up for anything in particular. 35.0% and 27.0% of women assigned neither treatment were saving up for something in particular at these two endlines. GSE treatment increased these levels by 7.3 and 12.4 percentage points, or by 20.9% and 45.9% (p-values = 0.031 and 0.000). The five-week effect is driven by women assigned both treatments, while at 13 months, the effects of GSE treatment only and of both treatments are positive, significant, and similar in magnitude to one another (columns (6) and (7) in Panel B of Table 8). It could be that raising women’s sense of agency raises their aspirations, or that discussions and activities in the GSE intervention around saving, goal setting, and goal pursuit produced persistent increases in the likelihood that women set savings goals. Either way, these results suggest greater aspirations for savings may help explain why GSE-treatment women were more likely to report contributions to savings.

I find few effects on family members’ reports of saving (columns (4) and (5) in Table 8). At six weeks and five months, I asked family members the same question about saving as I asked women. GSE treatment had a positive effect on family member reports at six weeks. This effect was driven by a highly significant effect of GSE treatment only while there was no effect of assignment to both treatments. There were no effects at five months. Thus, the effects present on women’s reports are,

for the most part, not present on family members' reports.

I see two possible explanations for the different effects on women's and family members' reports. The first is that GSE treatment did not change households' propensity to save but led women to become more involved in savings decisions. One caveat is that a similar fraction of women and family members in the control group reported savings contributions (this explanation would predict a lower fraction for women), but it is possible family members were more reluctant to report contributions to a surveyor than women were.<sup>43</sup> The second explanation is that the effects on women's reports reflect women saving independently what resources were in their control. This notion is somewhat at odds with savings effects being from different treatments and over different time horizons than employment effects, but perhaps employment did not affect women's propensity to save even if it allowed women to save more. Both explanations are consistent with GSE treatment granting women greater agency in savings decisions in the short and the long run.

## 8 Conclusion

Women in poor countries exercise little agency (Jayachandran, 2015), and raising women's agency is widely seen as a key step towards reaching gender equality (World Bank, 2012). This paper studies the role of women's sense of agency. I operationalize sense of agency using the GSE concept from psychology and evaluate the effects of a psychosocial intervention that sought to raise GSE of women in rural India. The intervention produced a persistent increase in women's GSE; led women to advocate for themselves in household decisions about their labor supply, producing meaningful effects on their employment in the weeks and months immediately following the intervention; and affected women's savings goals and behavior in the short and the long run.

Why might women in poor countries lack a sense of agency? One possible explanation is that the life experiences of these women - the low education, regressive gender attitudes, and other inequities they face (Duflo, 2012; Jayachandran, 2015) - may suggest to women that they are not agents capable of taking actions that would allow them to reach goals. These pessimistic beliefs could result in women not taking these actions and not learning they could succeed. But ultimately, answering the question of why women's sense of agency is low is outside the scope of this paper.

In sum, my results suggest the agency of women in poor countries may be constrained by women's own sense of agency. A scalable psychosocial intervention can help women develop a sense of agency and motivate them to take actions to change economic outcomes. There are of course many barriers to women's agency that a sense of agency cannot overcome. Future research should study how policymakers might combine psychosocial interventions with interventions that relax these external barriers, and investigate why women in poor settings might lack a sense of agency.

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<sup>43</sup>Pilot participants were reluctant to answer detailed questions about savings (e.g. the amount or how they saved) as they were being surveyed at home where their savings were often stored. I decided to use the less invasive question about having contributed to savings in response, but it is possible some reluctance about reporting savings remained. Women, regardless of treatment group, had more interaction with surveyors across the course of the study than their family members. This may have made women more comfortable than family members reporting savings contributions to surveyors.



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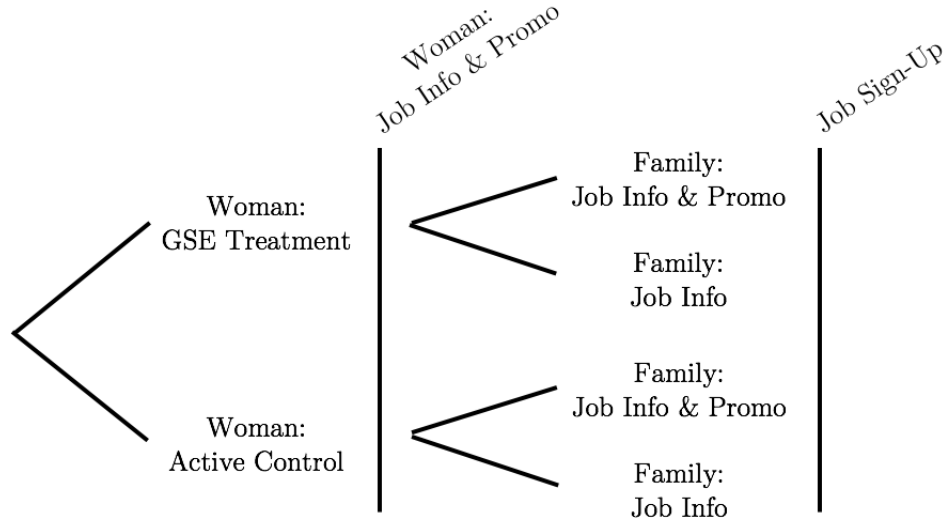
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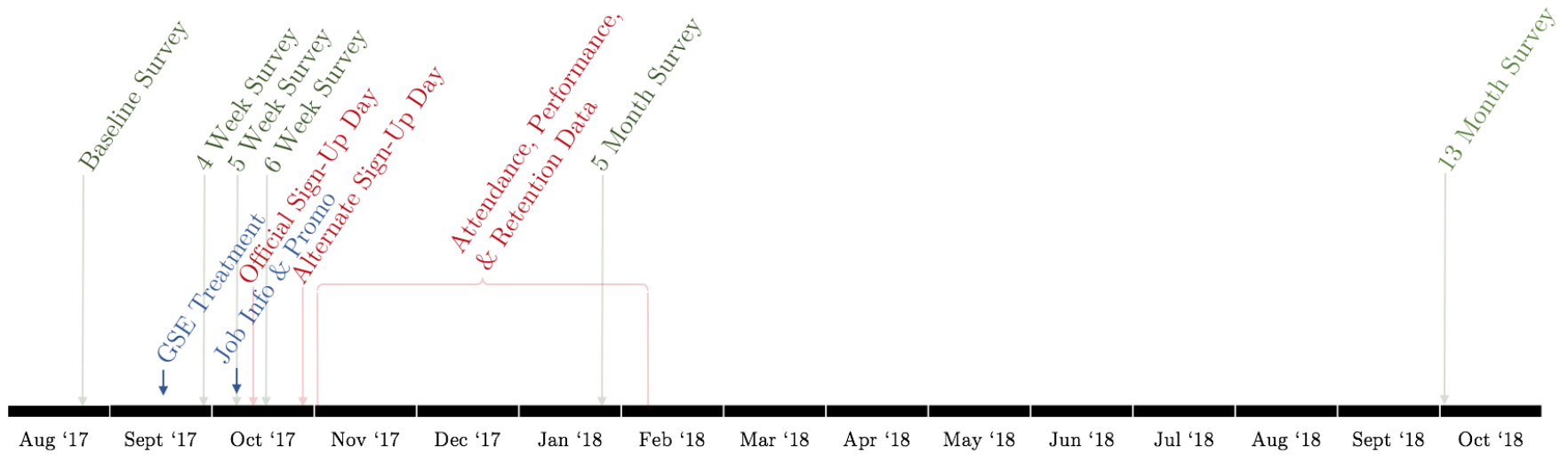
# Figures and Tables

Figure 1: Experimental Design



*Notes:* This figure visualizes the experimental design. The 1,022 women who enrolled in the study were assigned GSE treatment or control. Following this intervention, all women were given details about the firm's program and a promotion for it. A cross-randomization determined whether their families were given details only or both details and promotion. Sign-up for the program began after the interventions were delivered.

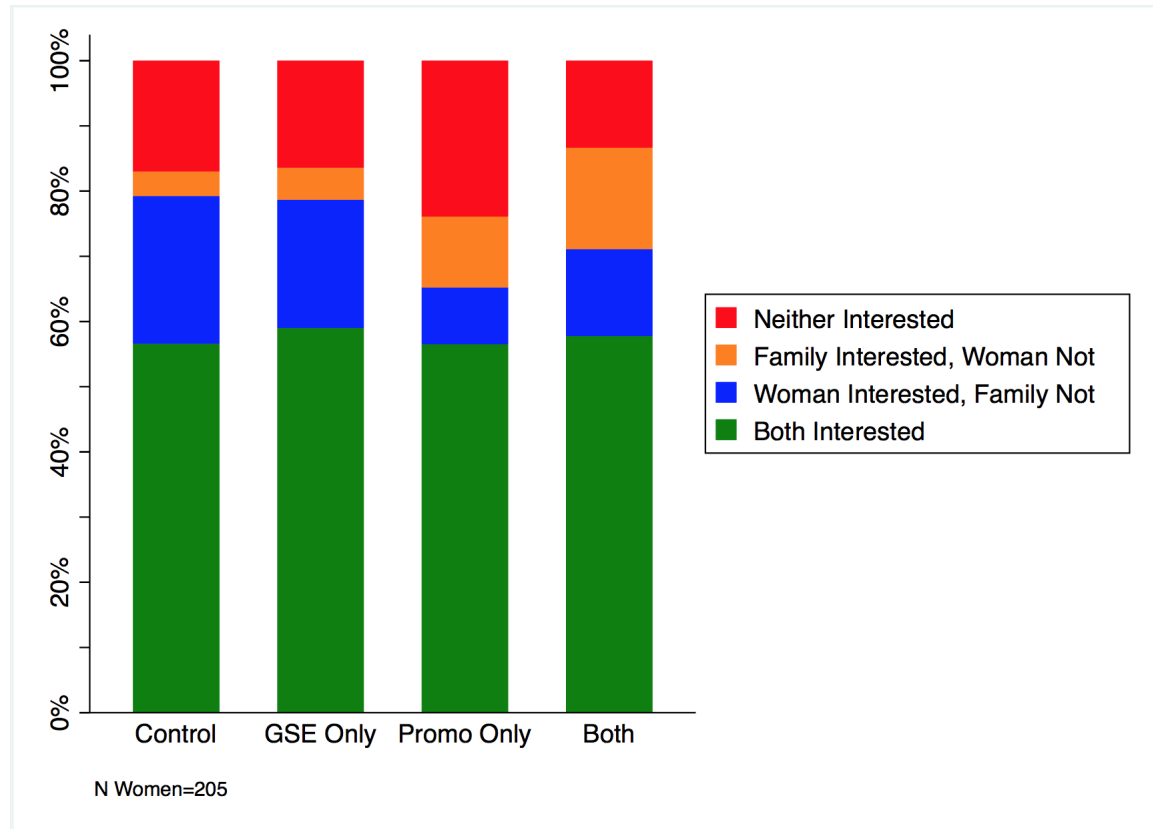
Figure 2: Study Timeline



*Notes:* This figure visualizes the timeline of the experimental interventions and the data collection. The interventions are noted on the timeline in blue. The activities in the firm's program that I observe are noted in red. The six waves of surveys are noted in green.

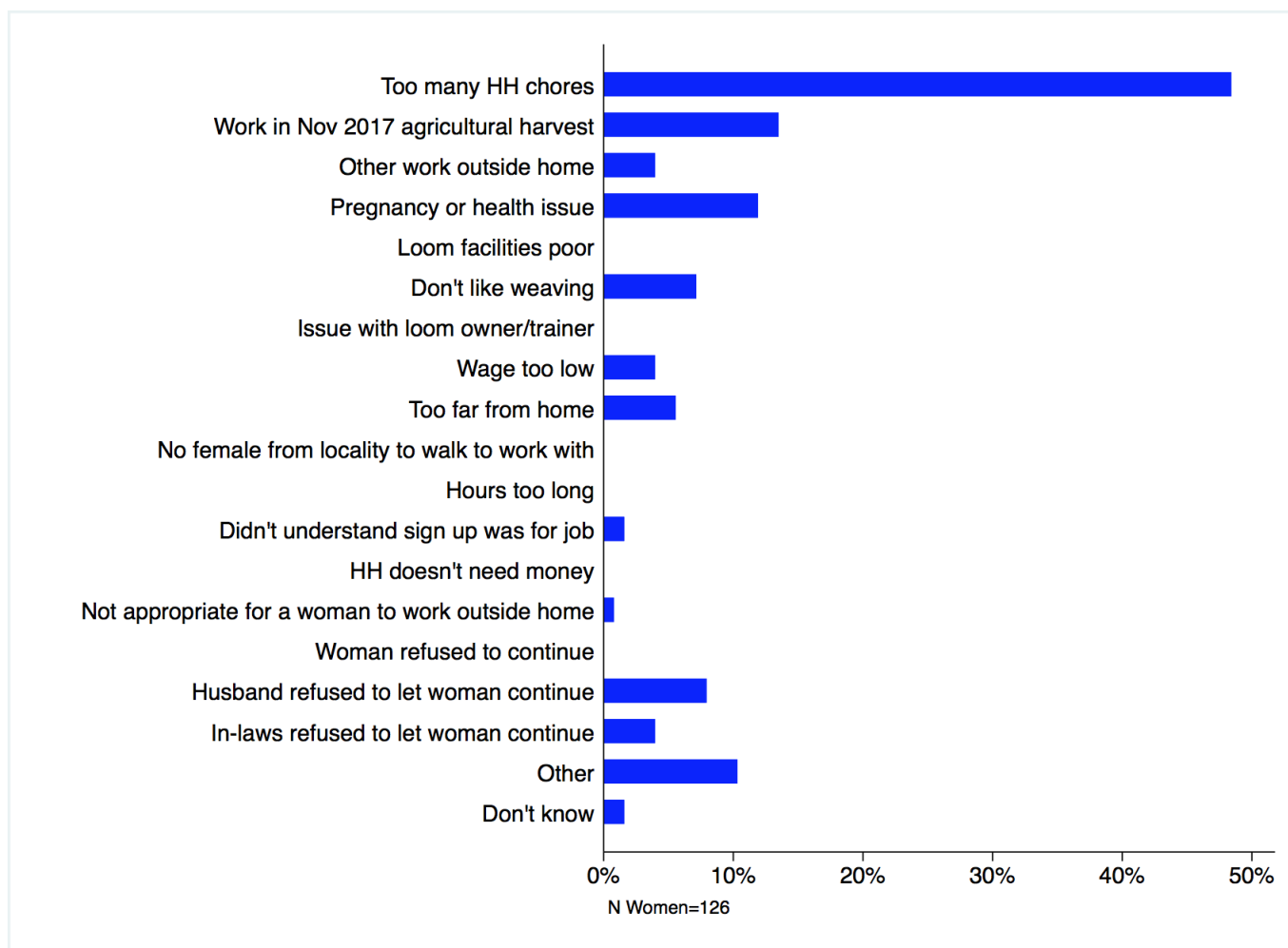


Figure 3: Distribution of Interest in Sign-Up within the Household



*Notes:* This figure presents the distribution of interest in sign-up within the household. For each of the four treatment cells, the figure visualizes the fraction of households in which neither the woman or her family were interested, in which only one of the two parties was interested, and in which both were interested. Interest data come from the five-week surveys and were recorded just after the job details and/or promotion were given. See Appendix Section D.3 for additional information on the interest variables. So as to capture effects of promotion treatment on women's interest, the sample is restricted to woman-family pairs in which the women's interest was assessed after promotion treatment or control was delivered to the families. Appendix Table A.10 presents a regression version of this figure with associated standard errors and p-values.

Figure 4: Reasons for Dropping Out of Firm's Program



*Notes:* This figure visualizes the reasons for dropping out of the firm's program. The sample is restricted to women who signed up and were invited to participate (either when the program began or later from the waitlist), but who never participated or participated and later dropped out. I include all women who I observe dropping out in my retention data, which includes the first three months of training for four centers, a bit more than three months for one center, and a bit less than three months for the last. Each bar represents the percentage of women for whom a given reason for dropout was recorded. Multiple reasons may have been recorded for any woman. See Appendix Section D.2.1 for additional information on this data.

Table 1: GSE Questionnaire

- 
- 
1. Can you always manage to solve difficult problems if you try hard enough?
  2. If someone opposes you, can you find some way to get what you want?
  3. Is it easy for you to stick to and accomplish your goals?
  4. Are you confident that you could deal efficiently with unexpected events?
  5. Do you know how to handle unforeseen situations by using your resourcefulness?
  6. Can you solve most problems if you invest the necessary effort?
  7. Can you remain calm when facing difficulties by relying on your coping abilities?
  8. When you are confronted with a problem, can you usually find several solutions?
  9. If you are in trouble, can you usually think of a solution?
  10. Can you usually handle whatever comes your way?
- 
- 

*Notes:* This table presents the questionnaire used to measure GSE. It is the Schwarzer and Jerusalem (1995) GSE scale with some modification to enhance comprehension of respondents in my setting. See Appendix Section D.1.1 for details on the differences between this questionnaire and the original scale, and Appendix Section D.1.2 for details on how GSE is defined from responses to this questionnaire.

Table 2: Baseline Characteristics and Balance

	(1)	(2)	(3)	(4)	(5) (6) (7) P-Value for Test that:			(8)
	$T_0$ Mean	$T_1 - T_0$	$T_2 - T_0$	$T_3 - T_0$	$T_1 = T_2$	$T_1 = T_3$	$T_2 = T_3$	N Women
Age	29.461	0.931 (0.526) [0.077]	-0.045 (0.477) [0.924]	0.489 (0.538) [0.365]	0.053	0.423	0.304	1022
Married (=1)	0.984	-0.015 (0.012) [0.209]	0.005 (0.010) [0.639]	0.003 (0.010) [0.773]	0.096	0.115	0.830	1022
Pregnant (=1)	0.078	-0.000 (0.023) [0.984]	0.004 (0.023) [0.859]	0.042 (0.025) [0.095]	0.854	0.101	0.152	1022
Number of Children	2.674	0.164 (0.132) [0.214]	-0.089 (0.127) [0.481]	0.054 (0.137) [0.692]	0.039	0.402	0.262	1022
Lives in In-Laws' Village (=1)	0.992	-0.019 (0.011) [0.099]	-0.013 (0.010) [0.177]	0.000 (0.009) [0.960]	0.677	0.110	0.188	1022
Number of Adults in HH	4.097	-0.321 (0.253) [0.206]	0.078 (0.253) [0.758]	0.071 (0.272) [0.795]	0.127	0.136	0.979	1022
Parent or Parent-in-Law in HH (=1)	0.543	-0.051 (0.046) [0.267]	0.007 (0.045) [0.881]	0.001 (0.045) [0.983]	0.213	0.248	0.900	1022
From Scheduled Caste or Tribe (=1)	0.481	0.013 (0.035) [0.702]	0.018 (0.033) [0.587]	-0.027 (0.033) [0.421]	0.890	0.203	0.133	1022
No Education (=1)	0.419	0.104 (0.042) [0.015]	0.079 (0.043) [0.069]	0.078 (0.045) [0.081]	0.539	0.536	0.978	1022
% GSE Questions Agreed With	63.256	-1.383 (2.636) [0.600]	1.544 (2.599) [0.553]	-0.926 (2.570) [0.719]	0.285	0.865	0.358	1022
Working off Own Farm (=1)	0.143	0.010 (0.030) [0.751]	-0.004 (0.029) [0.902]	0.016 (0.033) [0.624]	0.667	0.847	0.553	1022
HH Member Contributed to Savings in Last 2 Weeks (=1)	0.155	-0.016 (0.030) [0.585]	0.048 (0.035) [0.176]	0.003 (0.034) [0.938]	0.060	0.544	0.229	1022

*Notes:* This table presents average values of 12 baseline variables and tests for balance by GSE and promotion treatment assignment.  $T_0$  denotes the group of women assigned neither treatment,  $T_1$  the group assigned GSE treatment and promotion control,  $T_2$  the group assigned GSE control and promotion treatment, and  $T_3$  the group assigned both treatments. Column (1) presents means of the baseline variables in  $T_0$ . Columns (2)-(4) present coefficients, standard errors (in parentheses), and p-values (in brackets) from regressions of the baseline variables on indicators for  $T_1$ ,  $T_2$ , and  $T_3$ . The regressions include strata fixed effects. Standard errors are clustered at both the household and the meeting group  $\times$  promotion treatment levels. Columns (5)-(7) present p-values from tests that each pair of coefficients from columns (2)-(4) are equal.

Table 3: Effects of GSE and Promotion Treatments on GSE

	(1)	(2)	(3)	(4)	(5)
	% GSE Questions Agreed With				
	at 4 Weeks	at 5 Weeks	at 6 Weeks	at 5 Months	at 13 Months
<b>Panel A: Unsaturated Specification</b>					
$\gamma_1$ : GSE Treat	9.572 (2.416) [0.000]	4.959 (2.013) [0.015]	3.230 (1.796) [0.074]	3.123 (1.681) [0.065]	3.890 (1.964) [0.049]
$\gamma_2$ : Promo Treat	1.642 (2.033) [0.420]	1.548 (2.135) [0.469]	0.121 (1.938) [0.950]	0.337 (1.794) [0.851]	0.032 (2.211) [0.988]
P-Value for Test that:					
$\gamma_1 = \gamma_2$	0.021	0.254	0.228	0.240	0.197
Strata FE	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>					
$\beta_1$ : GSE Treat & Promo Control	10.383 (3.370) [0.002]	2.662 (3.022) [0.379]	5.607 (2.758) [0.043]	3.616 (2.505) [0.150]	3.286 (2.741) [0.232]
$\beta_2$ : GSE Control & Promo Treat	1.847 (3.206) [0.565]	-1.130 (2.977) [0.705]	2.344 (2.590) [0.366]	0.625 (2.513) [0.804]	-1.182 (2.981) [0.692]
$\beta_3$ : GSE Treat & Promo Treat	11.065 (2.883) [0.000]	6.638 (2.825) [0.019]	3.231 (2.684) [0.229]	3.330 (2.597) [0.201]	3.271 (2.865) [0.255]
P-Value for Test that:					
$\beta_1 = \beta_2$	0.011	0.196	0.197	0.208	0.127
$\beta_1 = \beta_3$	0.828	0.152	0.364	0.906	0.996
$\beta_2 = \beta_3$	0.001	0.004	0.716	0.276	0.131
Strata FE	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	70.429	72.166	75.093	78.081	73.793
N Women	648	868	855	795	674

*Notes:* This table presents effects of the GSE and promotion treatments on GSE. The outcomes are the percent of the 10 questions on the GSE questionnaire (in Table 1) that the respondent agreed with at each of the five endlines. See Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table 4: Effects of GSE and Promotion Treatments on Interest in Sign-Up

	(1)	(2)
	Interested (=1)	
	Family	Woman
<b>Panel A: Unsaturated Specification</b>		
$\gamma_1$ : GSE Treat	0.052 (0.029) [0.081]	-0.019 (0.051) [0.708]
$\gamma_2$ : Promo Treat	0.028 (0.036) [0.438]	-0.151 (0.060) [0.012]
P-Value for Test that:		
$\gamma_1 = \gamma_2$	0.622	0.096
Strata FE	Yes	Yes
PDS Lasso X	Yes	Yes
<b>Panel B: Saturated Specification</b>		
$\beta_1$ : GSE Treat & Promo Control	0.064 (0.046) [0.164]	-0.072 (0.077) [0.349]
$\beta_2$ : GSE Control & Promo Treat	0.034 (0.043) [0.436]	-0.199 (0.085) [0.021]
$\beta_3$ : GSE Treat & Promo Treat	0.079 (0.043) [0.069]	-0.166 (0.076) [0.029]
P-Value for Test that:		
$\beta_1 = \beta_2$	0.512	0.117
$\beta_1 = \beta_3$	0.758	0.221
$\beta_2 = \beta_3$	0.310	0.685
Strata FE	Yes	Yes
PDS Lasso X	Yes	Yes
GSE Control & Promo Control Mean	0.549	0.792
Sample Restrictions	None	Met Woman After
N Women	790	205

*Notes:* This table presents effects of the GSE and promotion treatments on interest in signing up for the firm's program. The outcome in column (1) is an indicator for women's family members expressing interest in the women signing up, and the outcome in column (2) is an indicator for women expressing interest in signing up. Both outcomes come from the five-week surveys and were recorded just after the job details and/or promotion were given. See Appendix Section D.3 for additional information on these outcomes. So as to capture effects of promotion treatment on women's interest, the sample in column (2) is restricted to women whose interest was assessed after promotion treatment or control was delivered to their families. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table 5: Effects of GSE and Promotion Treatments on Short-Run Employment

	(1)	(2)	(3)	(4)
	Participation in Firm's Program		Working off Own Farm (=1)	
		Attended in First 2 Months (=1)	at 6 Weeks	at 5 Months
	Signed Up (=1)			
<b>Panel A: Unsaturated Specification</b>				
$\gamma_1$ : GSE Treat	-0.008 (0.025) [0.739]	-0.003 (0.018) [0.866]	0.001 (0.020) [0.963]	0.022 (0.024) [0.365]
$\gamma_2$ : Promo Treat	0.038 (0.028) [0.177]	0.016 (0.020) [0.416]	-0.002 (0.022) [0.916]	0.018 (0.027) [0.505]
P-Value for Test that:				
$\gamma_1 = \gamma_2$	0.240	0.496	0.919	0.921
Strata FE	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>				
$\beta_1$ : GSE Treat & Promo Control	0.048 (0.035) [0.169]	0.035 (0.024) [0.152]	0.061 (0.029) [0.039]	0.087 (0.033) [0.009]
$\beta_2$ : GSE Control & Promo Treat	0.096 (0.038) [0.012]	0.055 (0.025) [0.032]	0.061 (0.028) [0.030]	0.076 (0.034) [0.027]
$\beta_3$ : GSE Treat & Promo Treat	0.029 (0.036) [0.412]	0.013 (0.025) [0.605]	-0.003 (0.027) [0.912]	0.038 (0.036) [0.301]
P-Value for Test that:				
$\beta_1 = \beta_2$	0.218	0.479	0.984	0.772
$\beta_1 = \beta_3$	0.593	0.410	0.032	0.188
$\beta_2 = \beta_3$	0.087	0.132	0.026	0.321
Strata FE	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.221	0.085	0.131	0.187
N Women	1022	1022	854	794

*Notes:* This table presents effects of the GSE and promotion treatments on employment in the short run. The outcome in column (1) is an indicator for signing up for the firm's program, and the outcome in column (2) is an indicator for ever attending the program in the first two months of training. The outcomes in columns (3) and (4) are indicators for having done any work for income off one's household's farm in the preceding two weeks. They come from women's six-week and five-month surveys. See Appendix Section D.2 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table 6: Effects on Sign-Up Decision-Making Process

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Financial Value Index		Household Discord Index		Household Discussed Opportunity (=1)		Woman Made Final Decision (=1)	
	Family's Reports	Woman's Reports	Family's Reports	Woman's Reports	Family's Report	Woman's Report	Family's Report	Woman's Report
<b>Panel A: Unsaturated Specification</b>								
$\gamma_1$ : GSE Treat	0.127 (0.069) [0.066]	-0.134 (0.063) [0.036]	-0.014 (0.059) [0.809]	-0.037 (0.072) [0.607]	0.031 (0.027) [0.264]	0.019 (0.023) [0.401]	0.023 (0.029) [0.432]	-0.003 (0.027) [0.902]
$\gamma_2$ : Promo Treat	0.155 (0.088) [0.081]	0.046 (0.076) [0.541]	-0.005 (0.076) [0.952]	0.045 (0.078) [0.567]	0.003 (0.033) [0.936]	0.013 (0.025) [0.610]	-0.014 (0.034) [0.695]	-0.003 (0.027) [0.926]
P-Value for Test that:								
$\gamma_1 = \gamma_2$	0.811	0.074	0.918	0.387	0.518	0.850	0.426	0.981
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>								
$\beta_1$ : GSE Treat & Promo Control	0.300 (0.115) [0.009]	0.058 (0.097) [0.551]	-0.172 (0.097) [0.078]	-0.279 (0.108) [0.010]	0.023 (0.045) [0.601]	0.006 (0.036) [0.875]	-0.022 (0.044) [0.619]	-0.010 (0.037) [0.793]
$\beta_2$ : GSE Control & Promo Treat	0.303 (0.106) [0.004]	0.254 (0.096) [0.008]	-0.173 (0.088) [0.050]	-0.205 (0.104) [0.049]	-0.017 (0.045) [0.710]	0.005 (0.032) [0.866]	-0.070 (0.045) [0.116]	-0.012 (0.039) [0.770]
$\beta_3$ : GSE Treat & Promo Treat	0.286 (0.109) [0.009]	-0.081 (0.097) [0.402]	-0.008 (0.099) [0.933]	-0.002 (0.115) [0.984]	0.028 (0.043) [0.519]	0.027 (0.034) [0.427]	0.011 (0.045) [0.810]	0.003 (0.039) [0.935]
P-Value for Test that:								
$\beta_1 = \beta_2$	0.973	0.046	0.984	0.424	0.357	0.995	0.291	0.961
$\beta_1 = \beta_3$	0.909	0.155	0.114	0.006	0.916	0.523	0.478	0.723
$\beta_2 = \beta_3$	0.874	0.001	0.074	0.042	0.291	0.488	0.092	0.714
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.000	0.255	0.000	0.242	0.793	0.855	0.766	0.776
N Women	763	853	763	852	763	853	763	853

*Notes:* This table presents effects of the GSE and promotion treatments on household decision-making about sign-up. The outcomes in columns (1) and (2) are indices that reflect family members' and women's perceived financial value of the firm's program. The indices include indicators for saying that the household earning extra money and that the woman acquiring a valuable skill were reasons to sign up. The outcomes in columns (3) and (4) are indices that reflect the amount of discord within the household about the sign-up decision based on reports of family members and of women. The indices include indicators for saying that the woman and family members disagreed about whether the woman should sign up, and for saying that discussions within the household were argumentative. The financial value and household discord indices are standardized against the distribution of family members in the control group. The outcomes in columns (5) and (6) are indicators for family members and women reporting they discussed the opportunity with each other a non-zero number of times. The outcomes in columns (7) and (8) are indicators for family members and women saying the final sign-up decision was made by the women or by the women and other household members equally. All outcomes in this table come from the six-week surveys, which occurred in the week following the official sign-up day. See Appendix Section D.3 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.



Table 7: Understanding Effects on Long-Run Employment

	(1)	(2)	(3)
		A Woman's Main Role Should Be HH Chores (=1)	
	Working off Own Farm (=1), at 13 Months	Family's Report, at 5 Months	Woman's Report, at 5 Months
<b>Panel A: Unsaturated Specification</b>			
$\gamma_1$ : GSE Treat	-0.006 (0.029) [0.847]	-0.006 (0.022) [0.773]	0.031 (0.025) [0.220]
$\gamma_2$ : Promo Treat	-0.008 (0.032) [0.799]	-0.016 (0.024) [0.517]	0.004 (0.025) [0.879]
P-Value for Test that:			
$\gamma_1 = \gamma_2$	0.952	0.766	0.449
Strata FE	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>			
$\beta_1$ : GSE Treat & Promo Control	0.005 (0.043) [0.905]	0.023 (0.031) [0.453]	0.028 (0.033) [0.397]
$\beta_2$ : GSE Control & Promo Treat	-0.007 (0.041) [0.863]	0.008 (0.031) [0.804]	-0.007 (0.036) [0.849]
$\beta_3$ : GSE Treat & Promo Treat	-0.012 (0.043) [0.779]	-0.018 (0.033) [0.596]	0.036 (0.034) [0.289]
P-Value for Test that:			
$\beta_1 = \beta_2$	0.764	0.625	0.333
$\beta_1 = \beta_3$	0.678	0.202	0.791
$\beta_2 = \beta_3$	0.905	0.453	0.232
Strata FE	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.190	0.856	0.832
N Women	674	764	793

*Notes:* This table investigates effects on employment in the long run. The outcome in column (1) is an indicator for having done any work for income off one's household's farm in the preceding two weeks. It comes from women's 13-month surveys. See Appendix Section D.2 for additional information on this outcome. The outcomes in columns (2) and (3) are indicators for family members and women agreeing that a woman's main role should be household chores. These outcomes come from surveys at five months. See Appendix Section D.3 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

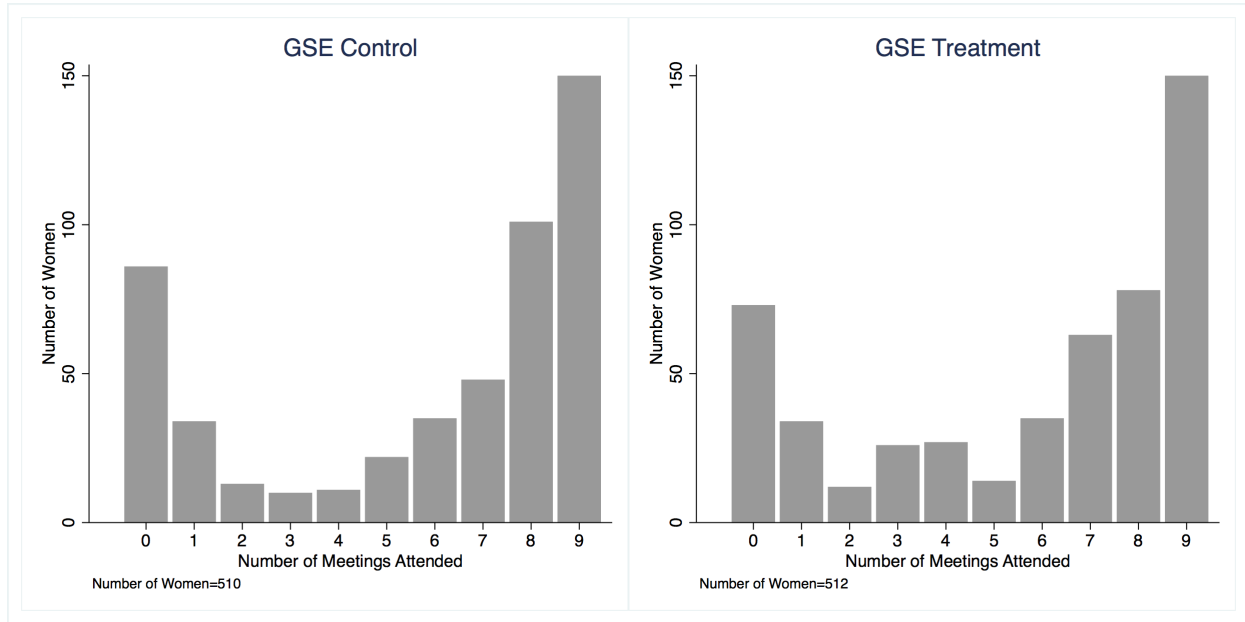
Table 8: Effects on Saving

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	HH Member Contributed to Savings in Last 2 Weeks (=1), Woman's Report			HH Member Contributed to Savings in Last 2 Weeks (=1), Family's Report		Woman Saving Up for Something (=1)	
	at 6 Weeks	at 5 Months	at 13 Months	at 6 Weeks	at 5 Months	at 5 Months	at 13 Months
<b>Panel A: Unsaturated Specification</b>							
$\gamma_1$ : GSE Treat	0.043 (0.025) [0.091]	0.056 (0.028) [0.044]	0.090 (0.033) [0.008]	0.040 (0.024) [0.099]	0.006 (0.028) [0.841]	0.073 (0.033) [0.031]	0.124 (0.035) [0.000]
$\gamma_2$ : Promo Treat	0.017 (0.027) [0.519]	-0.008 (0.030) [0.792]	-0.019 (0.033) [0.558]	-0.040 (0.026) [0.117]	0.020 (0.034) [0.557]	0.033 (0.032) [0.300]	0.015 (0.036) [0.686]
P-Value for Test that: $\gamma_1 = \gamma_2$	0.490	0.103	0.021	0.043	0.745	0.386	0.025
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>							
$\beta_1$ : GSE Treat & Promo Control	0.036 (0.036) [0.310]	0.083 (0.040) [0.037]	0.110 (0.048) [0.022]	0.132 (0.035) [0.000]	-0.007 (0.044) [0.870]	0.039 (0.045) [0.386]	0.158 (0.050) [0.002]
$\beta_2$ : GSE Control & Promo Treat	0.017 (0.036) [0.632]	0.015 (0.040) [0.707]	0.006 (0.047) [0.898]	0.041 (0.035) [0.238]	0.008 (0.041) [0.853]	-0.003 (0.046) [0.951]	0.053 (0.048) [0.267]
$\beta_3$ : GSE Treat & Promo Treat	0.059 (0.037) [0.115]	0.046 (0.043) [0.279]	0.066 (0.047) [0.164]	0.004 (0.030) [0.894]	0.029 (0.045) [0.511]	0.110 (0.046) [0.017]	0.137 (0.052) [0.009]
P-Value for Test that: $\beta_1 = \beta_2$	0.605	0.084	0.026	0.019	0.739	0.359	0.027
$\beta_1 = \beta_3$	0.545	0.368	0.353	0.000	0.433	0.112	0.680
$\beta_2 = \beta_3$	0.280	0.461	0.196	0.286	0.628	0.017	0.094
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.173	0.228	0.218	0.149	0.232	0.350	0.270
N Women	854	793	674	763	772	793	674

*Notes:* This table investigates effects of the GSE and promotion treatments on saving. The outcomes in columns (1)-(3) are indicators for women reporting a household member had contributed to savings in the last two weeks. They come from women's six-week, five-month, and 13-month surveys. The outcomes in columns (4) and (5) are family members' reports of the same variable at six weeks and five months. The outcomes in columns (6) and (7) are indicators for women saying at the five- and 13-month surveys that they were saving up for something. See Appendix Section D.4 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

## Appendix A: Appendix Figures and Tables

Figure A.1: Distribution of Number of GSE Treatment and Control Meetings Attended



*Notes:* This figure presents the distribution of the number of GSE treatment and control meetings attended. Women could attend up to nine group meetings during the GSE intervention period. For GSE treatment women, each meeting was part of the GSE intervention, and for GSE control women, each meeting involved a group survey. Each bar in the figure represents the number of women of a given GSE treatment status who attended a given number of meetings.

Table A.1: Relationships between Baseline GSE and Other Baseline Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	% GSE Questions Agreed With										
Age	-0.511 (0.176) [0.004]										
Married (=1)		-7.886 (7.298) [0.280]									
Pregnant (=1)			3.324 (3.294) [0.313]								
Number of Children				-0.944 (0.672) [0.161]							
Lives in In-Laws' Village (=1)					2.325 (7.236) [0.748]						
Number of Adults in HH						1.010 (0.420) [0.016]					
Parent or Parent-in-Law in HH (=1)							3.872 (2.006) [0.054]				
From Scheduled Caste or Tribe (=1)								2.444 (2.007) [0.224]			
No Education (=1)									-10.935 (1.976) [0.000]		
Working off Own Farm (=1)										3.862 (2.992) [0.197]	
HH Member Contributed to Savings in Last 2 Weeks (=1)											12.952 (2.226) [0.000]
Constant	77.998 (5.263) [0.000]	70.556 (7.228) [0.000]	62.519 (1.056) [0.000]	65.352 (2.052) [0.000]	60.526 (7.165) [0.000]	58.747 (1.965) [0.000]	60.766 (1.479) [0.000]	61.661 (1.368) [0.000]	68.233 (1.288) [0.000]	62.245 (1.070) [0.000]	60.679 (1.123) [0.000]
N Women	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022

*Notes:* This table presents relationships between baseline GSE and 11 other baseline characteristics. GSE is defined as the percent of the 10 questions on the GSE questionnaire (in Table 1) that the respondent agreed with. See Appendix Section D.1.2 for additional information on this variable. Each column presents results from a bivariate regression of GSE on one of the 11 other baseline characteristics. Robust standard errors are in parentheses and p-values in brackets.

Table A.2: Attendance at GSE Intervention and Job Information Meetings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Woman Attended GSE Treatment or Control Meeting (=1)									Attended Job Info Meeting (=1)	
	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	Woman	Family
<b>Panel A: Unsaturated Specification</b>											
$\gamma_1$ : GSE Treat	0.035 (0.025) [0.158]	0.040 (0.028) [0.147]	0.008 (0.026) [0.764]	-0.002 (0.028) [0.949]	-0.026 (0.026) [0.321]	-0.010 (0.029) [0.720]	-0.029 (0.027) [0.286]	-0.037 (0.029) [0.202]	-0.017 (0.029) [0.548]	0.031 (0.020) [0.113]	0.004 (0.023) [0.859]
$\gamma_2$ : Promo Treat	0.036 (0.029) [0.223]	0.022 (0.029) [0.455]	0.010 (0.032) [0.761]	0.014 (0.029) [0.634]	0.001 (0.031) [0.968]	-0.016 (0.030) [0.602]	-0.008 (0.029) [0.778]	-0.002 (0.028) [0.943]	-0.010 (0.032) [0.760]	-0.018 (0.022) [0.417]	-0.033 (0.027) [0.224]
P-Value for Test that:											
$\gamma_1 = \gamma_2$	0.984	0.632	0.961	0.702	0.501	0.893	0.595	0.384	0.861	0.104	0.289
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>											
$\beta_1$ : GSE Treat & Promo Control	0.054 (0.038) [0.151]	0.056 (0.039) [0.158]	-0.027 (0.040) [0.501]	0.022 (0.040) [0.591]	-0.009 (0.041) [0.835]	-0.008 (0.043) [0.849]	0.019 (0.040) [0.635]	-0.032 (0.038) [0.405]	0.003 (0.043) [0.948]	0.040 (0.029) [0.164]	0.010 (0.037) [0.788]
$\beta_2$ : GSE Control & Promo Treat	0.055 (0.036) [0.125]	0.037 (0.037) [0.318]	-0.026 (0.040) [0.521]	0.037 (0.038) [0.326]	0.019 (0.038) [0.616]	-0.014 (0.039) [0.722]	0.040 (0.037) [0.273]	0.003 (0.037) [0.941]	0.010 (0.043) [0.807]	-0.009 (0.033) [0.780]	-0.027 (0.036) [0.452]
$\beta_3$ : GSE Treat & Promo Treat	0.071 (0.037) [0.058]	0.062 (0.042) [0.137]	0.018 (0.040) [0.651]	0.012 (0.040) [0.773]	-0.025 (0.041) [0.536]	-0.026 (0.042) [0.532]	-0.038 (0.040) [0.344]	-0.038 (0.040) [0.334]	-0.027 (0.044) [0.536]	0.013 (0.029) [0.664]	-0.029 (0.036) [0.431]
P-Value for Test that:											
$\beta_1 = \beta_2$	0.980	0.637	0.969	0.697	0.495	0.893	0.577	0.376	0.855	0.105	0.288
$\beta_1 = \beta_3$	0.676	0.880	0.280	0.811	0.701	0.679	0.165	0.870	0.480	0.307	0.263
$\beta_2 = \beta_3$	0.683	0.543	0.295	0.529	0.269	0.756	0.041	0.310	0.374	0.478	0.961
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.636	0.624	0.655	0.605	0.628	0.632	0.632	0.643	0.640	0.841	0.797
N Women	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1015

*Notes:* This table presents levels of attendance at GSE intervention meetings and job information meetings, and tests for balance in attendance across treatment groups. The outcomes in columns (1)-(9) are indicators for women attending each of the nine group meetings during the GSE intervention period. For GSE treatment women, each meeting was part of the GSE intervention, and for GSE control women, each meeting involved a group survey. The outcomes in columns (10) and (11) are indicators for women and women's family members attending meetings in which job information was given. All women who attended their job information meetings were given details about and a promotion for the partner firm's program. Family members of treated women who attended their meetings were given both details and promotion, while those of control women were given details only. Column (11) includes only women with family members eligible to receive the promotion intervention. Panel A presents estimates of equation (1) without PDS-Lasso covariates. Panel B presents estimates of equation (2), again without PDS-Lasso covariates. Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.3: Endline Survey Attrition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Woman Surveyed (=1)					Family Surveyed (=1)		
	at 4 Weeks	at 5 Weeks	at 6 Weeks	at 5 Months	at 13 Months	at 5 Weeks	at 6 Weeks	at 5 Months
<b>Panel A: Unsaturated Specification</b>								
$\gamma_1$ : GSE Treat	-0.019 (0.028) [0.486]	0.028 (0.020) [0.156]	0.043 (0.022) [0.048]	0.023 (0.024) [0.344]	-0.003 (0.024) [0.908]	0.006 (0.023) [0.792]	0.023 (0.026) [0.368]	0.032 (0.026) [0.231]
$\gamma_2$ : Promo Treat	-0.002 (0.033) [0.960]	-0.020 (0.022) [0.377]	-0.023 (0.025) [0.361]	-0.015 (0.026) [0.557]	-0.033 (0.029) [0.258]	-0.035 (0.027) [0.195]	0.017 (0.027) [0.533]	0.015 (0.026) [0.575]
P-Value for Test that: $\gamma_1 = \gamma_2$	0.671	0.113	0.053	0.245	0.434	0.236	0.871	0.654
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>								
$\beta_1$ : GSE Treat & Promo Control	0.008 (0.043) [0.847]	0.036 (0.029) [0.221]	0.051 (0.030) [0.094]	0.048 (0.035) [0.179]	-0.002 (0.038) [0.950]	0.010 (0.037) [0.787]	0.030 (0.039) [0.436]	0.031 (0.036) [0.392]
$\beta_2$ : GSE Control & Promo Treat	0.026 (0.043) [0.542]	-0.012 (0.033) [0.705]	-0.016 (0.035) [0.643]	0.010 (0.037) [0.792]	-0.032 (0.036) [0.367]	-0.031 (0.035) [0.383]	0.024 (0.039) [0.537]	0.014 (0.037) [0.715]
$\beta_3$ : GSE Treat & Promo Treat	-0.021 (0.044) [0.628]	0.009 (0.030) [0.774]	0.020 (0.033) [0.540]	0.008 (0.038) [0.843]	-0.035 (0.037) [0.341]	-0.029 (0.036) [0.432]	0.040 (0.038) [0.293]	0.046 (0.036) [0.196]
P-Value for Test that: $\beta_1 = \beta_2$	0.662	0.112	0.052	0.245	0.434	0.235	0.871	0.651
$\beta_1 = \beta_3$	0.484	0.314	0.338	0.239	0.399	0.265	0.776	0.658
$\beta_2 = \beta_3$	0.265	0.496	0.319	0.952	0.932	0.946	0.660	0.389
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.632	0.845	0.829	0.767	0.674	0.797	0.734	0.742
N Women	1022	1022	1022	1022	1022	1015	1015	1015

*Notes:* This table presents levels of endline survey attrition and tests for balance in attrition across treatment groups. The outcomes in columns (1)-(5) are indicators for women being surveyed at each of the five endlines. The outcomes in columns (6)-(8) are indicators for the women's family members being surveyed at each of the three family member endlines. Columns (6)-(8) include only women with family members eligible to take the endline surveys. Panel A presents estimates of equation (1) without PDS-Lasso covariates. Panel B presents estimates of equation (2), again without PDS-Lasso covariates. Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.4: Effects of GSE and Promotion Treatments on Individual GSE Questions, at Four Weeks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Agreed (=1) with GSE Question									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
<b>Panel A: Unsaturated Specification</b>										
$\gamma_1$ : GSE Treat	0.092 (0.031) [0.004]	0.114 (0.032) [0.000]	0.158 (0.034) [0.000]	0.156 (0.034) [0.000]	0.069 (0.040) [0.084]	0.053 (0.031) [0.088]	0.074 (0.030) [0.014]	0.133 (0.035) [0.000]	0.032 (0.031) [0.297]	0.062 (0.040) [0.122]
$\gamma_2$ : Promo Treat	0.021 (0.033) [0.530]	0.033 (0.033) [0.324]	0.036 (0.034) [0.290]	0.020 (0.035) [0.561]	-0.000 (0.036) [0.992]	0.038 (0.031) [0.226]	0.015 (0.028) [0.588]	0.017 (0.033) [0.614]	-0.002 (0.029) [0.946]	-0.006 (0.037) [0.873]
P-Value for Test that:										
$\gamma_1 = \gamma_2$	0.114	0.101	0.014	0.006	0.187	0.745	0.151	0.017	0.460	0.197
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>										
$\beta_1$ : GSE Treat & Promo Control	0.112 (0.048) [0.019]	0.113 (0.048) [0.020]	0.192 (0.048) [0.000]	0.180 (0.049) [0.000]	0.051 (0.056) [0.366]	0.064 (0.047) [0.172]	0.079 (0.041) [0.052]	0.152 (0.050) [0.003]	-0.004 (0.043) [0.925]	0.090 (0.054) [0.095]
$\beta_2$ : GSE Control & Promo Treat	0.038 (0.049) [0.435]	0.026 (0.047) [0.572]	0.053 (0.049) [0.277]	0.041 (0.050) [0.408]	-0.010 (0.053) [0.849]	0.044 (0.044) [0.327]	0.021 (0.042) [0.626]	0.027 (0.048) [0.584]	-0.036 (0.041) [0.387]	0.007 (0.056) [0.905]
$\beta_3$ : GSE Treat & Promo Treat	0.113 (0.046) [0.015]	0.148 (0.042) [0.000]	0.191 (0.046) [0.000]	0.183 (0.049) [0.000]	0.068 (0.054) [0.210]	0.092 (0.041) [0.024]	0.089 (0.041) [0.029]	0.151 (0.047) [0.002]	0.032 (0.038) [0.403]	0.059 (0.056) [0.293]
P-Value for Test that:										
$\beta_1 = \beta_2$	0.098	0.078	0.003	0.004	0.243	0.658	0.134	0.007	0.478	0.102
$\beta_1 = \beta_3$	0.990	0.428	0.971	0.949	0.742	0.525	0.799	0.980	0.403	0.523
$\beta_2 = \beta_3$	0.081	0.003	0.003	0.004	0.120	0.225	0.077	0.006	0.092	0.331
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.712	0.718	0.595	0.663	0.613	0.748	0.791	0.687	0.853	0.663
N Women	648	648	648	648	648	648	648	648	648	648

Notes: This table presents effects of the GSE and promotion treatments on individual GSE questions at four weeks. Each of the 10 outcomes is an indicator for agreeing with the corresponding question on the GSE questionnaire (in Table 1) at the four-week endline. See column (1) of Table 3 for effects on the percentage of GSE questions agreed with at this endline, and see Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.5: Effects of GSE and Promotion Treatments on Individual GSE Questions, at Five Weeks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Agreed (=1) with GSE Question									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
<b>Panel A: Unsaturated Specification</b>										
$\gamma_1$ : GSE Treat	0.064 (0.028) [0.024]	0.077 (0.027) [0.005]	0.044 (0.030) [0.145]	0.061 (0.028) [0.029]	0.072 (0.027) [0.007]	-0.003 (0.027) [0.914]	0.035 (0.024) [0.140]	0.050 (0.030) [0.093]	0.039 (0.024) [0.105]	0.056 (0.028) [0.051]
$\gamma_2$ : Promo Treat	-0.056 (0.030) [0.059]	0.004 (0.033) [0.905]	0.034 (0.034) [0.324]	0.002 (0.031) [0.940]	0.018 (0.033) [0.582]	0.021 (0.028) [0.463]	0.056 (0.026) [0.033]	0.037 (0.030) [0.212]	-0.007 (0.027) [0.801]	0.040 (0.035) [0.254]
P-Value for Test that:										
$\gamma_1 = \gamma_2$	0.004	0.102	0.817	0.186	0.226	0.547	0.575	0.765	0.196	0.717
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>										
$\beta_1$ : GSE Treat & Promo Control	0.090 (0.039) [0.022]	0.025 (0.043) [0.561]	0.042 (0.045) [0.347]	-0.001 (0.041) [0.976]	0.063 (0.042) [0.136]	-0.016 (0.040) [0.687]	-0.018 (0.037) [0.623]	0.028 (0.043) [0.514]	0.021 (0.038) [0.580]	0.040 (0.046) [0.390]
$\beta_2$ : GSE Control & Promo Treat	-0.034 (0.041) [0.415]	-0.052 (0.045) [0.244]	0.021 (0.047) [0.662]	-0.066 (0.041) [0.105]	0.009 (0.043) [0.838]	0.003 (0.038) [0.933]	-0.002 (0.034) [0.945]	0.014 (0.042) [0.738]	-0.027 (0.039) [0.486]	0.020 (0.047) [0.675]
$\beta_3$ : GSE Treat & Promo Treat	0.010 (0.039) [0.802]	0.082 (0.040) [0.043]	0.083 (0.044) [0.064]	0.065 (0.038) [0.086]	0.090 (0.039) [0.022]	0.021 (0.038) [0.574]	0.092 (0.034) [0.007]	0.087 (0.039) [0.026]	0.031 (0.037) [0.403]	0.097 (0.046) [0.036]
P-Value for Test that:										
$\beta_1 = \beta_2$	0.002	0.079	0.639	0.140	0.226	0.612	0.656	0.746	0.175	0.642
$\beta_1 = \beta_3$	0.039	0.143	0.340	0.114	0.499	0.320	0.002	0.141	0.759	0.175
$\beta_2 = \beta_3$	0.279	0.001	0.170	0.001	0.051	0.618	0.003	0.067	0.104	0.075
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.742	0.747	0.627	0.728	0.581	0.793	0.797	0.728	0.802	0.673
N Women	868	868	868	868	868	868	868	868	868	868

*Notes:* This table presents effects of the GSE and promotion treatments on individual GSE questions at five weeks. Each of the 10 outcomes is an indicator for agreeing with the corresponding question on the GSE questionnaire (in Table 1) at the five-week endline. See column (2) of Table 3 for effects on the percentage of GSE questions agreed with at this endline, and see Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.



Table A.6: Effects of GSE and Promotion Treatments on Individual GSE Questions, at Six Weeks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Agreed (=1) with GSE Question									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
<b>Panel A: Unsaturated Specification</b>										
$\gamma_1$ : GSE Treat	0.050 (0.028) [0.074]	0.052 (0.024) [0.034]	0.053 (0.027) [0.048]	0.036 (0.027) [0.188]	0.029 (0.029) [0.319]	0.026 (0.026) [0.317]	0.028 (0.023) [0.215]	0.009 (0.027) [0.748]	0.022 (0.023) [0.340]	0.018 (0.029) [0.526]
$\gamma_2$ : Promo Treat	-0.004 (0.028) [0.885]	-0.013 (0.027) [0.632]	-0.022 (0.033) [0.503]	0.016 (0.027) [0.561]	0.006 (0.032) [0.840]	-0.012 (0.029) [0.667]	0.012 (0.028) [0.674]	0.036 (0.028) [0.207]	0.013 (0.023) [0.580]	0.010 (0.033) [0.764]
P-Value for Test that:										
$\gamma_1 = \gamma_2$	0.156	0.065	0.070	0.583	0.573	0.307	0.650	0.491	0.778	0.858
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>										
$\beta_1$ : GSE Treat & Promo Control	0.092 (0.040) [0.024]	0.088 (0.037) [0.017]	0.085 (0.042) [0.044]	0.068 (0.038) [0.080]	0.067 (0.045) [0.134]	0.066 (0.041) [0.114]	0.034 (0.037) [0.371]	-0.004 (0.040) [0.928]	0.041 (0.032) [0.201]	0.047 (0.040) [0.242]
$\beta_2$ : GSE Control & Promo Treat	0.040 (0.039) [0.306]	0.022 (0.038) [0.564]	0.016 (0.043) [0.703]	0.045 (0.036) [0.213]	0.044 (0.042) [0.299]	0.025 (0.040) [0.531]	0.013 (0.037) [0.720]	0.022 (0.039) [0.573]	0.031 (0.032) [0.339]	0.032 (0.047) [0.499]
$\beta_3$ : GSE Treat & Promo Treat	0.050 (0.040) [0.217]	0.038 (0.037) [0.303]	0.025 (0.043) [0.567]	0.052 (0.040) [0.201]	0.033 (0.046) [0.475]	0.014 (0.040) [0.718]	0.040 (0.036) [0.263]	0.042 (0.038) [0.275]	0.034 (0.032) [0.291]	0.029 (0.042) [0.497]
P-Value for Test that:										
$\beta_1 = \beta_2$	0.164	0.056	0.090	0.546	0.553	0.277	0.575	0.515	0.734	0.734
$\beta_1 = \beta_3$	0.275	0.142	0.125	0.691	0.431	0.176	0.850	0.237	0.811	0.651
$\beta_2 = \beta_3$	0.782	0.643	0.841	0.870	0.795	0.769	0.434	0.599	0.917	0.952
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.752	0.776	0.692	0.710	0.626	0.808	0.804	0.785	0.827	0.729
N Women	855	855	855	855	855	855	855	855	855	855

Notes: This table presents effects of the GSE and promotion treatments on individual GSE questions at six weeks. Each of the 10 outcomes is an indicator for agreeing with the corresponding question on the GSE questionnaire (in Table 1) at the six-week endline. See column (3) of Table 3 for effects on the percentage of GSE questions agreed with at this endline, and see Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.7: Effects of GSE and Promotion Treatments on Individual GSE Questions, at Five Months

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Agreed (=1) with GSE Question									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
<b>Panel A: Unsaturated Specification</b>										
$\gamma_1$ : GSE Treat	0.027 (0.025) [0.271]	0.030 (0.026) [0.239]	0.034 (0.028) [0.221]	0.011 (0.027) [0.676]	0.004 (0.031) [0.907]	0.034 (0.023) [0.141]	0.014 (0.021) [0.504]	0.049 (0.026) [0.060]	0.044 (0.023) [0.060]	0.059 (0.029) [0.043]
$\gamma_2$ : Promo Treat	-0.019 (0.027) [0.485]	0.009 (0.029) [0.754]	0.002 (0.033) [0.958]	0.001 (0.029) [0.960]	-0.021 (0.034) [0.547]	0.009 (0.026) [0.729]	0.031 (0.025) [0.215]	0.022 (0.027) [0.416]	-0.001 (0.024) [0.955]	-0.004 (0.029) [0.897]
P-Value for Test that:										
$\gamma_1 = \gamma_2$	0.199	0.572	0.448	0.800	0.581	0.478	0.605	0.488	0.137	0.117
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>										
$\beta_1$ : GSE Treat & Promo Control	0.028 (0.036) [0.437]	0.011 (0.039) [0.779]	0.023 (0.041) [0.576]	0.033 (0.039) [0.403]	-0.016 (0.045) [0.725]	0.022 (0.036) [0.540]	0.029 (0.034) [0.393]	0.073 (0.037) [0.046]	0.074 (0.034) [0.029]	0.070 (0.041) [0.088]
$\beta_2$ : GSE Control & Promo Treat	-0.020 (0.037) [0.585]	-0.014 (0.038) [0.708]	-0.011 (0.044) [0.808]	0.015 (0.038) [0.696]	-0.047 (0.046) [0.311]	0.000 (0.036) [0.990]	0.040 (0.030) [0.178]	0.052 (0.041) [0.198]	0.028 (0.033) [0.398]	0.004 (0.040) [0.911]
$\beta_3$ : GSE Treat & Promo Treat	0.004 (0.037) [0.920]	0.037 (0.039) [0.347]	0.031 (0.044) [0.480]	0.020 (0.040) [0.617]	-0.021 (0.049) [0.665]	0.041 (0.035) [0.230]	0.042 (0.033) [0.204]	0.071 (0.037) [0.054]	0.044 (0.036) [0.221]	0.051 (0.043) [0.239]
P-Value for Test that:										
$\beta_1 = \beta_2$	0.176	0.488	0.427	0.643	0.479	0.536	0.733	0.587	0.123	0.102
$\beta_1 = \beta_3$	0.499	0.488	0.849	0.755	0.907	0.559	0.710	0.939	0.339	0.646
$\beta_2 = \beta_3$	0.522	0.158	0.349	0.894	0.585	0.226	0.953	0.630	0.620	0.268
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.823	0.798	0.722	0.763	0.702	0.838	0.838	0.753	0.823	0.747
N Women	795	795	795	795	795	795	795	795	795	795

Notes: This table presents effects of the GSE and promotion treatments on individual GSE questions at five months. Each of the 10 outcomes is an indicator for agreeing with the corresponding question on the GSE questionnaire (in Table 1) at the five-month endline. See column (4) of Table 3 for effects on the percentage of GSE questions agreed with at this endline, and see Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.8: Effects of GSE and Promotion Treatments on Individual GSE Questions, at 13 Months

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Agreed (=1) with GSE Question									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
<b>Panel A: Unsaturated Specification</b>										
$\gamma_1$ : GSE Treat	0.061 (0.029) [0.037]	0.039 (0.028) [0.165]	0.013 (0.030) [0.679]	0.036 (0.030) [0.230]	0.038 (0.035) [0.284]	-0.005 (0.028) [0.872]	0.041 (0.026) [0.118]	0.051 (0.029) [0.077]	0.066 (0.027) [0.016]	0.048 (0.032) [0.137]
$\gamma_2$ : Promo Treat	-0.015 (0.033) [0.661]	0.013 (0.032) [0.681]	-0.035 (0.032) [0.282]	0.001 (0.036) [0.987]	0.006 (0.037) [0.876]	0.041 (0.035) [0.251]	0.012 (0.030) [0.682]	-0.032 (0.034) [0.355]	0.003 (0.032) [0.923]	0.006 (0.034) [0.849]
P-Value for Test that:										
$\gamma_1 = \gamma_2$	0.121	0.541	0.298	0.460	0.527	0.315	0.464	0.058	0.119	0.369
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>										
$\beta_1$ : GSE Treat & Promo Control	0.047 (0.042) [0.262]	0.025 (0.041) [0.539]	-0.048 (0.041) [0.240]	0.053 (0.044) [0.226]	0.050 (0.046) [0.277]	-0.030 (0.046) [0.516]	0.060 (0.040) [0.136]	0.046 (0.043) [0.288]	0.053 (0.041) [0.203]	0.029 (0.043) [0.506]
$\beta_2$ : GSE Control & Promo Treat	-0.029 (0.047) [0.535]	-0.005 (0.043) [0.917]	-0.100 (0.041) [0.016]	0.012 (0.047) [0.794]	0.020 (0.051) [0.700]	0.027 (0.046) [0.555]	0.035 (0.043) [0.415]	-0.039 (0.047) [0.408]	-0.015 (0.043) [0.728]	-0.008 (0.048) [0.863]
$\beta_3$ : GSE Treat & Promo Treat	0.044 (0.039) [0.261]	0.062 (0.041) [0.137]	-0.019 (0.043) [0.661]	0.028 (0.047) [0.558]	0.035 (0.052) [0.504]	0.035 (0.045) [0.440]	0.046 (0.041) [0.269]	0.022 (0.046) [0.632]	0.059 (0.043) [0.172]	0.045 (0.047) [0.342]
P-Value for Test that:										
$\beta_1 = \beta_2$	0.118	0.483	0.233	0.397	0.542	0.207	0.535	0.045	0.093	0.418
$\beta_1 = \beta_3$	0.941	0.364	0.519	0.587	0.764	0.149	0.714	0.555	0.874	0.707
$\beta_2 = \beta_3$	0.117	0.116	0.082	0.762	0.782	0.858	0.789	0.172	0.067	0.274
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.747	0.770	0.730	0.695	0.626	0.770	0.787	0.753	0.787	0.713
N Women	674	674	674	674	674	674	674	674	674	674

Notes: This table presents effects of the GSE and promotion treatments on individual GSE questions at 13 months. Each of the 10 outcomes is an indicator for agreeing with the corresponding question on the GSE questionnaire (in Table 1) at the 13-month endline. See column (5) of Table 3 for effects on the percentage of GSE questions agreed with at this endline, and see Appendix Section D.1.2 for additional information on these outcomes. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.9: Effects in Effort Task (Part 1/2)

	(1)	(2)	(3)	(4)	(5)	(6)
	Chose Puzzle (=1)				Chose Drawing (=1)	
	at 5 Months		at 13 Months		at 13 Months	
<b>Panel A: Unsaturated Specification</b>						
$\gamma_1$ : GSE Treat	0.054 (0.031) [0.077]	0.040 (0.046) [0.391]	0.040 (0.037) [0.280]	0.096 (0.050) [0.053]	-0.002 (0.030) [0.952]	0.019 (0.044) [0.667]
$\gamma_2$ : Promo Treat	0.031 (0.032) [0.335]	-0.024 (0.046) [0.600]	0.030 (0.041) [0.461]	0.049 (0.053) [0.357]	-0.019 (0.032) [0.568]	-0.035 (0.044) [0.436]
$\gamma_3$ : Prize High	0.047 (0.035) [0.178]	-0.024 (0.063) [0.707]	0.060 (0.035) [0.089]	0.137 (0.065) [0.037]	0.044 (0.029) [0.140]	0.048 (0.052) [0.354]
$\gamma_4$ : GSE Treat X Prize High		0.027 (0.070) [0.706]		-0.114 (0.070) [0.106]		-0.040 (0.058) [0.495]
$\gamma_5$ : Promo Treat X Prize High		0.115 (0.062) [0.062]		-0.041 (0.075) [0.590]		0.032 (0.065) [0.623]
P-Value for Test that:						
$\gamma_1 = \gamma_2$	0.590		0.850		0.669	
$\gamma_1 + \gamma_4 = 0$		0.155		0.738		0.601
$\gamma_2 + \gamma_5 = 0$		0.036		0.894		0.954
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control & Prize Low Mean	0.610	0.610	0.536	0.536	0.774	0.774
N Women	791	791	672	672	674	674

Notes: See part 2 of the table (on the next page).

Table A.9: Effects in Effort Task (Part 2/2)

	(1)	(2)	(3)	(4)	(5)	(6)
	Chose Puzzle (=1)				Chose Drawing (=1)	
	at 5 Months		at 13 Months		at 13 Months	
<b>Panel B: Saturated Specification</b>						
$\beta_1$ : GSE Treat & Promo Control	0.088 (0.043) [0.041]	0.077 (0.062) [0.215]	0.016 (0.058) [0.776]	0.099 (0.080) [0.216]	0.029 (0.039) [0.464]	0.036 (0.063) [0.568]
$\beta_2$ : GSE Control & Promo Treat	0.072 (0.042) [0.091]	0.015 (0.064) [0.813]	0.011 (0.058) [0.845]	0.071 (0.070) [0.311]	0.008 (0.044) [0.856]	-0.007 (0.064) [0.915]
$\beta_3$ : GSE Treat & Promo Treat	0.110 (0.044) [0.014]	0.041 (0.068) [0.544]	0.064 (0.057) [0.265]	0.146 (0.076) [0.055]	-0.037 (0.049) [0.447]	-0.028 (0.066) [0.674]
$\beta_4$ : Prize High	0.051 (0.033) [0.122]	-0.019 (0.070) [0.790]	0.068 (0.037) [0.067]	0.182 (0.079) [0.022]	0.043 (0.030) [0.159]	0.047 (0.062) [0.448]
$\beta_5$ : GSE Treat & Promo Control X Prize High		0.015 (0.092) [0.870]		-0.160 (0.111) [0.151]		-0.012 (0.088) [0.894]
$\beta_6$ : GSE Control & Promo Treat X Prize High		0.121 (0.096) [0.207]		-0.116 (0.104) [0.263]		0.034 (0.089) [0.700]
$\beta_7$ : GSE Treat & Promo Treat X Prize High		0.138 (0.097) [0.155]		-0.171 (0.102) [0.096]		-0.016 (0.090) [0.855]
P-Value for Test that:						
$\beta_1 = \beta_2$	0.710		0.927		0.590	
$\beta_1 = \beta_3$	0.612		0.377		0.135	
$\beta_2 = \beta_3$	0.383		0.336		0.343	
$\beta_1 + \beta_5 = 0$		0.151		0.444		0.657
$\beta_2 + \beta_6 = 0$		0.033		0.596		0.657
$\beta_3 + \beta_7 = 0$		0.005		0.751		0.514
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control & Prize Low Mean	0.610	0.610	0.536	0.536	0.774	0.774
N Women	791	791	672	672	674	674

*Notes:* This table presents effects of the GSE and promotion treatments on effort exertion. Effort exertion is measured using an incentivized task. Women chose between receiving a prize worth Rs.20 or attempting a timed puzzle, winning a prize worth Rs.30 or Rs.40 if successful (a randomization determined which was offered) and a prize worth Rs.10 if not. The outcome in columns (1) and (2) is an indicator for attempting the puzzle at five months, and the outcome in columns (3) and (4) is an indicator for attempting the puzzle at 13 months. To investigate whether effects on puzzle choice are driven by changes in risk taking, women were asked at 13 months to make another decision identical to the first except that instead of attempting a puzzle, women could try to draw a winning ball from a canvas bag. The outcome in columns (5) and (6) is an indicator for choosing to draw a ball. The “prize high” covariate is an indicator for being offered Rs.40 (rather than Rs.30) for succeeding in a task. See Appendix Section D.1.3 for additional information on these incentivized tasks. Panel A presents estimates of equation (1) but adds the prize and prize  $\times$  treatment indicators to the basic specification. Panel B presents estimates of equation (2), again with the prize and prize  $\times$  treatment indicators added. Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.10: Regression Version of Figure 3

	(1)	(2)	(3)	(4)
	Both Interested (=1)	Woman Interested, Family Not (=1)	Family Interested, Woman Not (=1)	Neither Interested (=1)
<b>Panel A: Unsaturated Specification</b>				
$\gamma_1$ : GSE Treat	0.008 (0.078) [0.922]	0.002 (0.051) [0.964]	0.056 (0.036) [0.125]	-0.010 (0.054) [0.848]
$\gamma_2$ : Promo Treat	-0.069 (0.072) [0.340]	-0.120 (0.052) [0.023]	0.091 (0.041) [0.030]	0.054 (0.055) [0.322]
P-Value for Test that:				
$\gamma_1 = \gamma_2$	0.491	0.085	0.498	0.414
Strata FE	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>				
$\beta_1$ : GSE Treat & Promo Control	0.022 (0.112) [0.845]	-0.015 (0.086) [0.861]	0.064 (0.047) [0.172]	0.002 (0.073) [0.984]
$\beta_2$ : GSE Control & Promo Treat	-0.035 (0.102) [0.731]	-0.145 (0.073) [0.049]	0.095 (0.053) [0.077]	0.054 (0.079) [0.499]
$\beta_3$ : GSE Treat & Promo Treat	-0.036 (0.103) [0.724]	-0.149 (0.074) [0.047]	0.135 (0.060) [0.027]	0.014 (0.072) [0.843]
P-Value for Test that:				
$\beta_1 = \beta_2$	0.596	0.074	0.577	0.510
$\beta_1 = \beta_3$	0.596	0.069	0.260	0.860
$\beta_2 = \beta_3$	0.991	0.938	0.554	0.610
Strata FE	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.566	0.226	0.038	0.170
N Women	205	205	205	205

*Notes:* This table presents a regression version of Figure 3. It presents effects of the GSE and promotion treatments on combinations of interest in sign-up within the household. The outcomes are indicators for both the woman and her family being interested, for only one of the two parties being interested, and for neither being interested. Interest data come from the five-week surveys and were recorded just after the job details and/or promotion were given. See Appendix Section D.3 for additional information on the interest variables. So as to capture effects of promotion treatment on women's interest, the sample is restricted to woman-family pairs in which the women's interest was assessed after promotion treatment or control was delivered to the families. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.11: Effects on Work off Own Farm by Sector, at Six Weeks

	(1)	(2)	(3)	(4)	(5)
			Working (=1)		
	off Own Farm	in Agriculture	in HH Micro- Enterprise	in Employment at a Firm	in Another Sector
<b>Panel A: Unsaturated Specification</b>					
$\gamma_1$ : GSE Treat	0.001 (0.020) [0.963]	0.001 (0.013) [0.955]	0.004 (0.014) [0.782]	-0.005 (0.006) [0.466]	0.010 (0.014) [0.492]
$\gamma_2$ : Promo Treat	-0.002 (0.022) [0.916]	0.001 (0.014) [0.948]	0.023 (0.013) [0.075]	-0.006 (0.008) [0.478]	-0.017 (0.017) [0.309]
P-Value for Test that:					
$\gamma_1 = \gamma_2$	0.919	0.992	0.357	0.912	0.269
Strata FE	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>					
$\beta_1$ : GSE Treat & Promo Control	0.061 (0.029) [0.039]	0.023 (0.018) [0.192]	0.015 (0.019) [0.426]	-0.012 (0.011) [0.264]	0.036 (0.022) [0.100]
$\beta_2$ : GSE Control & Promo Treat	0.061 (0.028) [0.030]	0.024 (0.017) [0.158]	0.035 (0.018) [0.048]	-0.014 (0.010) [0.185]	0.010 (0.022) [0.631]
$\beta_3$ : GSE Treat & Promo Treat	-0.003 (0.027) [0.912]	0.002 (0.019) [0.901]	0.026 (0.017) [0.142]	-0.009 (0.012) [0.466]	-0.014 (0.019) [0.448]
P-Value for Test that:					
$\beta_1 = \beta_2$	0.984	0.955	0.331	0.897	0.298
$\beta_1 = \beta_3$	0.032	0.317	0.594	0.690	0.019
$\beta_2 = \beta_3$	0.026	0.278	0.626	0.597	0.247
Strata FE	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.131	0.033	0.023	0.019	0.061
N Women	854	854	854	854	854

*Notes:* This table presents effects on work off own farm at six weeks by sector. The outcomes in columns (2)-(5) are indicators for having done work for income in agriculture (excluding work on own farm), in one's household's microenterprise, in employment at a firm, and in another off-own-farm sector in the preceding two weeks. They come from women's six-week surveys. The partner firm's program had not begun at six weeks so none of the sectors reflect participation in it. Effects on doing any work off own farm at six weeks are included in column (1) for reference. See Appendix Section D.2.2 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.12: Effects on Work off Own Farm by Sector, at Five Months

	(1)	(2)	(3)	(4)	(5)	(6)
	Working (=1)					
	off Own Farm	in Agriculture	in HH Micro- Enterprise	in Firm's Program	in Other Employment at a Firm	in Another Sector
<b>Panel A: Unsaturated Specification</b>						
$\gamma_1$ : GSE Treat	0.022 (0.024) [0.365]	0.021 (0.011) [0.056]	0.008 (0.011) [0.468]	-0.007 (0.016) [0.648]	-0.007 (0.013) [0.553]	0.019 (0.013) [0.137]
$\gamma_2$ : Promo Treat	0.018 (0.027) [0.505]	-0.000 (0.012) [0.971]	0.006 (0.010) [0.545]	0.023 (0.023) [0.312]	-0.002 (0.014) [0.893]	-0.017 (0.013) [0.195]
P-Value for Test that:						
$\gamma_1 = \gamma_2$	0.921	0.203	0.927	0.261	0.808	0.081
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>						
$\beta_1$ : GSE Treat & Promo Control	0.087 (0.033) [0.009]	0.027 (0.013) [0.038]	0.007 (0.015) [0.651]	0.012 (0.025) [0.638]	0.015 (0.018) [0.425]	0.038 (0.018) [0.034]
$\beta_2$ : GSE Control & Promo Treat	0.076 (0.034) [0.027]	0.009 (0.013) [0.491]	0.001 (0.015) [0.944]	0.037 (0.027) [0.169]	0.021 (0.020) [0.288]	0.001 (0.017) [0.944]
$\beta_3$ : GSE Treat & Promo Treat	0.038 (0.036) [0.301]	0.022 (0.015) [0.155]	0.017 (0.015) [0.238]	0.012 (0.029) [0.685]	-0.009 (0.014) [0.498]	-0.000 (0.015) [0.974]
P-Value for Test that:						
$\beta_1 = \beta_2$	0.772	0.251	0.703	0.360	0.779	0.068
$\beta_1 = \beta_3$	0.188	0.773	0.443	0.999	0.141	0.041
$\beta_2 = \beta_3$	0.321	0.450	0.271	0.412	0.112	0.928
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.187	0.020	0.025	0.081	0.025	0.035
N Women	794	794	794	794	794	794

*Notes:* This table presents effects on work off own farm at five months by sector. The outcomes in columns (2)-(6) are indicators for having done work for income in agriculture (excluding work on own farm), in one's household's microenterprise, in the firm's program, in other employment at a firm, and in another off-own-farm sector in the preceding two weeks. They come from women's five-month surveys. Effects on doing any work off own farm at five months are included in column (1) for reference. See Appendix Section D.2.2 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.



Table A.13: Performance in Firm's Program by Treatment Group

	(1)	(2)	(3)	(4)	(5)
	Number of Days Attended		Met Knots Target (=1)	Pay (Std Dev)	
	Month 1	Month 2	Month 2	Month 1	Month 2
<b>Panel A: Unsaturated Specification</b>					
$\gamma_1$ : GSE Treat	1.793 (2.167) [0.411]	1.741 (2.318) [0.455]	0.009 (0.053) [0.861]	0.167 (0.202) [0.411]	0.144 (0.195) [0.463]
$\gamma_2$ : Promo Treat	1.693 (2.377) [0.479]	1.346 (2.577) [0.603]	0.038 (0.049) [0.442]	0.158 (0.221) [0.479]	0.120 (0.214) [0.578]
P-Value for Test that: $\gamma_1 = \gamma_2$	0.975	0.896	0.688	0.975	0.924
Village FE	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>					
$\beta_1$ : GSE Treat & Promo Control	3.316 (3.172) [0.299]	1.777 (3.455) [0.608]	0.077 (0.078) [0.324]	0.309 (0.296) [0.299]	0.173 (0.289) [0.552]
$\beta_2$ : GSE Control & Promo Treat	3.122 (3.033) [0.306]	1.379 (3.312) [0.678]	0.102 (0.070) [0.148]	0.291 (0.283) [0.306]	0.147 (0.274) [0.592]
$\beta_3$ : GSE Treat & Promo Treat	3.613 (3.243) [0.268]	3.090 (3.866) [0.426]	0.053 (0.072) [0.469]	0.337 (0.302) [0.268]	0.266 (0.323) [0.412]
P-Value for Test that: $\beta_1 = \beta_2$	0.951	0.895	0.732	0.951	0.918
$\beta_1 = \beta_3$	0.929	0.717	0.734	0.929	0.759
$\beta_2 = \beta_3$	0.880	0.623	0.458	0.880	0.680
Village FE	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	7.783	9.652	0.043	-0.000	0.000
N Women	113	113	113	113	113

*Notes:* This table compares performance in the firm's program across treatment groups. Performance measures come from the first two months of training. Outcomes in columns (1) and (2) are the number of days women attended the program in each of the two months. Women's daily pay for month two was reduced if they could not weave a targeted number of knots per day by the end of the month; the outcome in column (3) is an indicator for meeting this target. Outcomes in columns (4) and (5) are women's pay in each of the two months, in units of standard deviations from the control group mean. Monthly pay was comprised of a fixed amount for each day a woman attended in that month, and the fixed amount was reduced in month two if she did not meet the knots target. See Appendix Section D.2.1 for additional information on the outcomes in this table. The sample is restricted to women who signed up for the program and were allowed to begin on the first day (in centers with oversubscription, only randomly chosen women who had signed up were allowed to begin on the first day, and in the center with no oversubscription, all women who signed up were allowed to begin on the first day). Panel A presents estimates of equation (1) without PDS-Lasso covariates and with village fixed effects instead of strata fixed effects. Panel B presents estimates of equation (2), again without PDS-Lasso covariates and with village fixed effects instead of strata fixed effects. Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.14: Effects on Components of Sign-Up Decision-Making Indices

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Components of Financial Value Indices</i>				<i>Components of Household Discord Indices</i>			
	Money Reason to Sign Up (=1)		Learning Skill Reason to Sign Up (=1)		Woman and Family Disagreed (=1)		Discussions Argumentative (=1)	
	Family's Report	Woman's Report	Family's Report	Woman's Report	Family's Report	Woman's Report	Family's Report	Woman's Report
<b>Panel A: Unsaturated Specification</b>								
$\gamma_1$ : GSE Treat	-0.012 (0.030) [0.694]	-0.064 (0.028) [0.026]	0.060 (0.024) [0.013]	-0.024 (0.020) [0.232]	-0.045 (0.029) [0.122]	0.005 (0.030) [0.863]	0.026 (0.019) [0.186]	-0.026 (0.024) [0.286]
$\gamma_2$ : Promo Treat	0.043 (0.037) [0.255]	0.016 (0.035) [0.645]	0.040 (0.030) [0.185]	0.021 (0.024) [0.394]	0.012 (0.034) [0.728]	-0.019 (0.034) [0.585]	-0.009 (0.024) [0.711]	0.027 (0.026) [0.307]
P-Value for Test that:								
$\gamma_1 = \gamma_2$	0.273	0.081	0.602	0.162	0.197	0.584	0.238	0.092
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>								
$\beta_1$ : GSE Treat & Promo Control	0.056 (0.051) [0.280]	0.019 (0.044) [0.661]	0.098 (0.039) [0.012]	0.013 (0.031) [0.674]	-0.111 (0.042) [0.008]	-0.102 (0.045) [0.023]	-0.010 (0.031) [0.756]	-0.068 (0.035) [0.051]
$\beta_2$ : GSE Control & Promo Treat	0.098 (0.047) [0.038]	0.109 (0.042) [0.010]	0.071 (0.037) [0.053]	0.059 (0.032) [0.069]	-0.059 (0.044) [0.180]	-0.128 (0.042) [0.002]	-0.045 (0.027) [0.092]	-0.018 (0.038) [0.640]
$\beta_3$ : GSE Treat & Promo Treat	0.028 (0.046) [0.543]	-0.046 (0.044) [0.299]	0.100 (0.037) [0.007]	-0.003 (0.031) [0.921]	-0.036 (0.044) [0.416]	-0.014 (0.047) [0.758]	0.018 (0.032) [0.569]	-0.002 (0.040) [0.968]
P-Value for Test that:								
$\beta_1 = \beta_2$	0.391	0.047	0.492	0.147	0.224	0.551	0.210	0.104
$\beta_1 = \beta_3$	0.558	0.163	0.955	0.589	0.087	0.063	0.412	0.034
$\beta_2 = \beta_3$	0.102	0.001	0.438	0.060	0.617	0.012	0.029	0.655
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.340	0.439	0.106	0.164	0.378	0.435	0.106	0.182
N Women	763	853	763	853	763	852	763	852

*Notes:* This table presents effects on components of the household decision-making indices in Table 6. The outcomes in columns (1)-(4) are the components of the financial value indices. The first component is an indicator for saying that the household earning extra money was a reason to sign up for the firm's program, and the second an indicator for saying that the woman acquiring a valuable skill was a reason to sign up. Columns (1) and (3) present effects on family members' reports, and columns (2) and (4) present effects on women's reports. The outcomes in columns (5)-(8) are the components of the household discord indices. The first component is an indicator for saying that the woman and family members disagreed about whether the woman should sign up, and the second an indicator for saying that discussions within the household were argumentative. Columns (5) and (7) present effects on family members' reports, and columns (6) and (8) present effects on women's reports. All outcomes in this table come from the six-week surveys, which occurred in the week following the official sign-up day. See Appendix Section D.3 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.15: Understanding Effects on Perceived Financial Value of Firm's Program (Part 1/2)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Believed Wage $\geq$ Actual (=1)		Knew Ability to Weave Not Required (=1)		Issue with Opportunity Reason to Not Sign Up (=1)		Chores Reason to Not Sign Up (=1)		Not Appropriate Reason to Not Sign Up (=1)		Woman Thought Ability $\geq$ Avg (=1)	Family Interested (=1)
	Family	Woman	Family	Woman	Family	Woman	Family	Woman	Family	Woman		
<b>Panel A: Unsaturated Specification</b>												
$\gamma_1$ : GSE Treat	0.031 (0.034) [0.355]	-0.042 (0.031) [0.176]	-0.018 (0.032) [0.562]	-0.002 (0.030) [0.949]	-0.012 (0.020) [0.554]	-0.017 (0.020) [0.386]	-0.011 (0.032) [0.744]	0.015 (0.033) [0.645]	-0.009 (0.015) [0.559]	-0.000 (0.015) [0.976]	0.027 (0.031) [0.382]	0.022 (0.046) [0.633]
$\gamma_2$ : Promo Treat	0.010 (0.035) [0.784]	0.055 (0.031) [0.081]	0.016 (0.038) [0.682]	0.038 (0.034) [0.258]	0.031 (0.023) [0.188]	-0.006 (0.021) [0.764]	-0.052 (0.036) [0.151]	-0.015 (0.036) [0.670]	-0.011 (0.018) [0.550]	-0.014 (0.017) [0.412]	-0.014 (0.035) [0.687]	-0.064 (0.053) [0.233]
P-Value for Test that: $\gamma_1 = \gamma_2$	0.675	0.036	0.472	0.359	0.183	0.716	0.391	0.543	0.923	0.495	0.356	0.220
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.303	0.411	0.564	0.523	0.106	0.121	0.473	0.477	0.069	0.070	0.463	0.565
Sample Restrictions	None	None	None	None	None	None	None	None	None	None	None	Met Family After
N Women	763	854	763	854	763	853	763	853	763	853	853	334

Notes: See part 2 of the table (on the next page).

Table A.15: Understanding Effects on Perceived Financial Value of Firm's Program (Part 2/2)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Believed Wage $\geq$ Actual (=1)		Knew Ability to Weave Not Required (=1)		Issue with Opportunity Reason to Not Sign Up (=1)		Chores Reason to Not Sign Up (=1)		Not Appropriate Reason to Not Sign Up (=1)		Woman Thought Ability $\geq$ Avg (=1)	Family Interested (=1)
	Family	Woman	Family	Woman	Family	Woman	Family	Woman	Family	Woman		
<b>Panel B: Saturated Specification</b>												
$\beta_1$ : GSE Treat & Promo Control	0.089 (0.048) [0.061]	-0.005 (0.043) [0.912]	0.014 (0.051) [0.783]	-0.002 (0.045) [0.967]	0.006 (0.028) [0.833]	-0.033 (0.028) [0.252]	-0.013 (0.052) [0.794]	-0.020 (0.050) [0.690]	-0.014 (0.026) [0.600]	-0.012 (0.023) [0.591]	0.048 (0.042) [0.254]	-0.000 (0.066) [0.996]
$\beta_2$ : GSE Control & Promo Treat	0.066 (0.044) [0.139]	0.097 (0.041) [0.018]	0.040 (0.050) [0.422]	0.039 (0.045) [0.391]	0.050 (0.032) [0.126]	-0.022 (0.032) [0.495]	-0.054 (0.050) [0.285]	-0.056 (0.048) [0.244]	-0.016 (0.026) [0.540]	-0.023 (0.023) [0.320]	0.004 (0.045) [0.921]	-0.065 (0.066) [0.329]
$\beta_3$ : GSE Treat & Promo Treat	0.029 (0.045) [0.527]	0.015 (0.042) [0.725]	-0.007 (0.051) [0.899]	0.040 (0.046) [0.379]	0.019 (0.029) [0.522]	-0.026 (0.028) [0.348]	-0.059 (0.047) [0.212]	0.010 (0.048) [0.840]	-0.016 (0.025) [0.524]	-0.021 (0.024) [0.384]	0.022 (0.048) [0.652]	-0.015 (0.071) [0.836]
P-Value for Test that:												
$\beta_1 = \beta_2$	0.639	0.025	0.580	0.352	0.165	0.720	0.388	0.461	0.900	0.568	0.318	0.353
$\beta_1 = \beta_3$	0.230	0.669	0.668	0.336	0.650	0.784	0.307	0.538	0.919	0.672	0.563	0.841
$\beta_2 = \beta_3$	0.438	0.062	0.330	0.974	0.338	0.879	0.902	0.155	0.979	0.923	0.726	0.505
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.303	0.411	0.564	0.523	0.106	0.121	0.473	0.477	0.069	0.070	0.463	0.565
Sample Restrictions	None	None	None	None	None	None	None	None	None	None	None	Met Family After
N Women	763	854	763	854	763	853	763	853	763	853	853	334

*Notes:* This table investigates effects on the perceived financial value of the firm's program. The outcomes in columns (1) and (2) are indicators for family members and women believing the wage in the firm's program was equal to or greater than the actual wage. The outcomes in columns (3) and (4) are indicators for family members and women knowing women did not need to know how to weave to sign up for the program. The outcomes in columns (5)-(10) are indicators for saying that an issue with this particular opportunity, that the woman having too many duties at home, and that it not being appropriate for a woman to work outside the home were reasons to not sign up for the firm's program. Columns (5), (7), and (9) present effects on family members' reports, and columns (6), (8), and (10) present effects on women's reports. The outcome in column (11) is an indicator for women predicting their weaving ability would be at or above average in the program if they were to participate. The outcomes in columns (1)-(11) come from the six-week surveys, which occurred in the week following the official sign-up day. Column (12) investigates whether women assigned GSE treatment only used messages in the promotion to persuade their families. The outcome is the indicator for family members expressing interest in the women signing up just after they were informed about the program (this outcome comes from the five-week surveys), but the sample is restricted to family members whose interest was assessed after the promotion was delivered to the women linked to them. See Appendix Section D.3 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.16: Effects on Having Discussions, Additional Analyses

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of Discussions		Minutes per Discussion		Woman Initiated Discussions (=1)	
	Family's Report	Woman's Report	Family's Report	Woman's Report	Family's Report	Woman's Report
<b>Panel A: Unsaturated Specification</b>						
$\gamma_1$ : GSE Treat	-0.091 (0.203) [0.654]	0.368 (0.225) [0.104]	-0.061 (0.946) [0.949]	0.532 (0.802) [0.508]	0.037 (0.030) [0.221]	-0.012 (0.028) [0.670]
$\gamma_2$ : Promo Treat	0.125 (0.201) [0.534]	0.097 (0.216) [0.655]	1.580 (1.108) [0.156]	-0.125 (1.040) [0.904]	0.009 (0.036) [0.798]	-0.016 (0.032) [0.625]
P-Value for Test that:						
$\gamma_1 = \gamma_2$	0.465	0.445	0.267	0.577	0.569	0.933
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>						
$\beta_1$ : GSE Treat & Promo Control	-0.252 (0.264) [0.341]	0.620 (0.296) [0.037]	-1.930 (1.242) [0.121]	0.460 (1.367) [0.737]	0.050 (0.048) [0.295]	-0.020 (0.044) [0.640]
$\beta_2$ : GSE Control & Promo Treat	-0.056 (0.281) [0.842]	0.394 (0.298) [0.187]	-0.531 (1.530) [0.729]	-0.109 (1.318) [0.934]	0.016 (0.047) [0.727]	-0.018 (0.042) [0.659]
$\beta_3$ : GSE Treat & Promo Treat	0.018 (0.270) [0.946]	0.367 (0.258) [0.156]	1.394 (1.394) [0.318]	0.364 (1.461) [0.803]	0.039 (0.047) [0.405]	-0.028 (0.044) [0.533]
P-Value for Test that:						
$\beta_1 = \beta_2$	0.504	0.520	0.335	0.627	0.472	0.962
$\beta_1 = \beta_3$	0.304	0.410	0.010	0.943	0.807	0.868
$\beta_2 = \beta_3$	0.803	0.935	0.220	0.709	0.620	0.828
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	2.909	2.807	10.902	11.830	0.633	0.762
N Women	757	845	715	816	763	852

*Notes:* This table presents additional analyses of effects on having discussions. The outcomes in columns (1) and (2) are the number of discussions family members and women reported having with each other about the opportunity with the partner firm. The outcomes in columns (3) and (4) are family members' and women's reports of how long each discussion usually lasted. The outcomes in columns (5) and (6) are indicators for family members and women saying the discussions were generally initiated by the woman or by the woman and other household members equally. All outcomes in this table come from the six-week surveys, which occurred in the week following the official sign-up day. The sample sizes in columns (1)-(4) are less than the number of family member or woman surveys completed at six weeks because the number of discussions and minutes per discussion outcomes are set to missing when the respondent did not know the values. See Appendix Section D.3 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.17: Effects in Discussion Task (Part 1/2)

	(1)	(2)
	Chose to Discuss with Husband (=1)	
<b>Panel A: Unsaturated Specification</b>		
$\gamma_1$ : GSE Treat	-0.005 (0.033) [0.870]	-0.020 (0.051) [0.696]
$\gamma_2$ : Promo Treat	-0.003 (0.036) [0.936]	0.095 (0.049) [0.053]
$\gamma_3$ : Rupee Discussion Price	-0.003 (0.000) [0.000]	-0.002 (0.001) [0.019]
$\gamma_4$ : GSE Treat X Rupee Discussion Price		0.000 (0.001) [0.655]
$\gamma_5$ : Promo Treat X Rupee Discussion Price		-0.002 (0.001) [0.013]
P-Value for Test that:		
$\gamma_1 = \gamma_2$	0.959	
$\gamma_1 + 50\gamma_4 = 0$		0.968
$\gamma_1 + 100\gamma_4 = 0$		0.753
$\gamma_2 + 50\gamma_5 = 0$		0.898
$\gamma_2 + 100\gamma_5 = 0$		0.073
Strata FE	Yes	Yes
PDS Lasso X	Yes	Yes
GSE Control & Promo Control & No Price Mean	0.696	0.696
N Women	705	705

Notes: See part 2 of the table (on the next page).

Table A.17: Effects in Discussion Task (Part 2/2)

	(1)	(2)
	Chose to Discuss with Husband (=1)	
<b>Panel B: Saturated Specification</b>		
$\beta_1$ : GSE Treat & Promo Control	-0.017 (0.050) [0.739]	0.020 (0.070) [0.780]
$\beta_2$ : GSE Control & Promo Treat	-0.015 (0.051) [0.773]	0.129 (0.069) [0.064]
$\beta_3$ : GSE Treat & Promo Treat	-0.010 (0.050) [0.841]	0.076 (0.073) [0.304]
$\beta_4$ : Rupee Discussion Price	-0.003 (0.000) [0.000]	-0.001 (0.001) [0.143]
$\beta_5$ : GSE Treat & Promo Control X Rupee Discussion Price		-0.001 (0.001) [0.532]
$\beta_6$ : GSE Control & Promo Treat X Rupee Discussion Price		-0.003 (0.001) [0.011]
$\beta_7$ : GSE Treat & Promo Treat X Rupee Discussion Price		-0.002 (0.001) [0.146]
P-Value for Test that:		
$\beta_1 = \beta_2$	0.964	
$\beta_1 = \beta_3$	0.887	
$\beta_2 = \beta_3$	0.924	
$\beta_1 + 50\beta_5 = 0$		0.744
$\beta_1 + 100\beta_5 = 0$		0.528
$\beta_2 + 50\beta_6 = 0$		0.741
$\beta_2 + 100\beta_6 = 0$		0.051
$\beta_3 + 50\beta_7 = 0$		0.868
$\beta_3 + 100\beta_7 = 0$		0.244
Strata FE	Yes	Yes
PDS Lasso X	Yes	Yes
GSE Control & Promo Control & No Price Mean	0.696	0.696
N Women	705	705

*Notes:* This table presents effects on women’s choices to have a discussion with their husbands in an incentivized task. Women who took the five-month survey could enter lotteries (at no cost) but had to choose during the survey how to allocate the prizes in case they won. For one of the prizes, women had two options: (1) Rs.500 allocated as their husbands chose across women’s accessories, men’s accessories, women’s clothing, and men’s clothing, or (2) Rs.500- $P$  allocated across these goods as their husbands chose but after a discussion with the women. A randomization set  $P$ , the “price” of discussion, to 0, 50, or 100. The outcome in this table is an indicator for choosing (2). The “rupee discussion price” covariate is the prize of discussion in rupees (i.e.  $P$ ). The sample size is less than the number of women’s surveys completed at five months because only women who were married and who agreed to enter the lotteries made this choice. See Appendix Section D.3 for additional information on this incentivized task. Panel A presents estimates of equation (1) but adds the price and price  $\times$  treatment indicators to the basic specification. Panel B presents estimates of equation (2), again with the price and price  $\times$  treatment indicators added. Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.

Table A.18: Effects on Work off Own Farm by Sector, at 13 Months

	(1)	(2)	(3)	(4)	(5)	(6)
	Working (=1)					
	off Own Farm	in Agriculture	in HH Micro- Enterprise	in Firm's Program	in Other Employment at a Firm	in Another Sector
<b>Panel A: Unsaturated Specification</b>						
$\gamma_1$ : GSE Treat	-0.006 (0.029) [0.847]	0.017 (0.015) [0.268]	-0.003 (0.014) [0.807]	-0.012 (0.010) [0.220]	0.008 (0.012) [0.481]	-0.008 (0.015) [0.622]
$\gamma_2$ : Promo Treat	-0.008 (0.032) [0.799]	-0.025 (0.017) [0.145]	0.007 (0.016) [0.676]	0.011 (0.012) [0.370]	0.009 (0.012) [0.427]	-0.017 (0.017) [0.309]
P-Value for Test that:						
$\gamma_1 = \gamma_2$	0.952	0.089	0.583	0.136	0.940	0.686
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
<b>Panel B: Saturated Specification</b>						
$\beta_1$ : GSE Treat & Promo Control	0.005 (0.043) [0.905]	0.025 (0.024) [0.301]	-0.033 (0.019) [0.086]	-0.004 (0.012) [0.724]	0.008 (0.016) [0.608]	0.013 (0.025) [0.609]
$\beta_2$ : GSE Control & Promo Treat	-0.007 (0.041) [0.863]	-0.016 (0.023) [0.483]	-0.020 (0.021) [0.341]	0.016 (0.017) [0.338]	0.009 (0.015) [0.563]	0.004 (0.023) [0.847]
$\beta_3$ : GSE Treat & Promo Treat	-0.012 (0.043) [0.779]	-0.008 (0.021) [0.708]	0.004 (0.023) [0.871]	-0.001 (0.015) [0.933]	0.018 (0.015) [0.251]	-0.028 (0.022) [0.207]
P-Value for Test that:						
$\beta_1 = \beta_2$	0.764	0.087	0.460	0.187	0.975	0.714
$\beta_1 = \beta_3$	0.678	0.119	0.078	0.831	0.584	0.061
$\beta_2 = \beta_3$	0.905	0.702	0.299	0.342	0.620	0.122
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS Lasso X	Yes	Yes	Yes	Yes	Yes	Yes
GSE Control & Promo Control Mean	0.190	0.046	0.057	0.017	0.017	0.052
N Women	674	674	674	674	674	674

*Notes:* This table presents effects on work off own farm at 13 months by sector. The outcomes in columns (2)-(6) are indicators for having done work for income in agriculture (excluding work on own farm), in one's household's microenterprise, in the firm's program, in other employment at a firm, and in another off-own-farm sector in the preceding two weeks. They come from women's 13-month surveys. Effects on doing any work off own farm at 13 months are included in column (1) for reference. See Appendix Section D.2.2 for additional information on the outcomes in this table. Panel A presents estimates of equation (1), while Panel B presents estimates of equation (2). Standard errors (in parentheses) are clustered by household and by meeting group in Panel A, and clustered by household and by meeting group  $\times$  promotion treatment in Panel B. P-values are in brackets.



## Appendix B: Additional Information on GSE Intervention

Table B.1: Content of GSE Treatment and Active Control Meetings

Meeting	GSE Treatment	Active Control
#1	Introduction <ul style="list-style-type: none"> <li>• Story: woman's GSE beliefs helped in building home</li> <li>• Discussion: introduction to GSE</li> </ul>	Survey Topic: <ul style="list-style-type: none"> <li>• Entertainment</li> </ul>
#2	Talents <ul style="list-style-type: none"> <li>• Discussion: talents</li> <li>• Activity: identify our own talents</li> <li>• Activity: we can do things we think we cannot (tablet sketchpad task)</li> </ul>	Survey Topic: <ul style="list-style-type: none"> <li>• Identification cards <ul style="list-style-type: none"> <li>• Access to</li> <li>• Use of</li> </ul> </li> </ul>
#3	Character Strengths <ul style="list-style-type: none"> <li>• Discussion: character strengths</li> <li>• Activity: identify people in our lives with strengths</li> <li>• Activity: identify our own strengths</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Cell phone use</li> <li>• Social interactions</li> </ul>
#4	Talents, Strengths, and Success <ul style="list-style-type: none"> <li>• Activity: identify times we felt proud or successful</li> <li>• Activity: identify talents and strengths that led to our successes</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Daily schedule</li> <li>• Sanitation</li> </ul>
#5	Goals <ul style="list-style-type: none"> <li>• Activity: guided reflection</li> <li>• Story: woman pursued goal of learning to sew</li> <li>• Discussion: understanding goals</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Men's employment <ul style="list-style-type: none"> <li>• Daily work</li> <li>• Migratory work</li> <li>• Government schemes</li> </ul> </li> <li>• Transportation facilities</li> </ul>
#6	Goal Planning <ul style="list-style-type: none"> <li>• Activity: strategy for goal planning <ul style="list-style-type: none"> <li>• Overview of three-step strategy</li> <li>• Visualize three-steps in last story</li> <li>• Apply strategy to our goals, using worksheet</li> </ul> </li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Availability of health services</li> <li>• Utilization of health services</li> <li>• Childbearing and fertility</li> <li>• Illness</li> <li>• Veterinary care</li> </ul>
#7	Problem Solving <ul style="list-style-type: none"> <li>• Story: woman overcame obstacles in agricultural work</li> <li>• Discussion: problem-solving mindset</li> <li>• Activity: anticipate obstacles to our goals and brainstorm solutions</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Livestock</li> <li>• Land</li> <li>• Loans</li> </ul>
#8	Putting It All Together <ul style="list-style-type: none"> <li>• Story: girl set exam goal, made plan, and identified own abilities to use</li> <li>• Discussion: importance of recognizing abilities in pursuing goals</li> <li>• Activity: identify abilities to use to reach our goals</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Schools</li> <li>• Voting</li> </ul>
#9	Conclusion <ul style="list-style-type: none"> <li>• Discussion: summarize curriculum</li> </ul>	Survey Topics: <ul style="list-style-type: none"> <li>• Drawn from multiple topics above</li> </ul>

Notes: This table outlines the contents of the nine GSE treatment and active control meetings.

Figure B.1: Example of GSE Intervention Activity



*Notes:* This figure shows an example of an activity from the GSE intervention. In the sixth session, women learned a strategy for planning to reach goals. An activity to teach this strategy asked women to draw pictures representing the goal they would like to reach in a sun at the top of a ladder, the steps to reach it on the rungs of the ladder, and the timeline they would follow alongside the ladder. This figure is a photo of the completed drawings of 14 women.

## Appendix C: Additional Information on Promotion Intervention

### Transcript of Promotional Video

*Female Narrator:* Greetings. I want to tell you about a unique and exciting opportunity your household has been selected for. This is a special woman's weaving training and employment program arranged by Obeetee. Now let us talk to an Obeetee official.

*Obeetee Official:* I am [name, omitted from transcript to protect confidentiality] and I manage all of Obeetee's hand-knotted carpet weaving business. The working environment for people who work here is really good and the weavers who are associated with the company also work under a good environment. I would like to reiterate that all of you should be aware about this program and come to work under this program.

*Female Narrator:* Today we will meet a few households who have participated in this program in other villages. Now, let us talk to a loom owner.

*Female Loom Owner:* Only females work in this loom. The male loom center is located separately. Only the female center is located here and only females work here. They live nearby. I am responsible for ensuring the safety of the women who work here. If any need arises, if their children have any problem, they tell me and I solve them as much as I can. For very small kids, we have arranged a cradle. The females feed their children and put them to sleep in the cradle after that. The children keep sleeping while women continue their work. Once the child wakes up, she can check up on them since they're nearby. There is also a toilet facility and water supply available. People don't have to go outside since everything is available here. They come between 8-8:30am and work for around 4 hours and go home at 12pm. The lunch lasts for 1 hour. When they leave at 12pm, they eat food, solve any issues at home and return after an hour. If they live far away, there are arrangements for them. There is a room for them to have lunch and it also has a water facility available. They wash their tiffins and keep them here itself.

*Female Narrator:* Now let us talk to the husband of another loom owner.

*Husband of Another Loom Owner:* The unemployed women from 2-3 nearby villages came to our loom and work in the loom operated by Obeetee. Only females work in the female center, not males. Their household members are very satisfied with their work because they complete household chores both in the morning and in the afternoon. They come during the day and work from 8am to 5pm and have lunch in the afternoon and also earn money. The place is also safe for them to work. Till 8am, they finish off all their household chores and because they live nearby and in case of emergencies, because they live nearby, they can go home easily since there are no hindrances. They maintain a cordial relationship with each other and are positively predisposed to each other. If need be, they can borrow and lend amongst one other. I also maintain a brotherly relationship with them and help them overcome any problems. This helps them out and this improves their household financial status.

*Female Narrator:* Now let us talk to a female weaver.

*Female Weaver 1:* I wake up at 5 in the morning and then I keep something to cook on the stove, then I prepare tiffins for my children. Then after washing clothes, I report to the loom at 8am to work. Then I go back to my home after 5pm. Then I meet my kids and ask them what they were taught in school that day. Then they tell me, then I give them some homework which they complete while I complete other household work. The loom is always very clean. The atmosphere is also very cordial and all the females working here are my friends. I like meeting and talking to them. Spending time with them helps me overcome any emotional trouble and I get to learn something new. The atmosphere is also very cordial.

*Female Narrator:* Now let us talk to another female weaver.

*Female Weaver 2:* I feel very happy that I am working here and I want that if I am working, so should everyone else. Eating and drinking facilities are also available here. There is an electric handpump installed nearby. I am very happy that everything is really nice here.

*Female Narrator:* Now let us talk to a female weaver's husband.

*Husband of a Female Weaver:* My wife is weaving at the center. I feel really good. She needs to wake up a little early in the morning to do household chores, she finishes off her work by 8am and then reaches the center. After that, when her shift gets over at 5pm, she takes a little bit more time than usual and finishes off her household chores like cooking and washing utensils by 9pm, which she earlier used to be done by 8pm. She thinks positively that if everybody works in the household, the household will progress and this is why she is very satisfied (with her work). Earlier, fewer women used to work in the loom but after watching them work, more women started working.

*Female Narrator:* As you can see, this is a very attractive and unique training and employment opportunity. I hope you make the best out of this unique and exciting opportunity. Thank you.

Figure C.1: Screenshot from Promotional Video



*Notes:* This figure shows a screenshot of the video used in the promotion intervention. In it, a female weaver in the firm's program is giving a testimonial about her experience in the program while seated at her workstation.

## Appendix D: Data Appendix

### D.1 GSE Outcomes

#### D.1.1 GSE Scale

GSE is measured using the questionnaire in Table 1. It is the Schwarzer and Jerusalem (1995) GSE scale with slight modification for my setting. The Schwarzer and Jerusalem (1995) scale is a widely-used scale from psychology designed to measure GSE. It asks respondents to assess the extent to which they agree, on a four-point scale, with 10 statements reflecting high GSE. I made several small modifications to this scale for use in my setting: (i) all items were changed from statements that respondents assessed agreement with to questions; (ii) some questions were reworded very slightly to facilitate translation into the local language; (iii) for questions that tended to be difficult to understand, alternate phrasings and explanations were added and used when surveyors encountered issues with comprehension; (iv) the four answer options were reworded from “not at all true,” “hardly true,” “moderately true,” and “exactly true” to “no - completely,” “no - somewhat,” “yes - somewhat,” and “yes - completely”; and (v) participants were required to answer all questions but a don’t know option was added to the choice set. The modified version of the scale was then translated to the local dialect of Hindi.

#### D.1.2 GSE Measure

The GSE measure - *% GSE Questions Agreed With* - is the percent of the 10 questions in the GSE questionnaire the respondent agreed with. Each question had five answer choices: (1) no - completely, (2) no - somewhat, (3) yes - somewhat, (4) yes - completely, and (5) don’t know. The GSE measure is the percent of questions for which the respondent selected (3) or (4) as opposed to (1), (2), or (5). I also present effects on indicators for selecting (3) and (4) for each question. The GSE questionnaire was administered on all five endlines so GSE outcomes are observed for each of the five.

**Deviation from pre-specified measures.** I pre-specified two different measures of GSE and the measure I use is a third version. The three differ in their handling of don’t know responses. The first pre-specified version replaces don’t know responses with the participant’s average response to the other questions (the values of the average range from 1 to 4), but sets the average to missing if more than three responses are don’t know. This handling of missing responses is what is suggested in documentation for the scale (Schwarzer, 2014). The second pre-specified version assigns all don’t know responses the value of 1 then averages the 10 responses (all of which are on a 1-4 scale). I prefer the third measure to either of these. The first pre-specified measure results in GSE being missing for many women who completed the questionnaire, and on some endlines, such omissions happened at different rates for GSE treatment and control women. The second pre-specified version addresses this, but the choice to assign don’t know’s a value of 1 is somewhat arbitrary. The version I use, *% GSE Questions Agreed With*, aggregates indicators that are well defined; these are indicators

for agreeing with the question, and don't know is not agreement so the coding of don't know is not arbitrary. The downside of the version I use is that collapsing 1-4 responses into an indicator results in some loss of information. But this should just make results less precise, which seems less problematic than the concerns with the other two measures.

### D.1.3 Effort Task

During the five- and 13-month surveys, I asked women to choose to either (i) receive a prize worth Rs.20, or (ii) attempt to complete a puzzle in two minutes, and win a prize worth more than Rs.20 if successful and worth Rs.10 if not. A randomization determined whether the prize a woman was offered for successfully completing the puzzle was worth Rs.30 or Rs.40. The randomization was done at the household level and stratified by GSE treatment and geographic unit (see Section 3.3 for details on the geographic unit variable). The puzzle on the five-month survey was a small jigsaw puzzle, and the puzzle at 13 months was assembly of small, plastic blocks to build a toy house. The *Chose Puzzle* outcomes are indicators for choosing option (ii) at the corresponding endline.

The 13-month survey asked women to make another decision that was identical to the puzzle decision with one exception: instead of attempting a puzzle, participants could draw out a ball from a canvas bag without looking, winning if the ball was one of the two balls with happy faces and losing if the ball was the one with a sad face. The *Chose Drawing* outcome is an indicator for choosing to draw a ball.

## D.2 Employment Outcomes

### D.2.1 Program Participation Data

The *Signed Up* outcome is an indicator for signing up for the firm's program. It takes the value of 1 if women completed the sign-up process at the official sign-up day, at the alternate sign-up day, or after contacting the research team about interest in the program following both sign-up days. Otherwise, the indicator is 0. I do not consider women who attempted to sign up but were outside of the required age range as having signed up, and the indicator is set to 0 for these women. Data on sign-up come from records I kept during the sign-up process.

I also collected data on attendance, performance, and retention in the first months of training. I aimed to collect three months of data and did so for four centers. The surveyor assigned the fifth center entered extra data so I have three months and 10 days of data for this center. I have 2.5 months of data for the final center as this is the center that opened two weeks late. This data come from paper records loom centers kept on trainee attendance and performance that surveyors digitized. In addition to this information, surveyors recorded dropouts and the reasons for them. The following variables come from this data:

- *Attended in First 2 Months*. This is an indicator for attending the program at least once in the first two months of training. These are the months for which I observe attendance in the

entire month for all six centers.

- *Number of Days Attended.* This variable is the number of days in a given month women attended the program. It is observed in all six centers for the first and second months of training.
- *Met Knots Target.* Women’s daily pay for month two was reduced if they could not weave a targeted number of knots per day by the end of the month. This variable is an indicator for meeting this target. There were also targets in months three and four, but I only observe whether targets were met in five of the six centers for month three and I have no data on targets for month four.
- *Pay.* This variable is the pay women earned in a given month. It is observed in all six centers for the first and second months of training. Pay in a given month is reported in units of standard deviations from the control group mean in that month (i.e. the variable *Pay* for a given month is pay in rupees for that month, minus the average pay in rupees for that month amongst women assigned neither treatment, and divided by the standard deviation of pay in rupees for that month amongst women assigned neither treatment). Monthly pay was comprised of a fixed amount for each day a woman attended in that month, and the fixed amount was reduced in month two if she did not meet the knots target. The payment structure in months three and four was similar to that of month two (i.e. a fixed amount per day attended that was reduced if a monthly knots target was not met), but I only observe pay in five of the six centers for month three and I have no data on pay for month four.
- *Reasons for Dropping Out of Firm’s Program.* This variable contains the reasons women dropped out of the firm’s program. Reasons for dropout were recorded for women who signed up and were invited to participate (either when the program began or later from the waitlist), but who never participated or participated and later dropped out. I consider reasons for all woman I observe dropping out in my retention data, which includes the first three months of training for four centers, the first three months and 10 days for one center, and the first 2.5 months for the last. Reasons were recorded as fitting in one or more of 17 categories or an other category (all categories are listed in Figure 4). There was also a don’t know category, selected when reasons were unknown. One woman dropped out, rejoined, and dropped out again; I only consider the reasons for her first dropout.

## D.2.2 General Employment

On the six-week, five-month, and 13-month surveys, women were asked whether they had worked for income in any of several common employment sectors in the preceding two weeks. The employment sectors were agriculture on own household’s land, agriculture off own household’s land, husbandry of own household’s animals, husbandry of animals not owned by own household, own household’s micro-enterprise, casual non-farm labor, employment at a firm, anganwadi work, teaching, and



NREGA. Participants were able to report work that did not fit into one of these sectors in an other category. On the surveys done after the firm's program began (i.e. the five- and 13-month surveys), the program was added as its own sector.

- *Working off Own Farm.* These outcomes take the value of 1 when women reported work in any sector except agriculture on own household's land and husbandry of own household's animals; they take the value of 0 when women had worked only on their own farms, had done no work, or said don't know.
- *Work off Own Farm by Sector.* Each of these outcomes take the value of 1 when women reported work in a particular sector and 0 when women had done work in another sector but not the particular one, had done no work, or said don't know. The particular sectors considered are agriculture off own household's land, own household's micro-enterprise, and employment at a firm. For the five- and 13-month surveys, I bifurcate employment at a firm into work in the partner firm's program and other employment at a firm. I also present effects on work in another sector, a grouping that includes work reported in the other category or work reported in any other off-own-farm category in which less than 1% of women reported working at baseline (i.e. husbandry of animals not owned by own household, casual non-farm labor, anganwadi work, teaching, and NREGA).

### D.3 Channels Outcomes

- *Interested.* On their five-week surveys, immediately after they were given details about the firm's program and, if applicable, the promotion, women and family members were asked how interested they were in the women signing up for the program. There were five answer choices: (1) uninterested - very, (2) uninterested - somewhat, (3) interested - somewhat, (4) interested - very, and (5) don't know. The *Interested* outcomes take the value of 1 when respondents selected (3) or (4), and the value of 0 when they selected (1), (2), or (5).
- *Number of Discussions.* On their six-week surveys, women and family members were asked how many times they had discussed the firm's program with each other. The *Number of Discussions* outcomes equal the number of discussions respondents reported and are set to missing when respondents said don't know.
- *Household Discussed Opportunity.* These outcomes take the value of 0 when respondents reported 0 discussions, and the value of 1 when respondents reported a positive number or did not know the number.
- *Minutes per Discussion.* When women or family members reported a positive number of discussions or did not know the number, they were asked how long each discussion usually lasted. There were seven answer choices: (1) less than 1 minute, (2) 1-5 minutes, (3) 5-15 minutes, (4) 15-30 minutes, (5) 30-60 minutes, (6) over 60 minutes, and (7) don't know. To

create the *Minutes per Discussion* outcomes, I converted options (1)-(6) to minutes, coding (1) as 0.5, (2) as 3, (3) as 10, (4) as 22.5, (5) as 45, and (6) as 90. The outcomes are set to missing when (7) was selected and set to 0 when respondents had said there were no discussions.

- *Woman Initiated Discussions.* When women or family members reported a positive number of discussions or did not know the number, they were asked who in their households generally initiated the discussions. There were four answer choices: (1) the woman, (2) the woman and other household members equally, (3) other household members, and (4) don't know. The *Woman Initiated Discussions* outcomes take the value of 1 when respondents selected (1) or (2), and take the value of 0 when respondents selected (3), selected (4), or had said there were no discussions.
- *Household Discord Index.* When women or family members reported a positive number of discussions or did not know the number, they were asked whether the discussions were generally argumentative and asked the extent to which they disagreed with each other during these discussions about whether the women should sign up. The first variable in each *Household Discord Index* is an indicator for saying the discussions were argumentative; it takes the value of 1 when the answer to the argumentative question was yes, and takes the value of 0 when the respondent answered no, answered don't know, or had said there were no discussions. The second variable in each index is an indicator for saying the woman and family members disagreed about whether the woman should sign up. There were five answer choices for the disagreement question: (1) agreed - completely, (2) agreed - somewhat, (3) disagreed - somewhat, (4) disagreed - completely, and (5) don't know. The disagreed indicator takes the value of 1 when respondents selected (3) or (4), and takes the value of 0 when respondents selected (1), selected (2), selected (5), or had said there were no discussions. To form women's and family members' indices, I standardized the respondents' disagreed and argued indicators against the distribution of the indicators amongst family members in the control group (i.e. I computed the average and standard deviation of the disagreed and argued indicators amongst family members of women assigned neither treatment, then subtracted those means from the indicators and divided the differences by those standard deviations), then averaged the respondents' two standardized indicators, and finally standardized the averages (again against the distribution amongst family members in the control group).
- *Woman Made Final Decision.* On their six-week surveys, women and family members were asked who in their households made the final decision as to whether or not the women would sign up for the firm's program. There were four answer choices: (1) the woman, (2) the woman and other household members equally, (3) other household members, and (4) don't know. The *Woman Made Final Decision* outcomes are indicators that take the value of 1 when respondents selected (1) or (2), and the value of 0 when respondents selected (3) or (4).
- *Financial Value Index.* On their six-week surveys, I asked women and family members what

the main reasons they considered for signing up for the firm's program were. The first variable in each *Financial Value Index* is an indicator for saying the household earning extra money was a main reason, and the second is an indicator for saying the woman learning a valuable skill was a main reason. Each indicator takes the value of 1 when the respondent provided the corresponding reason, and the value of 0 when the respondent provided other reason(s), said there were no reasons to sign up, or said don't know. The procedure I used to form the *Financial Value Index* from these indicators is analogous to the procedure I used for the *Household Discord Index*.

- *Issue with Opportunity Reason to Not Sign Up, Chores Reason to Not Sign Up, and Not Appropriate Reason to Not Sign Up.* On their six-week surveys, I asked women and family members what the main reasons they considered for not signing up for the firm's program were. These three outcomes are indicators for saying that an issue with this particular opportunity (e.g. don't like weaving, issue with loom owner, hours long, wage low, far from home, etc.) was a main reason, that the woman having too many household chores was a main reason, and that it not being appropriate for a woman to work outside the home was a main reason. Each indicator takes the value of 1 when the respondent provided the corresponding reason, and the value of 0 when the respondent provided other reason(s), said there were no reasons to not sign up, or said don't know.
- *Woman Thought Ability  $\geq$  Avg.* Women's six-week surveys, which were done in the week following the official sign-up day and before the firm's program began, asked women to predict how they would perform in the program if they were to participate. Women who signed up at the official sign-up day were asked how they thought their weaving ability would compare to the average woman weaver in the program. Women who had not signed up on that day were asked how they thought their weaving ability would have compared had they signed up. Both questions had the same four answer choices: (1) worse than average woman weaver, (2) equal to average woman weaver, (3) better than average woman weaver, and (4) don't know. The outcome *Woman Thought Ability  $\geq$  Avg* is an indicator that takes the value of 1 when women selected (2) or (3) as the answer to their question, and the value of 0 when they selected (1) or (4).
- *Believed Wage  $\geq$  Actual.* Questions on women's and family members' six-week surveys tested knowledge about specific details of the firm's program. One question asked how much women would earn per day during the first month of the program. The *Believed Wage  $\geq$  Actual* outcomes are indicators that take the value of 1 when respondents provided the correct wage or a wage higher than the correct one, and the value of 0 when respondents provided a wage lower than the correct one or said don't know.
- *Knew Ability to Weave Not Required.* Questions on women's and family members' six-week surveys tested knowledge about specific details of the firm's program. One question asked

whether women needed to know how to weave to sign up for the program. The *Knew Ability to Weave Not Required* outcomes are indicators that take the value of 1 when respondents said no and 0 when respondents said yes or don't know.

- *Chose to Discuss with Husband*. This outcome comes from an incentivized task done on the five-month surveys. Women and any husbands who took the family member surveys were invited to enter lotteries. There was no cost for entering. The winners of the women's and husbands' lotteries would receive Rs.500 allotted as they wished across four goods: women's bangles, men's sunglasses, women's saris/salwar suits, or men's pants/kurtas. Participants had to choose during their surveys how they would like the money allotted should they win. Married women who entered the lotteries were also put into an additional drawing. The winner of this additional lottery could choose between winning (i) the set of goods her husband had selected as his prize should he win the husbands' lottery,<sup>44</sup> or (ii) a set of the four goods worth Rs.500− $P$ , again chosen by her husband, but chosen after a discussion with her. If the woman chose the second option and won, a surveyor would meet the husband and wife several weeks later, let them discuss the allotment, and then ask the husband how the money would be allotted. A randomization set  $P$ , the "price" of discussion, to 0, 50, or 100. The randomization was done at the household level and stratified by GSE treatment and geographic unit (see Section 3.3 for details on the geographic unit variable). As with the first lottery, women had to choose during their surveys the prize they would like should they win this additional lottery. The *Chose to Discuss with Husband* outcome is an indicator for choosing option (ii). This outcome is only observed if women agreed to enter the lotteries and if they were married.
- *A Woman's Main Role Should Be HH Chores*. On their five-month surveys, women and family members were asked whether they thought that a woman's main role should be to tend to household chores. The *A Woman's Main Role Should Be HH Chores* outcomes are indicators that take the value of 1 when respondents said yes and the value of 0 when they said no or don't know.

## D.4 Saving Outcomes

- *HH Member Contributed to Savings in Last 2 Weeks*. These outcomes come from a question asked on women's six-week, five-month, and 13-month surveys and on family members' six-week and five-month surveys. Respondents were asked whether they or anyone else in their households had contributed money to savings in the preceding 2 weeks. The outcomes take the value of 1 when respondents said yes, and the value of 0 when respondents said no or don't know.

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<sup>44</sup>Women were not told what their husbands choices were, and in many cases, husbands were surveyed after their wives so that husbands' choices had not been made when women were asked to make this choice. Women's decisions were therefore based on their expectations of what their husbands had chosen or would choose.

- *Woman Saving Up for Something.* At the five- and 13-month endlines, women were asked whether there was anything in particular they were saving up for, and if so, what. The *Woman Saving Up for Something* outcomes take the value of 1 when women said yes to the first question and specified what they were saving up for in the second question; they take the value of 0 when (a) women said no or don't know to the first question, or when (b) women said yes to the first question but, when asked what they were saving up for, said they did not know or said there was nothing they were saving up for.