

Home-bias among Female Entrepreneurs: Experimental Evidence on Preferences from Pakistan*

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Abstract

Enterprises run by women in developing countries are often short-lived and small. Using data from an RCT with aspiring female entrepreneurs in Pakistan, we find that providing loans and training leads to business creation, but confirm that this effect is short-lived. Moreover, four out of five new micro-enterprises are home-based. Through novel incentivised tasks, we find that both women and male decision-makers in their household favor women setting up a business, but display ‘home-bias’ in preferred business location and are willing to give up almost 60% of median profits for running the business from home. Women also exhibit a ‘home-bias’ in source of advice, refraining from taking advice of outsiders, even when it can increase task earnings. Our findings indicate that internalized gender norms may contribute to explaining the small scale and life of businesses operated by women. Development interventions must take these gender norms into account when promoting female entrepreneurship.

Keywords: Gender, Entrepreneurship, Field experiment, Norms, Microfinance

JEL codes: C93, D13, G21, J16, J17

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1 Introduction

Over the last few decades, microfinance has been hailed as an important tool to tackle poverty. Financial inclusion has the potential to improve the lives of recipients by providing them with the ability to invest in income generating activities, smooth consumption and mitigate financial risks. In particular, by targeting women, it aims to improve female autonomy and household welfare (Kabeer, 2001; Aghion and Morduch, 2005; Pitt et al., 2006). In spite of these promises, existing evidence on the impact of microfinance loans on business outcomes shows that the effects are moderately positive but not transformative, especially for women (Banerjee et al., 2014, 2015). This is confirmed even when access to finance is coupled with business training (Ginè and Mansuri, 2011; Berge et al., 2014), suggesting that other factors, beyond credit and knowledge constraints, may limit women's ability to start or grow a business.

An important obstacle to the effectiveness of microfinance and business training programs is the presence of social factors limiting female autonomous decision making and control over resources (Jakiela and Ozier, 2015; Mel et al., 2014; Field et al., 2010, 2016). These social factors may include constraints on women's ability to work outside the home or interact with non-household members. Consistent with the importance of these factors, business training that addresses the time and mobility constraints faced by women, leveraging network support and targeting gender issues have been effective in fostering female entrepreneurship (Calderón et al., 2013; Field et al., 2016; Valdivia, 2014; Bulte et al., 2016).¹

In this paper, we provide direct evidence on how gender norms, limiting the ability of women to work outside the home and to interact with non-household members, can shape decisions with potential consequences for business outcomes. We collect survey data and conduct incentivised behavioral tasks with a sample of women participating in a Randomised Control Trial (RCT) offering them micro-loans and training to set up a new enterprise. We use the incentivised tasks to elicit preferences for business location and willingness to pay for advice from non-household members.

We confirm the short-lived impact of microfinance on business outcomes. Our results also show a preference by women for a business that is set up and operated from the home. Of the 158 new businesses set up over two years by women in our sample, 128 were based at home.² Of these 128, 100 (78.1%) businesses had closed down by the end of second year. Of the 26 businesses set up outside the home, more than a third still existed at the time of the final followup survey.

We conduct an innovative elicitation exercise with the entire sample to determine the preferred location of hypothetical businesses. Responses reveal that women prefer home-based businesses, and in doing so are willing to give up almost 60% of median profits.

¹ See Buvinić and Furst-Nichols (2016) and Buvinić and O'Donnell (2017) for a review.

² We do not have locations of 4 new businesses.

Such home-bias extends to demand for advice: we find through incentivized tasks that even when advice from non-household members has instrumental value and is free, 40% of the women forgo it, preferring instead to ask their male partners for advice even though the average quality of such advice is poor. These preferences are not affected by access to finance, instrumented with being treated within the RCT, but appear to be correlated with prior experiences: women who recently (in the last 2 years) closed their business are more likely to choose a business outside the home and the advice of experts.

Contrary to the common belief that men impose their preferences on women, we show that privately elicited preferences for business location are strikingly similar between men and women. This implies that the women in our sample have internalised gender-specific rules of behavior. Our interpretation of the empirical results is in line with the seminal paper by [Akerlof and Kranton \(2000\)](#), which argues that such rules provide men and women with an ‘identity’ or sense of self. We hypothesize that the disutility incurred by contravening gender rules can limit the use of microcredit for female enterprise and can also explain the small impact of finance. Indeed, as far as the location of a business influences its market size and potential for growth, and consultation and advice from peers can be considered an important source of information for setting up or expanding a business, a home-bias in preferences for business location and a lack of demand for advice from outside the home can help in explaining why female-run businesses do not grow or survive. Since microcredit alone fails to change these preferences, it may not be the binding constraint on the creation or growth of enterprises by women.

We make four contributions to the literature. First, we add to the existing literature on potential causes of low growth in female enterprises. Where other studies have explored finance ([Banerjee et al., 2015](#); [Ginè and Mansuri, 2011](#)), technical skills ([Blattman et al., 2015](#)) and a need to hide income sources from the household ([de Mel et al., 2012](#); [Fiala, 2015](#)), our results show that gender identity and internalised norms can also constrain the growth of businesses run by women. We contribute to the literature on gender identity by exploring another decision where identity may undermine what development policies aim to achieve by empowering women economically. For instance, [Bertrand et al. \(2015\)](#) find that women in Brazil refrain from participating in the labour force because they are likely to earn more than their male partners. This contradicts the gender norm that prescribes men to be the primary income earners. Similarly, [Mueller \(2016\)](#) shows that female politicians in India are unlikely to make pro-female policies choices and may be proxies of male representatives. Second, our finding that gender norms are internalised by women, in that they can influence women’s behavior even in situations where choice is private and plausible deniability is guaranteed by the experimental protocol, is consistent with theoretical models ([Akerlof and Kranton, 2000](#); [Bordalo et al., 2016](#)) and empirical evidence on identity and self-stereotyping ([Bordalo et al., 2019](#); [Coffman, 2014](#)). It also complements empirical evidence on intra-household dynamics, showing how male preferences constrain women’s decisions, for instance concerning labor force participation and fertility ([Bursztyn et al., 2017](#); [Ashraf et al., 2014](#); [Field et al., 2019](#)). Our results suggest that reduced mobility and interactions with non-household members are not only due to impositions by spouses or

male relatives.

Third, our evidence on the short-lived impact of microfinance on business outcomes contributes to the already cited growing number of microfinance evaluations. Our setting is novel in that we consider a product specifically intended to support women to set up a new business. Women in our sample submitted a proposal for a new business and a randomly selected sub-sample then received the loan, together with a business management training at the time of loan disbursement. This particular setting may explain the slightly larger impacts that we obtain in terms of business creation with respect to other studies: loan recipients are 10 and 18 percentage points more likely to set up a business within one and two years, respectively - effects that are larger than the relatively modest impact found in other studies of microfinance loans that do not target start ups (Banerjee et al., 2015). However, the effect is short-lived, as loan recipients are also 18 percentage points more likely to shut down a new business over the same period. Our findings, when taken together with the preference for business location and advice, suggest that business growth and longevity may be bound by internalized norms.

Finally, similar to existing findings on advice-taking and social learning, we find that advice is undervalued.³ We add to the literature by differentiating the identity of the adviser and show that the demand for advice is lower if advice comes from an individual who does not belong to the household, even if forgoing it comes at an economic cost.

The remainder of the paper proceeds as follows: Section 2 summarizes the conceptual framework of our analysis. Section 3 describes the design and study setting. Section 4 discusses the empirical results and Section 5 concludes.

2 Conceptual framework

We apply Akerlof and Kranton (2000)'s identity economics framework to the decision of venturing out of the household for income. Specifically, we look at the decision of aspiring female entrepreneurs in our sample to set up an enterprise and choose the location from which it is operated. Akerlof and Kranton (2000) assume two social categories that prescribe specific rules of behaviour that individuals internalize and provide a sense of self. Individual utility is a function of the satisfaction (dissatisfaction) derived from own and other's conformity with (contravention of) the rules for their category. In the context of our sample, *conformers* prescribe to the following rule: Men go out of the home to earn; women are primarily caretakers of the household and engage in home-based economic activities. There may be stigma attached to women leaving the home in our setting. Working

³ See Barham et al. (2017) and Stone and Zafar (2014). Weizsacker (2008) provides a review of literature and concludes that preference for information from peers is only slightly stronger than preference for random decisions.

outside the home or interacting with outsiders may not be considered 'respectable' activities (World Bank, 2006; Jayachandran, 2019) and can be vetoed by other members of the family. Female mobility may be severely restricted by both social norms and a lack of safe transport options. Security concerns have been highlighted in a number of different studies looking at female enrollment in schools (Jacoby and Mansuri, 2011; Andrabi et al., 2013), in vocational training programs (Cheema et al., 2012) and labor force participation (Field and Vyborny, 2016) in Pakistan.

By engaging in an enterprise outside the home, a woman will not be considered a true *con-former* and experience a loss of utility within the Akerlof and Kranton (2000) framework from two sources: costs could occur from violating personal beliefs about the appropriateness of opening a business outside the home; and from sanctions or displeasure of society and other household members. In what follows, we focus on the first source of disutility, given that the design of our incentivised tasks implies that individual decisions are completely private. However, even if our design is intended to shut down the social component by making choices private, starting up a business, its location and interactions with strangers are observable, making it difficult to distinguish which source of cost is more relevant in the decisions we study.⁴ For this reason, we speak broadly of costs related to deviation from norms, which we refer to, for brevity, as norms-related costs. Lastly, within this framework we expect preferences to be uni-modal, defined by mass of respondents deeming one option acceptable over others.

Among a sample of microenterprise loan applicants, and since norms-related costs are also borne by the spouse (or family member) of a working woman, we expect that:

Hypothesis I - Men and women will prefer that women set up a home-based enterprise, which does not involve her regularly venturing out of the household.

Hypothesis II - By extension, preference for other activities requiring interaction with outsiders - specifically, advice from non-family members, will be low.

It is possible that preferences of the decision makers are imposed on the subordinate group. In our setting, these are likely to be men and women, respectively.⁵ It is also possible that the gender norms are internalized, women will act as proxies of male and will display preferences very similar to those of men. If the latter is true, we should find:

Hypothesis III - Male preferences are not statistically different from female preferences.

Finally, though we do not have sufficient data on actual decision - only 158 women actually set up a business in our sample - we use innovative incentivised tasks to elicit preferences for business location and advice from aspiring entrepreneurs participating in the RCT. Norms-related costs associated with businesses outside the home may be higher for

⁴ For instance, if girls are raised to be modest, obedient, etc, these are likely to become values they adhere to, rather than external social impositions.

⁵ Only 20% of the female sample reports making household decisions on her own. This is similar to the proportions reported in other studies in Pakistan, e.g. ?.

women with more responsibilities at home -e.g. women with dependent children, or those who live in nuclear families and do not have support with childcare and housework. We expect that women with greater agency may be able or willing to violate gender norms. We also expect that access to finance can motivate women on the extensive margin - those for whom norms-related costs are relatively low, to set up a business and one that is outside the home.

3 Experimental design and context

3.1 The treatment loan product

The collaborating organisation, Kashf Foundation, is a specialized non-profit microfinance organization in Pakistan, offering microfinance services to women from low-income households. At the time of the baseline, Kashf was serving 12.5% of the total active female borrowers in the country, providing an average PKR 10,000 (~\$ 67) entry loan. In 2014, Kashf Foundation piloted a new microenterprise loan for women desirous of setting up a *new* business. Treatment loan size ranged from PKR 10,000 - PKR 40,000 (~\$67-267), to be repaid over a year, with repayments starting from the month after disbursement.⁶ The loan was complemented by a three hour session on the importance of marketing, networking and capacity building for a new business.

Consistent with the stated purpose of the product, applicants were required to submit a business plan for a new business, owned and controlled by the applicant, and were informed that they would not be provided follow-up loans if they did not end up using the loans as intended. Applicants who were deemed to have a 'viable' business plan, in addition to sufficient household income to repay the loan, were eligible to receive the loan and training.⁷ The research team assigned individual applicants within each branch to a treatment group that received the loan product and a control group that did not.⁸

⁶ The average and median loan size was PKR 30,000, with a 22% monthly 'service charge' on reducing loan balance. The results discussed later are robust when we include the size of the loan as a control.

⁷ Viability' required the proposed plan to qualify in two main aspects: i) the required investment in assets did not exceed PKR 40,000; and ii) that at least 20% profit margin is expected by end of year, for a new business that "should be owned and controlled by a female, while male participation, if any, should be limited to assisting in various activities such as transportation, external party dealing etc."

⁸ Applicants in the control group were informed that, due to high demand, the Foundation had used a lottery system to select eligible applicants who would receive the loan.

3.2 Preference elicitation task I: Location of Business

In this and the next sub-sections, we describe the protocol of the two incentivised tasks conducted with study participants during the second follow-up survey, two years after loan disbursement. The protocol is designed to minimize information spillovers and influence between respondents. Each task was conducted privately, with no other respondent within hearing distance, first with the men and then the women. The version of the tasks administered to each household was randomized to avoid information spillovers between households in the same community. All earnings were revealed at the end of the male and female questionnaire, respectively. Online Appendix OA.1 contains the detailed protocol followed by the enumerators for the two experiments.

Table 1: Business location preference elicitation

Activities with the male respondent

Step 1: Presented with 3 business scenarios (location, revenues and costs) and asked to rank them in increasing level of profits for a reward of PKR 100.

Step 2: Asked to select an activity from the 3 options (or doing nothing) for the female respondent, assuming there are no financing constraints.

Activities with the female respondent

Step 3: Presented with the same 3 business scenarios as the male respondent and asked to rank them in order of increasing profit levels for a reward of PKR 100.

Step 4: Asked to select an activity for herself from the 3 options (or doing nothing), assuming there are no financing and permission from male respondent constraints. Response provided in a sealed envelope.

Step 5: For a reward of PKR 100, asked to guess what the male respondent chose for her.

Table 1 summarizes the steps of the location preference elicitation protocol. Respondents were presented with 3 business scenarios. Each business scenario was characterized by a location, value of sales and running costs. Business locations varied between home, local neighborhood market and larger market in the city. The level of sales and costs, and thus profits, associated with each location was randomised in order to disentangle preferences for location from preferences for profits.

First, to measure if respondents understood the profits associated with each scenario, they were asked to compute such profits and rank the scenarios by profit level.⁹ Respondents earned PKR 100 for correctly ranking the business profits. Second, we asked the male

⁹ The profit figures are in the range of median profits earned by the sample and the figures were kept deliberately simple to calculate.

respondent what he would prefer his wife to do, if finance were not a constraint. He was also allowed to answer 'do nothing' if none of the options were to his liking.

Next, the female respondent was presented with the same 3 business scenarios and was asked to rank the scenarios in order of increasing profits for a PKR 100 (\approx \$0.6) reward.¹⁰ Then she was asked about the scenario she would choose for herself, assuming that finance and permission from the male respondent were not a problem, or whether she preferred to not set up any business. To keep this response confidential, the woman was asked to mark her preferences on a piece of paper and submit it to the enumerator in a sealed envelope. Finally, we test female knowledge of the man's preferences, by asking her to guess what they selected for her, offering a PKR 100 reward if she guessed correctly.

While this procedure allows us to determine whether a certain business location is preferred because of its profitability, it cannot disentangle other reasons for preferring a location. In the real world, a business' location, its profitability, safety and other attributes are likely to be interrelated and hard to observe (Field and Vyborny, 2016). When these other non-economic considerations are taken into account, giving up a higher profit location for business might be efficient for the household. Through this simple task we try to measure overall preferences over locations in a general attempt to separate economic from non-economic reasons for location preferences. Moreover, the task allows us to observe whether preferences for the woman's business location differ by gender, and whether women can correctly predict men's preferences.

3.3 Preference elicitation task II: Demand for advice

At endline, we also elicited women's willingness to pay for advice. To remove confounding effects of existing business knowledge, which would affect any demand for advice on business matters, the task elicits willingness to pay for generic advice. That is, in the task women can ask for advice on the correct answer to randomly selected questions on general knowledge and abstract reasoning (using Raven's matrices). Table 2 summarizes each step of the elicitation protocol.

First, we asked these questions to male respondents and used their answers as the advice to be offered to women. Each male respondent was asked two questions in random order. Each question had four possible answers, and the male respondent was asked to pick the two options that he deemed most likely to be correct. To incentivise answering carefully, the male respondent was told that his answers might be offered to the female respondent as advice and that she could earn up to PKR 200 (\approx \$1.3) for each correctly answered question.

¹⁰ This was done for a similar reason as with the male respondent – so that we could control for understanding of profit levels in the analysis.

Table 2: Demand for Advice Elicitation

Activity with the male respondent

Step 1: Asked to provide two answers (most likely to be correct) to 2 multiple choice questions (1 each on general knowledge and abstract reasoning).

Activities with the female respondent

Step 2: Presented with the same questions as the male respondent.

Step 3: Before the two questions can be answered, the respondent is offered advice at three different costs (PKR 0, 50 and 100). This is done twice, once about advice from the male partner and once about advice from an expert.

Step 4: Enumerator opens sealed envelope containing randomly drawn out price and source of advice for implementation.

Step 5: Choice for accepting or rejecting advice is implemented, corresponding to the randomly drawn price and source of advice combination. If applicable, advice is provided.

Step 6: Selects final answer for each question.

Step 7: Final earnings calculated based on number of correct answers, minus any cost of advice purchased.

We then proceeded to ask the same 2 questions to female respondents. We informed women that they would earn PKR 200 for every question they answered correctly and that we would offer them the opportunity to get advice from her husband/male household member or an expert. The expert advice was generated by the research team and consisted in pairs of answers to the questions, each pair containing the correct answer. Expert advice had greater instrumental value than advice from the husband, which contained the correct answer only 32% of the times.

Four features of the decision to ask for advice were carefully explained to subjects. First, the expert was characterized as someone with knowledge on the subject matter of the questions, not personally known to the respondent and of unspecified gender. Second, advice may be costly: namely, advice from each source could be free, or cost PKR 50 or 100 (\approx \$0, \$0.3 or \$0.7, respectively). The cost of advice was determined by a random draw, but respondents had to decide whether they wanted advice for each possible combination

of source and cost before knowing the result of the random draw.¹¹ Third, advice was in the form of two options for each question that either the male partner or the expert had provided, and the female respondent had to select the final answer. Fourth, both types of advice were present with the enumerator and did not require any personal contact with the advisor.

With random selection of the advice source and cost to be implemented, advice given in the form of two options and physical separation of adviser and female respondent, the woman could *plausibly deny* whether she had decided to purchase advice from her male partner or from the expert or both. Plausible deniability is crucial, as we want the demand for advice to capture the woman's preference, free of fear of retribution from household members.

3.4 Study setting

The study sample is drawn from peri-urban areas of three districts of Punjab, Pakistan: Bahawalpur, Gujrat and Sialkot, displaying differing levels of income and socio-economic indicators: average monthly household income is PKR 30,294 (\$200), PKR 51,854 (\$350) and PKR 29,110 (\$200), respectively;¹² and the three districts are ranked 31st, 19th and 13th in terms of educational attainment, respectively, out of 36 districts in Punjab (Memon et al., 2014). At the time of the baseline in May 2014, these districts were among the highest served districts in terms of both MFI penetration and number of active borrowers.¹³

We interview 630 women who form our treatment and control sample in three annual rounds of survey. A little under one-third of our sample (28%) reports that husbands and other members of the family make decisions about their labor market participation, though only 1% believe their household members will not allow them to work at all. All women in our sample all applied for a loan to set up a business from a microfinance organization, demonstrating a desire to engage in some income generating activity. However, even if they are desirous of setting up an enterprise, cultural norms may discourage women from working outside the home, particularly if it requires regularly venturing out alone.

¹¹ In other words, willingness to pay was elicited using the strategy method: in the spirit of Becker-DeGroot-Marschak method (BDM) (Becker et al., 1964), subjects were asked for each price-source combination, whether they were willing to get advice or not. In practice, the random draw was implemented by showing women a sealed envelope, containing the combination of cost and source of advice to be implemented. Any payment for advice was deducted from the subject's earnings so that no out-of-pocket expense had to be borne by the respondent.

¹² Inflation adjusted estimates from Pakistan Social and Living Standards Measurement survey 2010-11.

¹³ According to MicroWatch Issue 31, 2014 and MicroWatch Issue 37, 2015, <http://www.pmn.org.pk/publications/category/MicroWatch>, Accessed 30 January 2017.

3.5 Study sample and timeline

Between May - August 2014, we conducted a baseline survey with applicants eligible for the loan for start-ups at Kashf branches in the sample areas. A total of 899 respondents were surveyed at baseline, out of which 440 were assigned to the treatment group. These respondents were interviewed at yearly intervals for the midline and endline surveys between July - September 2015 and July - September 2016. Figure 1 displays the study timeline. 630 original respondents could be located and successfully surveyed at endline of which 328 belonged to the treatment sample. In Section 4 we discuss how we address attrition in the empirical analysis.

Figure 1: Study timeline and respondents

Random Assignment Baseline survey	Midline survey	Endline survey Location and advice elicitation
$t = 0$	$t = 1$	$t = 2$
May - Aug 2014	July - Sept 2015	July - Sept 2016
<i>Number of respondents:</i>		
899	689	630
(49%)	(51%)	(52%)

Note: The figure displays months, duration and corresponding activities related conducted at $t = 0, 1, 2$. Proportion of sample in treatment group are reported in parenthesis below the number of respondents for each time period.

All surveys were conducted with female respondents only. The survey contains questions on basic demographics - respondent age, education level, marital status, current and past experience in managing the business and the role the woman played in decisions made in the household. The survey also includes questions on household assets, expenditure, financial access and other businesses in the household. At both follow-up surveys, we collected information on whether the respondent had set up a new business since the treatment loan was first disbursed, on whether that business still existed or had shut down in the meantime.

At endline, we also conducted incentivised tasks with the female respondent and the main male decision maker in the respondents' household to elicit their preferences for business location and advice. As discussed in Sections 3.2 and 3.3, this was only done when both the female and male respondents were at home, which was possible in 585 instances.¹⁴

¹⁴ These were 585 households where the husband or male decision-makers identified by the research team agreed to participate in the elicitation exercise. To preserve anonymity of female responses in one part of the tasks females were asked to record their preferences on a paper and put it in a sealed envelope. Due to errors in data entry, we could not match identifiers for 21 women and their data has been dropped from the analysis. These women are not statistically different in any dimension from the sample that has been used in the analysis.

The male respondent was either the woman's spouse; or the main male decision maker in the household in cases where the woman was unmarried or the husband was unavailable because he lived and worked in another city or country. Of the 585 male respondents, 74% were husbands, 12% were sons and 4% were brothers of female respondents.

Table A1 in the Appendix presents the characteristics of the female sample. The average respondent belongs to a low-income household, is 37 years of age, married and literate. Most of the respondents live in homes owned by one of the household members, with an average household expenditure of PKR 14,000 per month. Two in every five respondents reported to be running a business at the time of the baseline, or to have previously run one. On average, women are allowed by family members to seek paid work, although the average respondent has low decision making power in the household, according to indices for autonomy and female agency.¹⁵ Respondents report low access to formal and informal finance at baseline. Observable characteristics are strongly balanced across the control and treatment groups. The F-test of joint significance of treatment and baseline variables produces a p - value of 0.98 (column 5 of table A1).

4 Results

4.1 Impact of the Microfinance Product

We measure the impact of having been randomly selected to receive the loan and training after one and two years, or the *short* and *medium* term, respectively. Our primary outcome of interest is whether the financial product improved the likelihood that a woman set up a business, and that the business was still operating in the short and medium term. Given the limited sample of our study, in the regressions we report the minimum detectable effect (MDE) size for each outcome variable. This is the ex post effect size given our sample size that is detectable at 5 percent significance level with 80 percent power (Duflo et al., 2008; Haushofer and Shapiro, 2016).

We estimate the average Intent to Treat (ITT) parameters of equation (1):

$$y_i = \beta_0 + \beta_1 \cdot \text{Treatment}_{(1\text{year}),i} + \beta_2 \cdot \text{Treatment}_{(2\text{year}),i} + \beta_3 \cdot y_{i0} + \beta_4 \cdot z_{i0} + \phi_s + \varepsilon_i \quad (1)$$

Where y_i is the value for individual i of the outcome variable and y_{i0} is its baseline value. β_1 provides the average ITT effect on outcome y one year after disbursement; and β_2 provides the cumulative effect two years after the treatment loans were first disbursed. For each outcome variable, we estimate an ANCOVA specification with z_{i0} controls due to

¹⁵ Variable construction and survey questions are described in the Online Appendix table 5

systematic attrition, ϕ_s denoting the common parameter for branch stratum s and standard errors are clustered at the branch level.

We were unable to survey 209 of the initial 899 baseline respondents at the first followup and a further 60 at the second followup, leading to an overall attrition rate of 30% from the original baseline sample after two years. Attrition is selective, in that almost two-thirds of the attrited sample belong to the control sample, mainly due to the fact that the implementing partner, Kashf Foundation, had limited contact with women in the control group after the initial loan application, while they had regular interaction and updated addresses for treated women. Beside treatment status, attrition is correlated with individual characteristics (Appendix table A2). In our analysis, we deal with attrition in two main ways. First, we estimate equation (1) for each outcome using Inverse Probability Weights capturing successful interviews (Wooldridge, 2002); and by estimating a fully saturated model with control variables selected using the post-double lasso regularization approach of Belloni et al. (2013). Both results are provided in Table 3. Second, we estimate equation (1) with all baseline characteristics that are systematically related to attrition included as controls. These results are shown in Appendix Table A3. We also use the bounding procedure by Lee (2009) to show the lower and upper limits of treatment effects in Appendix Table A4.

At the end of the first year, a total of 119 respondents, 38 from control and 81 from the treated sample, report having set up a new business. Over the full two years of the study, a total of 158 new businesses are set up, 107 by women from the treated sample, but 118 of these businesses shut down, 84 of which belong to the treated sample. Table 3 reports regression results. At midline, treated women are 6 percentage points more likely than the control sample to be running a new business (columns 1 & 2): this figure captures the effect of the treatment on the probability that a woman once sets up a business during the first year after the disbursement of the loan, equal to 10 percentage points (columns 5 & 6), net the share of businesses that closed over the same year among treated women (equal to 4 percentage points in columns 3 & 4). The positive treatment effect on existing businesses is insignificant and disappears completely after 2 years, when the higher share of closed-down businesses in the treated group offsets any treatment effects on the likelihood of having started a business. The high Minimum Detectable Effects for the coefficients in (columns 1 and 2) seem to suggest that the small sample size is not responsible for the statistical insignificance of this effect. These result remain robust to re-estimating the regression with the inclusion as controls of all characteristics significantly related with attrition (Appendix Table A3). Table A4 in the Appendix shows the upper and lower bounds of treatment effects using the Lee (2009) bounds technique.

In addition, we show treatment effects on other outcomes, namely household assets, expenditures and finance; and on female agency and autonomy in decision making. We confirm the limited impact of microfinance on these outcomes, which has also been found in the literature (Banerjee et al., 2015; Meager, 2019). Results are given in Tables A5 and A6 of the Appendix.

It is interesting to compare our results with those observed in other evaluations of microfi-

Table 3: Impact of treatment on enterprise creation and survival

	Business exists (1)	Business exists (2)	Shut down business (3)	Shut down business (4)	Set up business (5)	Set up business (6)
Treatment _(1year)	0.061 (0.038) [0.069]	0.060 (0.038) [0.069]	0.037 (0.025) [0.064]	0.039 (0.024) [0.064]	0.098 (0.049)** [0.088]	0.098 (0.049)** [0.088]
Treatment _(2years)	0.001 (0.012) [0.055]	-0.001 (0.013) [0.055]	0.178 ^{AAA} (0.044) ^{***} [0.087]	0.179 ^{AAA} (0.046) ^{***} [0.087]	0.179 ^{AAA} (0.047) ^{***} [0.100]	0.177 ^{AAA} (0.047) ^{***} [0.100]
Mean _{1year}	0.083	0.083	0.043	0.043	0.126	0.126
Mean _{2years}	0.070	0.070	0.078	0.078	0.147	0.147
N	1260	1260	1260	1260	1260	1260
Attrition controls	IPW	PDS Lasso	IPW	PDS Lasso	IPW	PDS Lasso

Note: All regressions include branch fixed effects with errors clustered at the branch level. ‘Business exists’ is a binary variable equal to 1 if the respondent set up a new business since baseline that is still operating one (two) year(s) later at the time of first (second) followup. ‘Shuts down business’ is a binary variable equal to 1 if the respondent shut down a new business that was set up after baseline. ‘Set up business’ is a binary variable equal to 1 if the respondent set up a new business since baseline irrespective of whether it is still operating or not. Treatment_{t=1} and Treatment_{t=2} refer to the average intent to treat effect on the outcome one and two years after treatment was first disbursed, respectively. Ex post minimum detectable effect (MDE) size at a significance level of 0.05 and power of 80 percent are shown in square brackets. ‘Mean’ reports the average value for the control sample over time. ‘N’ refers to the final sample size.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Adjusting critical values following the approach by Benjamini and Hochberg, 1995: ^{AAA}Significance at 1% level, ^{AA}Significance at 5% level, ^ASignificance at 10% level.

nance products. The short-term effect of treatment on business creation is relatively larger than the existing evidence in the literature, consistent with the different target of our analysis and with the stated purpose of the product. Other studies have typically looked at the impacts of finance on business outcomes for existing businesses, not new businesses.¹⁶ Our findings suggest that finance can have a larger effect on business creation if provided to aspiring entrepreneurs.

Our results also show that the life-span of a micro-enterprise is likely to be short. This effect has been documented in other studies: according to Banerjee et al. (2014), one possi-

¹⁶ See for instance, Duflo et al. (2013), Angelucci et al. (2015), Attanasio et al. (2015), Crepon et al. (2015), Tarozzi et al. (2014), Karlan and Zinman (2011) and Augsburg et al. (2015), among others. Using Bayesian hierarchical models to aggregate data from these studies, Meager (2019) finds generally small or insignificant impact of microcredit, except on households with existing businesses, where the effects are generally positive and larger.

ble reason for these results is that the financial gains of a new enterprise are often offset by increased opportunity costs of the entrepreneur's labor. For instance, women may find increased demands on their time as they balance the time spent on household chores and their business. Others posit that finance alone is insufficient to sustain enterprise (Fafchamps et al., 2014) and that it must be complemented with skills, training (Blattman et al., 2015) and cooperation from household members (de Mel et al., 2009, 2012).

In Appendix Table A7, we examine sources of heterogeneity in treatment effects, in order to test whether our data confirm these hypotheses. We find that women who live in households where other members run businesses are less likely to have shut down their own business at midline, though this effect does not persist until the endline. This contradicts the finding that the low average returns to capital earned by female entrepreneurs in India, Ghana and Sri Lanka are due to the capital being invested in husband's enterprise rather than the respondents' (Bernhardt et al., 2017). Our results show that household experience with another enterprise helps new female-run enterprises survive. Women with higher than median levels of agency at baseline are more likely to have a surviving business at midline, an effect that persists at endline. The woman's own experience from having run a business in the past or having young children does not make a significant difference either at midline or endline.

Results from our preference tasks allows us to elicit preferences from all the RCT sample, rather than from the selected sample of those who are able to set up a business. We are also able to test if these preferences are driven by profit or location considerations, if respondents' preferences differ from those of their family members and if preferences driven by conservative social norms manifest in multiple ways that could affect the business, i.e. if they are also expressed in demand for advice.

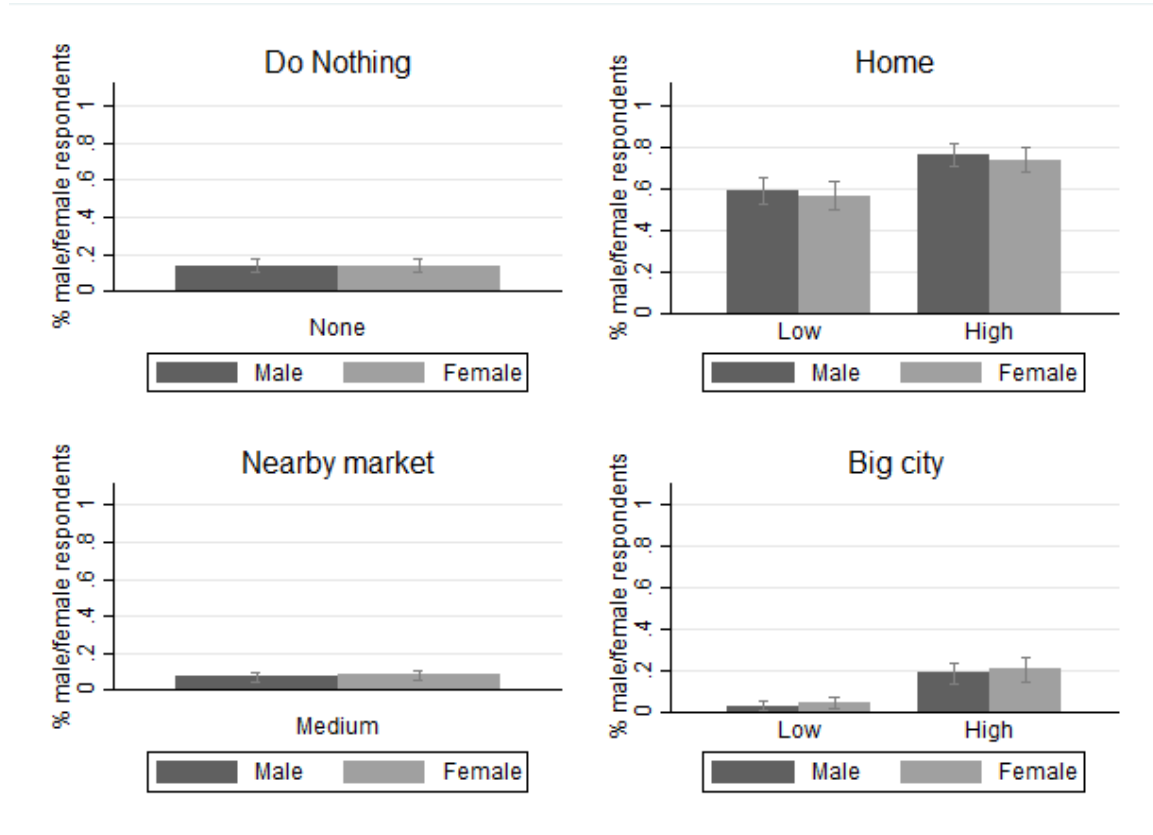
4.2 Preferences for Business Location

We now report results of the elicitation of preferences for business location and demand for advice that we conducted at endline. Table A8 in the appendix provides average responses in the elicitation tasks. Business operated from the home is the dominant choice, preferred by 69% of the men and 66% of the women. Only about 12% of the men and 13% of the women prefer that the women not set up a business at all, if finance is not a constraint. Four out of every five women would accept advice from their husband/household member but a lower proportion (65%) demands advice from an expert. Demand from both sources is significantly lower when advice is costly, i.e. 45% of the female sample prefers husbands advice, while only 30% prefers advice from an expert.

We investigate whether preferences for the location of a business run by the woman differ on the basis of the gender of the respondent and on the level of profit associated to businesses located at home, in a local market or in a city market. Figure 2 presents average

preferences by location, gender and profit levels.

Figure 2: Business preferences by gender



Note: *x-axis* shows the business opportunity selected by men for women or by women for themselves, by the level of profits associated with each option (None, Low, Medium or High). The *y-axis* displays the percentage of response by respondents who were able to rank business opportunities by profits correctly. Vertical bars represent the 95% confidence interval.

Three main features of the data are worth noticing. First, demand for enterprise is high and concentrated towards home-based businesses. Home is the modal location, regardless of the level of profits associated with it: almost 75 per cent of all respondents rank the home business scenario at the top when it is the most profitable one, a percentage that decreases by 17 percentage points when it is the least profitable. Consistent with this result, the other business locations are much less popular: while more respondents (14 per cent on average) prefer doing nothing to conducting a business in the local market (8 per cent on average), the share of subjects opting for a business located in a city market varies between 4 per cent when it is the least profitable scenario, to 20 per cent when it is the most profitable one. Second, it follows from these patterns that location takes precedence over profit considerations. Women are willing to give up PKR 3000 in profits when they select the home option instead of going to the city for doing business, which is equivalent to 60% of median profits reported at the midline.

Third, preferences of male and female respondents are almost indistinguishable: women are slightly more likely to prefer businesses located outside than inside the house, but these differences are not statistically significant.

These results suggest that women may have internalized norms on the appropriateness of female enterprise and appropriate location. Indeed, 25 per cent of the sample at baseline that was not working and not seeking work reported that they did not feel their household members would allow them to work. However, a considerable proportion (30 per cent) stated that they themselves did not want to venture outside the household. The evidence on demand for advice suggest that a ‘home-bias’ exists also in domains that do not require venturing outside the house. There may be a number of reasons for these findings. For instance, as discussed in Section 2, it may be considered ‘inappropriate’ for women to leave the households or interact with outsiders; and security concerns may limit female mobility further. While our data do not allow us to disentangle these different explanations, we try to rule out alternative explanations for our results.

It is possible that these results are driven by a lack of understanding of the questions asked. However, we test if the respondents can correctly rank profits and find that around 80 per cent of subjects are able to do so when home is the most profitable option, a share that decreases by 9 percentage points when it is the least profitable.¹⁷ The similarity between male and female preferences may be due to the fact that women, fearing retribution outside the experiment, answer what their best guess of males’ preferences is. Indeed, women are very good at guessing male partners’ ranking of the three business scenarios, as shown in Appendix Figure A2: the difference between male responses and female guesses are both economically and statistically insignificant. However, given the activity was designed to keep female responses private and confidential, we do not expect fear of retribution to be a significant factor deterring women from expressing a preference for business outside the house.

4.3 Demand for Advice

We also elicited women’s willingness to pay for advice from their male partners and from an expert at the endline.¹⁸ Such advice may help them give correct answers to two general knowledge questions, each worth PKR 200. The price of advice varied between PKR 0, 50 and 100. The cost of advice is thus strictly lower than the expected return from it. Therefore, in expectation, women should rationally take advantage of it. Moreover, the respondent was not required in this scenario to venture outside the home to obtain advice

¹⁷ Appendix Figure A1 shows the rate of correct answers to the profit ranking question, by version of the task and gender of the respondent. While both men and women are more likely to make mistakes when the home-based business is the least profitable, this difference is only statistically significant for women ($p = 0.001$). Therefore, in all analysis we control for whether the respondent has correctly ranked profits or not.

¹⁸ Table A8 in the appendix provides a brief summary of preferences displayed by female respondents.

from a non-household stranger, and could plausibly deny to the spouse having asked for it. Absent other considerations apart from profit maximization, women should opt for advice from either source at any price. Hence, women should opt for advice, at least when it is free.¹⁹

Figure 3 shows the share of women requesting advice from experts (dark grey bars) and male partners (light grey bars) at the various price levels. Demand for both types of advice falls as the price of advice increases: as the price of advice goes from PKR 0 to 100, the share of women willing to obtain it falls from 80 to 32 per cent in the case of partner's advice, and from 63 to 20 per cent in the case of expert advice. It is thus worth noticing that about 40 per cent of respondents do not want advice from an expert when it is free, even if they do not have to meet or speak to the expert. Consistent with this, demand for partner's advice is higher than that for expert advice at all costs. Such differences range from 17 percentage points when advice is free, to 16 percentage points when advice costs PKR 50, to 12 percentage points when it costs PKR 100, and are always statistically significant ($p = 0.000$ in each case).

These results are striking for two reasons. One, displaying a preference for advice from an expert and from the male partner were not mutually exclusive. Respondents could display a demand for both and randomly receive one. Yet, a considerable number of women did not want to ask for expert advice, even when the advice was free and non-binding. Second, the definition of 'expert' implied greater knowledge and higher instrumental value of advice, thus expert advice should have been sought more often, in comparison to the partner's advice, if maximizing reward was the dominant concern.²⁰ Thus women are willing to forgo advice from outsiders, even when advice is free and can increase the likelihood of earning a reward.²¹

4.4 Correlates of Business Preferences and Advice

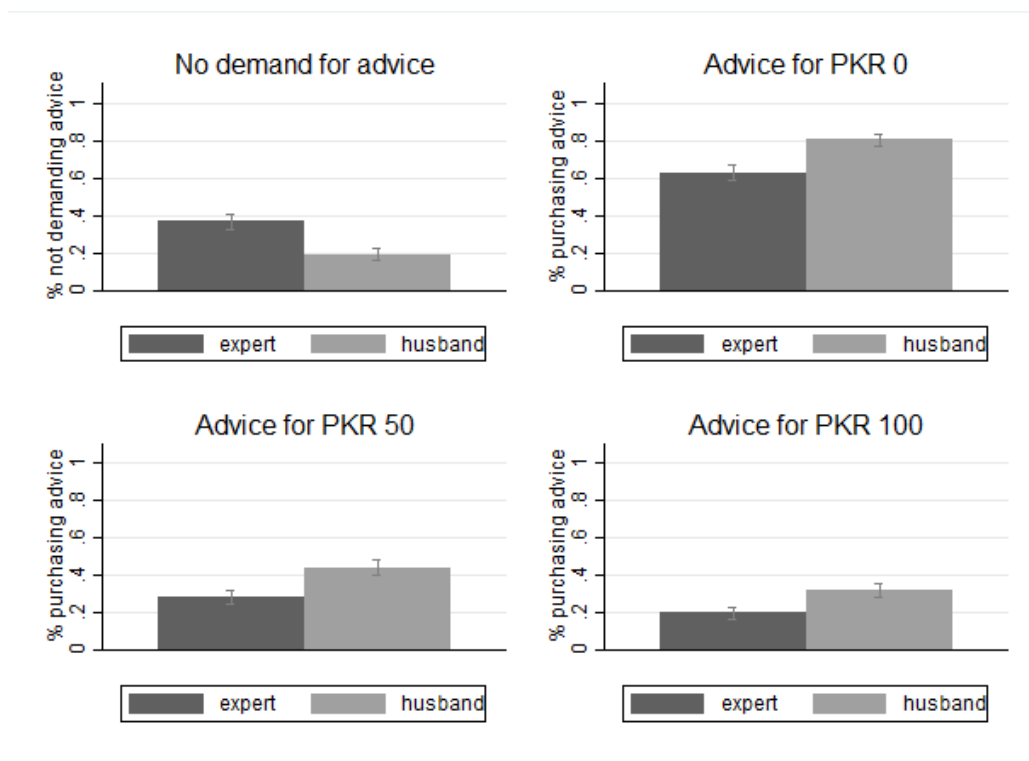
We now ask what drives these preferences. We start by considering access to finance. Recall that the women in our study were randomized into receiving a loan and training for starting a business. We observe their preferences for location and advice two years after the intervention. We test if preferences have changed due to the treatment loan. Results are shown in Table 4 and 5. The treatment has no statistically significant impact on either

¹⁹ The expected returns from costly advice depend on beliefs on its usefulness, which we don't collect.

²⁰ While women did not know ex-ante that male household members' advice was correct only 32% of the cases, it is reasonable to assume that only opting for this type of advice did not maximize a woman's likelihood to correctly answer questions in this task.

²¹ We cannot disentangle lack of trust of experts in general and gender specific norms around taking advice from people outside the household as reasons for why women are less willing to take advice from experts. However, for whatever reason they are reluctant, this still indicates a general reluctance to seek advice outside the household.

Figure 3: Female demand for advice



Note: Each panel shows the demand for different 'prices' of advice. *No demand for advice* is a binary variable equal to one if the respondent indicated she did not want advice at any purchase price, including 0. *Advice for 0, 50, 100* refer to the purchase price that the respondent was willing to pay for advice on either the knowledge or the abstract reasoning questions. *x-axis* shows the 'adviser'. The *y-axis* displays the percentage of female respondents who were willing to pay the given price to obtain advice.

preferences for business location or advice.²²

The inability of finance to overcome home bias can explain why recent studies have found finance to have an insignificant impact on female-run business creation or growth (see, for instance, Duflo et al. (2013); Angelucci et al. (2015); Banerjee et al. (2014); Crepon et al. (2015); Tarozzi et al. (2014); Said et al. (2017)). The fact that finance is unable to shift preferences for business location and advice suggest that it is not the binding constraint to growth or sustainability of female-run businesses.

We observe a correlation between home bias in preferences and women's business experience. Women who have a business that was started since the baseline and still exists, are significantly more likely to ask for advice from the husband and less likely to ask for advice from the expert (column 2 and 5 of Table 5). On the other hand, women who have experienced business closure since the baseline express a greater preference for business

²² We also find that the effect of ITT on location preferences of men is negative but highly insignificant ($p = 0.531$).

Table 4: Correlates of preference for business

Dependent variable: <i>Business preference</i>			
	(1)	(2)	(3)
<i>ITT</i>	0.067 (0.163)		
Business exists		-0.678 (0.430)	
Set up business			-0.620 (0.436)
Shut down business			0.992 (0.465)**
Existing family business	-0.011 (0.165)	-0.052 (0.173)	-0.060 (0.173)
Female respondent: agency index	-0.158 (0.127)	-0.139 (0.129)	-0.134 (0.127)
Female respondent: has young children	-0.059 (0.222)	-0.067 (0.230)	-0.073 (0.224)
Female respondent: with nuclear family	-0.272 (0.160)*	-0.276 (0.154)*	-0.242 (0.152)
N	564	564	564
Pseudo R^2	0.021	0.023	0.026

Note: Results are from an ordered logit regression with dependent variable coded as business preference = 0 for doing nothing; = 1 for business operations inside the home; = 2 for business outside the home. *ITT* is a dummy variable that is equal to one if the female respondent belonged to the RCT treatment sample. *Business exists* is a dummy variable equal to 1 if the respondent set up a business since baseline that exists at the time of the final follow-up survey *Set up business* is dummy variable equal to 1 if the respondent set up a business since baseline; *Shut down business* is a dummy variable equal to 1 if the respondent has shut down up a business that was set since the baseline. *Existing family business* is a dummy variable equal to one if there was an existing business in the household at baseline. *Female respondent: Agency index* is an index created for the female respondent using Anderson (2008) from variables that measure if the respondent can make household decisions (clothing, footwear, medical, recreation, social visits, joining credit groups, purchases for self, purchases for others, marriage, investment) and feels confident in her ability to support the household (for 4 weeks) on her own. *Female respondent: has young children* is a dummy variable equal to 1 if the female respondent has children aged 5 or less. *Female respondent: with nuclear family* is a dummy variable equal to 1 if the female respondent belongs to a nuclear household (with no in-laws or extended family). All regressions include controls for female respondent age, marital status, occupation, an index of her decision making power in the household; household assets; and the version of survey administered at endline. * * * $p < 0.01$, * * $p < 0.05$, * $p < 0.1$.

Table 5: Correlates of preference for advice

Takes advice from:	Husband (1)	Husband (2)	Husband (3)	Expert (4)	Expert (5)	Expert (6)
<i>ITT</i>	0.016 (0.019)			-0.030 (0.040)		
Business exists		0.080 (0.029)**			-0.180 (0.054)***	
Business started			0.109 (0.036)**			-0.175 (0.056)***
Shut down business			0.040 (0.023)			0.201 (0.066)**
Existing family business	0.069 (0.039)*	0.073 (0.039)*	0.072 (0.040)*	-0.001 (0.048)	-0.011 (0.047)	-0.011 (0.047)
Female respondent: agency index	-0.010 (0.018)	-0.013 (0.018)	-0.012 (0.018)	0.006 (0.024)	0.011 (0.024)	0.011 (0.024)
Female respondent: has young children	0.048 (0.022)*	0.048 (0.022)**	0.044 (0.021)*	-0.008 (0.057)	-0.009 (0.057)	-0.010 (0.056)
Female respondent: with nuclear family	0.042 (0.024)	0.040 (0.025)	0.055 (0.024)**	-0.025 (0.055)	-0.022 (0.053)	-0.020 (0.052)
N	585	585	585	585	585	585
R ²	0.094	0.095	0.116	0.060	0.064	0.065

Note: Results are from an OLS regression with dependent variable coded 1 if the respondent is willing to take advice from the husband, 0 otherwise, in columns 1, 2 and 3; and coded as 1 if the respondent is willing to take advice from an expert, 0 otherwise in columns 4, 5 and 6. *Business exists* is a dummy variable equal to 1 if the respondent set up a business since baseline that exists at the time of the final follow-up survey *Set up business* is dummy variable equal to 1 if the respondent set up a business since baseline; *Shut down business* is a dummy variable equal to 1 if the respondent has shut down up a business that was set since the baseline. *Existing family business* is a dummy variable equal to one if there was an existing business in the household at baseline. *Female respondent: Agency index* is an index created for the female respondent using Anderson (2008) from variables that measure if the respondent can make household decisions (clothing, footwear, medical, recreation, social visits, joining credit groups, purchases for self, purchases for others, marriage, investment) and feels confident in her ability to support the household (for 4 weeks) on her own. *Female respondent: has young children* is a dummy variable equal to 1 if the female respondent has children aged 5 or less. *Female respondent: with nuclear family* is a dummy variable equal to 1 if the female respondent belongs to a nuclear household (with no in-laws or extended family). All regressions include controls for female respondent age, marital status, occupation, an index of her decision making power in the household; household assets; and the version of survey administered at endline. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

outside the home²³ and for advice from an expert. It is possible that the experience of starting and failing to sustain an enterprise led to these women to update their preferences towards what they perceived as likely causes of failure i.e. lack of advice from peers and business restricted to home.

Next, we explore whether these preferences vary by the characteristics of the respondents, which have been highlighted in the literature as predicting business creation in households with access to finance: presence of a business in the household; female agency, measured by an index of questions on women's decision making power in the household; and household responsibilities, proxied by the presence of young children in the household. Women who live in nuclear families are less likely to prefer a business outside the home - women living with in-laws may have more support for household chores from other adult women in the household.²⁴ None of the other variables are significantly correlated with preferences for location. The existence of a household business does make it more likely that the woman asks for advice from husband. Women with young children and those living in nuclear families are also more reliant on husband's advice, though these factors still do not induce them to ask for expert's advice.²⁵

5 Discussion and Conclusion

We run an individual level randomised trial to test the effect of a loan and short training product provided to aspiring female micro-entrepreneurs in Pakistan. The product has a relatively large effect on business creation when compared to effects documented in literature, but this effect is largely transitory, significant only in the first year. Using evidence from two survey experiments, we examine how preferences for business location and advice may explain why female-run businesses are short-lived. We show that there is a significant home-bias in the actual and preferred location of businesses that can limit the growth and sustainability of the business. Home-bias thus expresses itself in two dimensions: women

²³ These results are robust to excluding the respondents who prefer no business at all (Appendix Table A9).

²⁴ These effects are small and disappear when we exclude women who prefer no business. See Appendix Table A9.

²⁵ In Appendix Table A10, we take a broader look at correlates of preferences, by comparing the average characteristics of individuals who prefer a business at home, outside home or no business at all. We find that, in general, observable characteristics have little explanatory power. Only prior business experience displays a significant correlation with location preferences in that women with prior experience are less likely to prefer a business located outside the house. Having a mother who also had a business, owning one's house, greater financial access (has a bank account) and being more impatient all increase the likelihood that a woman wants to run a business. In terms of demand for advice from a household member, being illiterate, scoring poorly on cognitive and numeracy tests and being more risk loving are all positively and significantly correlated with demand for husband's advice, perhaps because of a reliance on the husband's advice outside the task (Appendix Table A11). Numeracy scores and risk aversion levels also correlate similarly with demand for advice from experts (Appendix Table A12).

prefer their businesses to be located within the confines of their house (even though this means that they may sacrifice up to 60% of median profits), and women are reluctant to obtain non-binding advice from outsiders that can help them gain more resources. Given the limited scale and potential for growth of businesses located inside the house, and the importance of learning from peers and networking for business growth (Campos and Gassier, 2017; Field et al., 2016), these preferences may reflect other non-economic considerations. These may be related to safety or household duties, which make this the optimal choice for the household or a defined set of socio-cultural norms that frown upon women setting up businesses outside of their homes (see Jayachandran (2019) for a review of the recent literature). This in turn provides an alternative explanation of why female-run enterprises tend to remain small and unprofitable.²⁶

Male and female preferences coincide, despite female preferences being anonymous within the scope of the experiment. Under the gender identity framework of Akerlof and Kranton (2000), this implies that women have internalized gender norms. If microcredit is unable to significantly influence these norms, then it may have little impact on business outcomes, as found by recent impact evaluations (Angelucci et al., 2015; Banerjee et al., 2014). However, our results show that these preferences do correlate with experience of business survival or closure - women with businesses that have survived over the course of study are more likely to prefer husband's advice and a business at home, but women who have had to shut down their businesses are more inclined to seek expert advice and display a greater preference for business outside the home.

There are important caveats to these findings: our experiments, though incentivized, elicit preferences for business scenarios under unrestricted access to finance. Our data do not allow us to test whether these preferences are acted upon. The loans provided in the RCT were small, even if typical in size of many microfinance loans in developing countries, and may have been insufficient on their own to sustain business or to have a long term impact on long-held preferences. Larger or sustained lines of credit may indeed have the power to change preferences and encourage business growth, even if it means leaving the home. Finally, even though we can test if preferences differ by sample characteristics, we do not have baseline measures of these preferences and, therefore, cannot say how the preferences for business and advice may have changed, or if they changed differently for the treated and control sample.

Taken as a whole, these results provide important insights into why many microcredit impact evaluations have found small or insignificant effects on outcomes of female-run businesses. Women appear to prefer to not expand their businesses in order to avoid venturing outside the household. They may also be reluctant to obtain advice, especially from people outside their households, even if that advice can lead to immediate gains. Our results also imply that development programs need to go beyond providing just finance and business training and, for instance, show recipient households how women can provide a meaningful contribution to household income by expanding their market. Given the internalization

²⁶ See Carranza et al. (2018) for a review of the evidence on this.

of gender norms, programs that focus on cooperative rather than confrontational household dynamics are likely to yield larger effects. From a policy perspective, these findings when considered with results from recent studies documenting the effectiveness of peer support (Field et al., 2016), personal initiative training (Campos et al., 2017) and possibility of improving aspirations of female entrepreneurs (Lybbert and Wydick, 2016), imply that there is scope to encourage both the creation and growth of female enterprises through additional measures taken along with the provision of finance.

References

- Aghion, A. B. and Morduch, J. (2005). *The Economics of Microfinance*. MIT Press.
- Akerlof, G. and Kranton, R. E. (2000). Economics and identity. *The Quarterly Journal of Economics*, 115(3):715–753.
- Anderson, M. L. (2008). Multiple Inference and Gender Differences in the Effects of Early ntervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. *Journal of the American statistical Association*, 103(484).
- Andrabi, T., Das, J., and Khwaja, A. (2013). Students today, teachers tomorrow: Identifying constraints on the provision of education. *Journal of Public Economics*, 100(C):1–14.
- Angelucci, M., Karlan, D., and Zinman, J. (2015). Microcredit impacts: Evidence from a randomized microcredit program placement experiment by Compartamos Banco. *American Economic Journal: Applied Economics*, 7(1):151–182.
- Ashraf, N., Field, E., and Lee, J. (2014). Household bargaining and excess fertility: An experimental study in Zambia. *American Economic Review*, 104(7):2210–2237.
- Attanasio, O., Augsburg, B., Haas, R. D., Fitzsimons, E., and Harmgart, H. (2015). The impacts of microfinance: Evidence from joint-liability lending in Mongolia. *American Economic Journal: Applied Economics*, 7(1):90–122.
- Augsburg, B., Haas, D., R., H., H., and Meghir, C. (2015). The impacts of microcredit: Evidence from Bosnia and Herzegovina. *American Economic Journal: Applied Economics*, 7(1):183–202.
- Banerjee, A., Duflo, E., and Hornbeck, R. (2014). Measured profit is not welfare: Evidence from an experiment on bundling microcredit and insurance. Working Paper 20477, National Bureau of Economic Research.
- Banerjee, A., Karlan, D., and Zinman, J. (2015). Six randomized evaluations of microcredit: Introduction and further steps. *American Economic Journal: Applied Economics*, 7(1):1–21.
- Barham, B., Chavas, J., Fitz, D., and Schechter, L. (2017). Responsiveness to advice, learning ability, and technology adoption: An economic experiment with farmers. Unpublished manuscript.
- Becker, G. M., DeGroot, M. H., and Marschak, J. (1964). Measuring utility by a single-response sequential method. *Behavioral science*, 9(3):226–232.
- Belloni, A., Chernozhukov, V., and Hansen, C. (2013). Inference on Treatment Effects after Selection among High-Dimensional Controls. *The Review of Economic Studies*, 81(2):608–650.

- Berge, L. I. O., Bjorvatn, K., and Tungodden, B. (2014). Human and financial capital for microenterprise development: Evidence from a field and lab experiment. *Management Science*, 61(4):707–722.
- Bernhardt, A., Field, E., Pande, R., and Rigol, N. (2017). Household matters: Revisiting the returns to capital among female micro-entrepreneurs. Technical report, National Bureau of Economic Research.
- Bertrand, M., Kamenica, E., and Pan, J. (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics*, 130(2):571–614.
- Blattman, C. C. U., Green, E. P., Jamison, J. C., Lehmann, M. C., and Annan, J. (2015). *The Returns to Microenterprise Support Among the Ultra-Poor: A field experiment in post-war Uganda*. NBER Working Paper Series No. 21310.
- Bordalo, P., Coffman, K., Gennaioli, N., and Shleifer, A. (2016). Stereotypes. *The Quarterly Journal of Economics*, 131(4):1753–1794.
- Bordalo, P., Coffman, K., Gennaioli, N., and Shleifer, A. (2019). Beliefs about gender. *American Economic Review*, 109(3):739–73.
- Bulte, E., Lensink, R., and Vu, N. (2016). Gender training and female empowerment: Experimental evidence from vietnam. *Economics Letters*, 145:117–119.
- Bursztyn, L., Fujiwara, T., and Pallais, A. (2017). 'acting wife': Marriage market incentives and labor market investments. *American Economic Review*, 107(11):3288–3319.
- Buvinić, M. and Furst-Nichols, R. (2016). Promoting women's economic empowerment: What works? *World Bank Research Observer*, 31(1):59–101.
- Buvinić, M. and O'Donnell, M. (2017). Gender matters in economic empowerment interventions: A research review. *CGDev Working Paper Series No. 456*.
- Calderón, G., Cunha, J., and De Giorgi, G. (2013). Business literacy and development: Evidence from a randomized controlled trial in rural mexico. NBER Working Papers 19740, National Bureau of Economic Research.
- Campos, F., Frese, M., Goldstein, M., Iacovone, L., Johnson, H. C., McKenzie, D., and Mensmann, M. (2017). Teaching personal initiative beats traditional training in boosting small business in west africa. *Science*, 357(6357):1287–1290.
- Campos, F. and Gassier, M. (2017). *Gender and enterprise development in Sub-Saharan Africa: a review of constraints and effective interventions*. The World Bank.
- Carranza, E., Dhakal, C., and Love, I. (2018). Female entrepreneurs: How and why are they different? Jobs Working Paper Series no. 20, World Bank Group.

- Cheema, A., Khwaja, A., Naseer, F., and Shapiro, J. (2012). PEOP phase 1 baseline household survey report. Mimeo, Center for Economic Research in Pakistan.
- Coffman, K. B. (2014). Evidence on self-stereotyping and the contribution of ideas. *The Quarterly Journal of Economics*, 129(4):1625–1660.
- Crepon, B., Devoto, F., Duflo, E., and Parienté, W. (2015). Estimating the impact of microcredit on those who take it up: Evidence from a randomized experiment in morocco. *American Economic Journal: Applied Economics*, 7(1):123–150.
- de Mel, S., McKenzie, D., and Woodruff, C. (2009). Are women more credit constrained? Experimental evidence on gender and microenterprise returns. *American Economic Journal: Applied Economics*, 1(3):1–32.
- de Mel, S., McKenzie, D., and Woodruff, C. (2012). One-time transfers of cash or capital have long-lasting effects on microenterprises in Sri Lanka. *Science*, 335:962–966.
- Duflo, E., Banerjee, A., Glennerster, R., and Kinnan, C. G. (2013). The miracle of microfinance? Evidence from a randomized evaluation. *NBER Working Paper Series No. 18950*.
- Duflo, E., Glennerster, R., and Kremer, M. (2008). *Using Randomization in Development Economics Research: A Toolkit*, volume 4. North Holland, Amsterdam and New York. This file is the version posted by the Centre for Economic Policy Research, CEPR Discussion Papers: 6059.
- Fafchamps, M., McKenzie, D., Quinn, S., and Woodruff, C. (2014). Microenterprise growth and the flypaper effect: Evidence from a randomized experiment in Ghana. *Journal of Development Economics*, 106:211–226.
- Fiala, N. (2015). Business is tough but family is worse: The role of family constraints on microenterprise development in Uganda. *Unpublished Manuscript*.
- Field, E., Jayachandran, S., and Pande, R. (2010). Do traditional institutions constrain female entrepreneurship? A field experiment on business training in india. *American Economic Review*, 100(2):125–29.
- Field, E., Jayachandran, S., Pande, R., and Rigol, N. (2016). Friendship at work: Can peer effects catalyze female entrepreneurship? *American Economic Journal: Economic Policy*, 8(2):125–53.
- Field, E., Pande, R. and Rigol, N., Schaner, S., and Moore, C. (2019). On her own account: How strengthening women's financial control impacts labor supply and gender norms. Discussion Paper 2201, Cowles FOUNDATION, Yale University.
- Field, E. and Vyborny, K. (2016). Female labor force participation in Asia: Pakistan country study. Technical report, Asian Development Bank.

- Ginè, X. and Mansuri, G. (2011). *Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan*. The World Bank Policy Research Working Paper Series.
- Haushofer, J. and Shapiro, J. (2016). The short-term impact of unconditional cash transfers to the poor: Experimental evidence from Kenya. *The Quarterly Journal of Economics*, 131(4):1973–2042.
- Jacoby, H. G. and Mansuri, G. (2011). Crossing boundaries: gender, caste and schooling in rural Pakistan. Technical report, World Bank Policy Research Working Paper Series.
- Jakiela, P. and Ozier, O. (2015). Does africa need a rotten kin theorem? Experimental evidence from village economies. *The Review of Economic Studies*, 83(1):231–268.
- Jayachandran, S. (2019). Social norms as a barrier to women's employment in developing countries. Working paper.
- Kabeer, N. (2001). Conflicts over credit: Re-evaluating the empowerment potential of loans to women in rural Bangladesh. *World Development*, 29(1):63–84.
- Karlan, D. and Zinman, J. (2011). Microcredit in theory and practice: Using randomised credit scoring for impact evaluation. *Science*, June:1278–1284.
- Lee, D. S. (2009). Training, Wages, and Sample Selection: Estimating Sharp Bounds on Treatment Effects. *The Review of Economic Studies*, 76(3):1071–1102.
- Lybbert, T. J. and Wydick, B. (2016). Hope as aspirations, agency, and pathways: Poverty dynamics and microfinance in oaxaca, mexico. Working Paper 22661, National Bureau of Economic Research.
- Meager, R. (2019). Understanding the average impact of microcredit expansions: A bayesian hierarchical analysis of seven randomized experiments. *The American Economic Journal: Applied Economics*.
- Mel, S. d., McKenzie, D., Woodruff, C., et al. (2014). What generates growth in microenterprises? experimental evidence on capital, labor and training. Technical report, Competitive Advantage in the Global Economy (CAGE).
- Memon, A. S., Naz, S., Abass, H., Zahid, J., Tabbasum, R., and Zeshan, M. (2014). Alif Ailaan Pakistan District Education Rankings. Technical report, Alif Ailaan in collaboration with Social Development Policy Institute.
- Mueller, U. (2016). Lost in representation? feminist identity economics and women's agency in india's local governments. *Feminist Economics*, 22(1):158–182.
- Pitt, M., Khandker, S., and Cartwright, J. (2006). Empowering women with microfinance: Evidence from Bangladesh. *Economic Development and Cultural Change*, pages 791–831.

- Said, F., Mahmud, M., and Chaudhry, A. (2017). Microfinance for startups: Experimental evidence from Pakistan. Unpublished manuscript.
- Stone, D. F. and Zafar, B. (2014). Do we follow others when we should outside the lab? evidence from the ap top 25. *Journal of Risk and Uncertainty*, 49(1):73–102.
- Tarozzi, A., Desai, J., and Johnson, K. (2014). The impacts of microcredit: Evidence from Ethiopia. *American Economic Journal: Applied Economics*, 7(1):54–89.
- Valdivia, M. (2014). Business training plus for female entrepreneurship? Short and medium-term experimental evidence from Peru. *Journal of Development Economics*, 113:33–51.
- Weizsacker, G. (2008). Do we follow others when we should? A simple test of rational expectations. Technical report, Working Paper. ESRC Centre for Economic Learning and Social Evolution, University College London, London, UK.
- Wooldridge, J. M. (2002). Inverse probability weighted M-estimators for sample selection, attrition, and stratification. *Portuguese Economic Journal*, 1(2):117–139.
- World Bank (2006). Women's work and movement into the public sphere. Technical report, World Bank.

Appendix

Table A1: Sample characteristics and balance

	<i>N</i>	Mean	Median	S. Dev	Balance Test
	(1)	(2)	(3)	(4)	(5)
Age (years)	630	37.20	36.00	9.90	0.83
Dummy: Respondent is currently married	630	0.90	1.00	0.30	0.62
Dummy: Respondent can read and write	630	0.50	1.00	0.50	0.97
Number of young children (years < 5) of respondent	630	0.48	0.00	0.82	0.87
Dummy: Respondent has a business	630	0.20	0.00	0.40	0.27
Dummy: Respondent had a business in the past	630	0.20	0.00	0.40	0.45
Dummy: Household has existing business	630	0.21	0.00	0.41	0.80
Dummy: Respondent is confident she can support household for 4 weeks	630	0.80	1.00	0.40	0.74
Index: Respondent makes decisions in the household herself	630	0.20	1.20	2.10	0.35
Dummy: Respondent is not allowed by the household to seek work	630	0.01	0.00	0.12	0.83
Household expenditure in an average month (PKR)	599	13801	13500	4201	0.69
Dummy: Household home is owned by a household member	630	0.80	1.00	0.40	0.41
Index: Assets owned by the household	630	0.10	0.20	1.70	0.45
Dummy: Household has outstanding loans	630	0.00	0.00	0.20	0.57
Dummy: Household member(s) have a bank account	630	0.00	0.00	0.10	0.67
Share of sample in treatment group					0.52
<i>p</i> – value of F test of joint significance					0.98

Note: Robust standard errors are show in column (4). Column (5) shows the result of the balance test. The cells show the *p-values* for statistical significance of the coefficient on the variable in the row when it is regressed on treatment assignment. The F test of joint significance is from a test of significance of all independent variables when all variables in rows are included in one regression with treatment assignment as the dependent variable. ****p* < 0.01, ***p* < 0.05, **p* < 0.1.

Table A2: Predicting attrition

	Not Attrited (1)	Not Attrited (2)	Not Attrited (3)	<i>Sharpened q-values (4)</i>
Treatment Assignment	0.088***	0.052***	0.105	
<i>Family 1: Demographics</i>				
Age (years)	-0.001		-0.002	0.83
Dummy: Respondent is currently married	-0.082*		-0.157**	0.053**
Dummy: Respondent can read and write	-0.028		-0.006	1.00
Number of children (years <17) in the household	0.018*		0.005	1.00
Household dependency ratio	0.037**		0.044**	0.053**
<i>Family 2: Occupation and experience</i>				
Dummy: Respondent has a business	-0.064		-0.029	1.00
Dummy: Respondent has worked as a paid employee in the past	-0.014		-0.046	1.00
Dummy: Respondent has had a business in the past	0.015		0.036	1.00
<i>Family 3: Household assets and income</i>				
Household expenditure in an average month (PKR)	0.000		0.000	0.38
Dummy: household home is owned by a household member	0.066		0.093	0.18
Index: Assets owned by the household	0.022*		0.030*	0.18
<i>Family 4: Intrahousehold agency and autonomy</i>				
Dummy: Respondent is confident she can support hh for 4 weeks	0.070*		0.069*	0.12
Index: Respondent makes decisions in the household herself	0.020***		0.023**	0.12
Dummy: Respondent is not allowed by the household to seek employment	0.074		0.192	0.16

Family 5: Access to formal or informal finance

Dummy: Household has outstanding loans	0.087		0.203*	0.20
Dummy: Household member(s) have participated in ROSCAs	0.023		0.082	0.20
Dummy: Household member(s) have a bank account	-0.123		-0.158	0.20
N	850	899	850	850
p-value of F test of joint significance of explanatory variables	0.00	0.00	0.00	0.00
Above variables interacted with Treatment	No	No	Yes	Yes

Note: Column (1) reports the coefficient on the variable in the row when they are all included in a regression where the output is being successfully located and surveyed. Column (2) reports the coefficient on treatment status when the outcomes is being successfully located and surveyed. Column (3) reports the coefficient on row variable when included in a regression with treatment status and the interaction of each row variable with treatment status. The inverse covariance index variable in Family 4 drops out from the regression due to collinearity with variables in Family 4.

Finally, column (4) reports critical values following the approach by Benjamini and Hochberg, 1995: ^{AAA}Significance at 1% level, ^{AA}Significance at 5% level, ^ASignificance at 10% level.

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Impact of treatment on business creation - OLS estimations

OLS with and without controls.

Table A3: Impact of treatment on enterprise creation and survival - OLS estimations

	Business exists (1)	Business exists (2)	Shut down business (3)	Shut down business (4)	Set up business (5)	Set up business (6)
Treatment _(1year)	0.062 (0.039) [0.069]	0.061 (0.038) [0.069]	0.036 (0.025) [0.064]	0.036 (0.025) [0.064]	0.098 (0.050)* [0.088]	0.098 (0.048)** [0.088]
Treatment _(2years)	0.001 (0.013) [0.055]	0.000 (0.013) [0.055]	0.176 ^{AAA} (0.045) ^{***} [0.087]	0.176 ^{AAA} (0.044) ^{***} [0.087]	0.177 ^{AAA} (0.047) ^{***} [0.100]	0.177 ^{AAA} (0.045) ^{***} [0.100]
Mean _{1year}	0.083	0.083	0.043	0.043	0.126	0.126
Mean _{2years}	0.070	0.070	0.078	0.078	0.147	0.147
N	1260	1260	1260	1260	1260	1260
Controls	No	Yes	No	Yes	No	Yes

Note: All regressions include branch fixed effects with errors clustered at the branch level. 'Business exists' is a binary variable equal to 1 if the respondent set up a new business since baseline that is still operating one (two) year(s) later at the time of first (second) followup. 'Shuts down business' is a binary variable equal to 1 if the respondent shut down a new business that was set up after baseline. 'Set up business' is a binary variable equal to 1 if the respondent set up a new business since baseline irrespective of whether it is still operating or not. Treatment_{t=1} and Treatment_{t=2} refer to the average intent to treat effect on the outcome one and two years after treatment was first disbursed, respectively. Ex post minimum detectable effect (MDE) size at a significance level of 0.05 and power of 80 percent are shown in square brackets. 'Mean_{1year}' and 'Mean_{2years}' report the average value for the control sample over time 1 and 2 years. 'N' refers to the final sample size.

* * * $p < 0.01$, * * $p < 0.05$, * $p < 0.1$. Adjusting critical values following the approach by Benjamini and Hochberg, 1995: ^{AAA}Significance at 1% level, ^{AA}Significance at 5% level, ^ASignificance at 10% level.

Lee (2009) bounds on treatment effects on enterprise

Table A4: Lee (2009) bounds for treatment effect on enterprise creation and survival

	1 year			2 year		
	Business exists (1)	Shuts down business (2)	Set up business (3)	Business exists (4)	Shuts down business (5)	Set up business (6)
Treatment	0.062 (0.019)***	0.038 (0.023)*	0.100 (0.028)***	0.001 (0.019)	0.178 (0.023)***	0.179 (0.028)***
Lower bound	-0.059 (0.029)**	-0.022 (0.027)	0.017 (0.05)	-0.018 (0.029)	0.118 (0.037)***	0.134 (0.036)***
Upper bound	0.064 (0.027)**	0.087 (0.022)***	0.151 (0.033)***	0.016 -0.021	0.152 (0.031)***	0.168 (0.036)***
Selected obs.	630	630	630	630	630	630
No. of obs.	899	899	899	899	899	899

Note: 'Treatment' refers to the coefficient on Intention to Treat variable in a simple regression of treatment status on the output variable listed in the column (without including variables that are significantly related to attrition). The lower and upper bounds refer to the treatment effect bounds constructed using the Lee (2009) procedure.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A5: Treatment impact: Households assets, expenditure and new loans

	Monthly exp (PKR) (1)	Monthly exp (PKR) (2)	Asset index (3)	Asset index (4)	Loans(s) last year (5)	Loans(s) last year (6)
Treatment _(1year)	90.223 (702.455) [1516.875]	98.226 (732.903) [1516.875]	0.016 (0.153) [0.360]	0.008 (0.148) [0.360]	0.1990.202 ^{AAA} (0.058) ^{***} [0.105]	0.202 ^{AAA} (0.060) ^{***} [0.105]
Treatment _(2years)	-404.400 (805.325) [2070.535]	-409.788 (854.604) [2070.535]	-0.126 (0.156) [0.441]	-0.137 (0.149) [0.441]	0.016 (0.021) [0.083]	0.013 (0.024) [0.083]
Monthly expenditure _{t=0}	0.229 (0.079) ^{***}	0.158 (0.073) ^{**}				
Asset index _{t=0}			0.118 (0.037) ^{***}	0.115 (0.028) ^{***}		
Loans(s) last year _{t=0}					0.130 (0.079)	0.121 (0.078)
Mean _(1years)	17966.481	17966.481	0.041	0.041	0.248	0.248
Mean _(2years)	17613.302	17613.302	0.103	0.103	0.182	0.182
N	1216	1216	1260	1260	1216	1216
Attrition controls	IPW	PDS Lasso	IPW	PDS Lasso	IPW	PDS Lasso

Note: All regressions include branch fixed effects with errors clustered at the branch level. 'Monthly expenditure' is calculated by summing up the average monthly household expenditure on different items, reported in PKR. 'Asset index' is an index created from the number of assets owned by the household using Principal Component Analysis. 'Loan(s) last year' is a binary variable equal to 1 if someone in the household took out a loan (other than the treatment loan) in the last year. Treatment_{t=1} and Treatment_{t=2} refer to the average intent to treat effect on the outcome one and two years after treatment was first disbursed, respectively. Ex post minimum detectable effect (MDE) size at a significance level of 0.05 and power of 80 percent are shown in square brackets. 'Mean' reports the average value for the control sample over time. 'N' refers to the final sample size.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Adjusting critical values following the approach by Benjamini and Hochberg, 1995: ^{AAA}Significance at 1% level, ^{AA}Significance at 5% level, ^ASignificance at 10% level.

Table A6: Treatment impact: female agency and autonomy in decision making

	Conf.	Conf.	Emp. index	Emp. index	Agency index	Agency index
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment _(1year)	-0.029 (0.045) [0.112]	-0.028 (0.047) [0.112]	0.156 (0.135) [0.472]	0.165 (0.126) [0.472]	0.012 (0.088) [0.212]	0.020 (0.086) [0.212]
Treatment _(2years)	0.031 (0.054) [0.110]	0.029 (0.057) [0.110]	-0.046 (0.215) [0.559]	-0.004 (0.222) [0.559]	0.021 (0.102) [0.257]	0.032 (0.110) [0.257]
Conf _{t=0}	-0.014 (0.042)	-0.029 (0.043)				
Emp. index _{t=0}			0.071 (0.037)*	0.064 (0.037)*		
Agency index _{t=0}					0.007 (0.044)	-0.000 (0.036)
Mean _(1year)	0.455	0.455	0.030	0.030	-0.270	-0.270
Mean _(2years)	0.530	0.530	0.045	0.045	-0.159	-0.159
N	1216	1216	1260	1260	1216	1216
Attrition controls	IPW	PDS Lasso	IPW	PDS Lasso	IPW	PDS Lasso

Note: All regressions include branch fixed effects with errors clustered at the branch level. 'Confident' is a binary variable equal to 1 if the respondent believes she can support her family on her own for 4 weeks. 'Empowerment index' is an index created using Principal Component Analysis from variables that measure if the respondent can make household decisions (clothing, footwear, medical, recreation, social visits, joining credit groups, purchases for self, purchases for others, marriage, investment) on her own. 'Agency index' is an inverse variance-covariance index (Anderson, 2008) created out of the Confident and Empowerment index variables. 'Mean' reports the average value for the control sample over time. 'N' refers to the final sample size.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Adjusting critical values following the approach by Benjamini and Hochberg, 1995: ^{AAA}Significance at 1% level, ^{AA}Significance at 5% level, ^ASignificance at 10% level.

Heterogeneity in effects on business status

Table A7: Heterogeneity in treatment effects by baseline characteristics

Baseline characteristic:	Another business in hh			Has existing business			Has had business in past		
	Exists	Shut down	Set up	Exists	Shut down	Set up	Exists	Shut down	Set up
New business:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment _(1year)	0.058 (0.034)	0.061** (0.023)	0.119** (0.045)	0.057 (0.041)	0.040 (0.026)	0.097 (0.054)	0.073 (0.044)	0.052* (0.023)	0.125* (0.052)
Treatment _(1year) *	0.007 (0.067)	-0.103** (0.037)	-0.097 (0.092)	0.010 (0.043)	-0.008 (0.061)	0.002 (0.052)	-0.057 (0.061)	-0.055 (0.035)	-0.112 (0.072)
Baseline characteristic									
Treatment _(2years)	-0.004 (0.018)	0.204*** (0.044)	0.200*** (0.046)	-0.008 (0.014)	0.178*** (0.051)	0.170*** (0.051)	0.015 (0.011)	0.200*** (0.050)	0.215*** (0.052)
Treatment _(2years) *	0.011 (0.053)	-0.116 (0.083)	-0.105 (0.102)	0.037 (0.035)	0.008 (0.041)	0.045 (0.050)	-0.068 (0.041)	-0.093 (0.054)	-0.160 (0.088)
Baseline characteristic									
Baseline characteristic:	Has children under 5			Has above median empowerment			Has above median agency		
	Exists	Shut down	Set up	Exists	Shut down	Set up	Exists	Shut down	Set up
New business:	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Treatment _(1year)	0.044 (0.039)	0.038 (0.026)	0.082 (0.048)	0.048 (0.043)	0.046 (0.041)	0.094 (0.067)	0.027 (0.038)	0.038 (0.033)	0.064 (0.057)
Treatment _(1year) *	0.050* (0.024)	0.001 (0.054)	0.052 (0.051)	0.018 (0.028)	-0.010 (0.044)	0.008 (0.054)	0.062** (0.023)	0.001 (0.042)	0.063 (0.051)
Baseline characteristic									
Treatment _(2years)	-0.014 (0.012)	0.162*** (0.049)	0.148** (0.049)	0.003 (0.027)	0.173** (0.064)	0.176** (0.065)	-0.031 (0.018)	0.159** (0.055)	0.128* (0.058)
Treatment _(2years) *	0.039 (0.030)	0.054 (0.057)	0.093 (0.057)	-0.005 (0.034)	0.010 (0.058)	0.004 (0.058)	0.055* (0.024)	0.038 (0.055)	0.093 (0.062)
Baseline characteristic									
N	1260	1260	1260	1260	1260	1260	1260	1260	1260

Note: This table shows treatment effects when interacted with specified baseline characteristics. All regressions include controls selected by Post-Double Lasso and branch fixed effects with errors clustered at the branch level. 'N' refers to the final sample size. * $p < 0.01$, ** $p < 0.05$, *** $p < 0.1$.

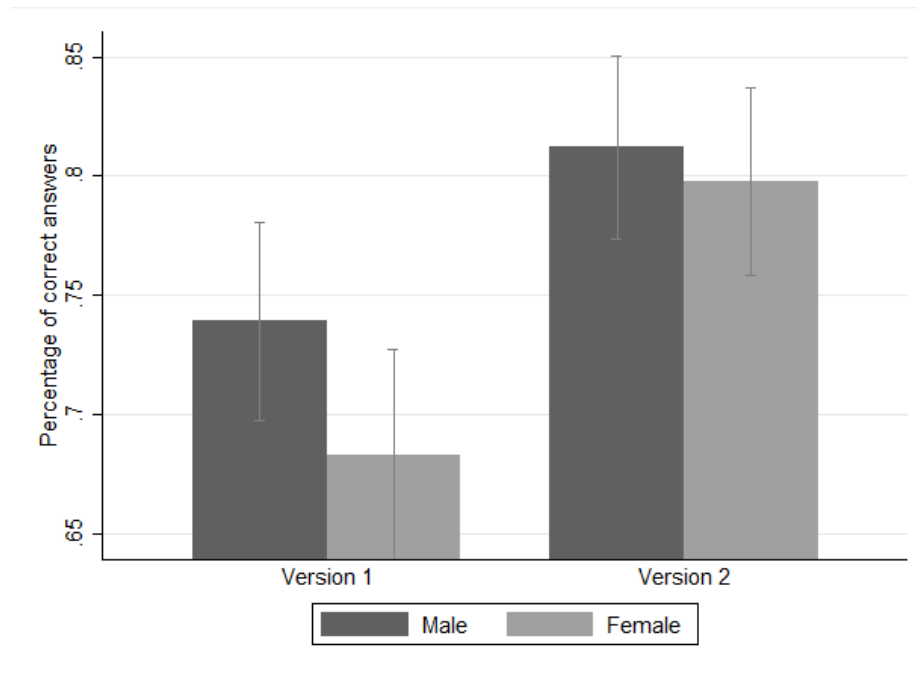
Preferences for business location and advice

Table A8: Descriptive data on responses in experiments

	<i>N</i>	Mean	S.Dev.	Med.	Min.	Max.
Males:						
Preferred business opportunity	564	1.19	0.78	1.00	0.00	3.00
Prefers no business	564	0.12	0.32	0.00	0.00	1.00
Prefers business at home	564	0.69	0.46	1.00	0.00	1.00
Prefers business outside home	564	0.19	0.40	0.00	0.00	1.00
Females:						
Preferred business opportunity	564	1.19	0.80	1.00	0.00	3.00
Prefers no business	564	0.13	0.34	0.00	0.00	1.00
Prefers business at home	564	0.66	0.47	1.00	0.00	1.00
Prefers business outside home	564	0.21	0.41	0.00	0.00	1.00
Demands partner advice	585	0.81	0.39	1.00	0.00	1.00
Demands expert advice	585	0.65	0.48	1.00	0.00	1.00
Willing to pay for partner advice	585	0.45	0.50	0.00	0.00	1.00
Willing to pay for expert advice	585	0.30	0.46	0.00	0.00	1.00

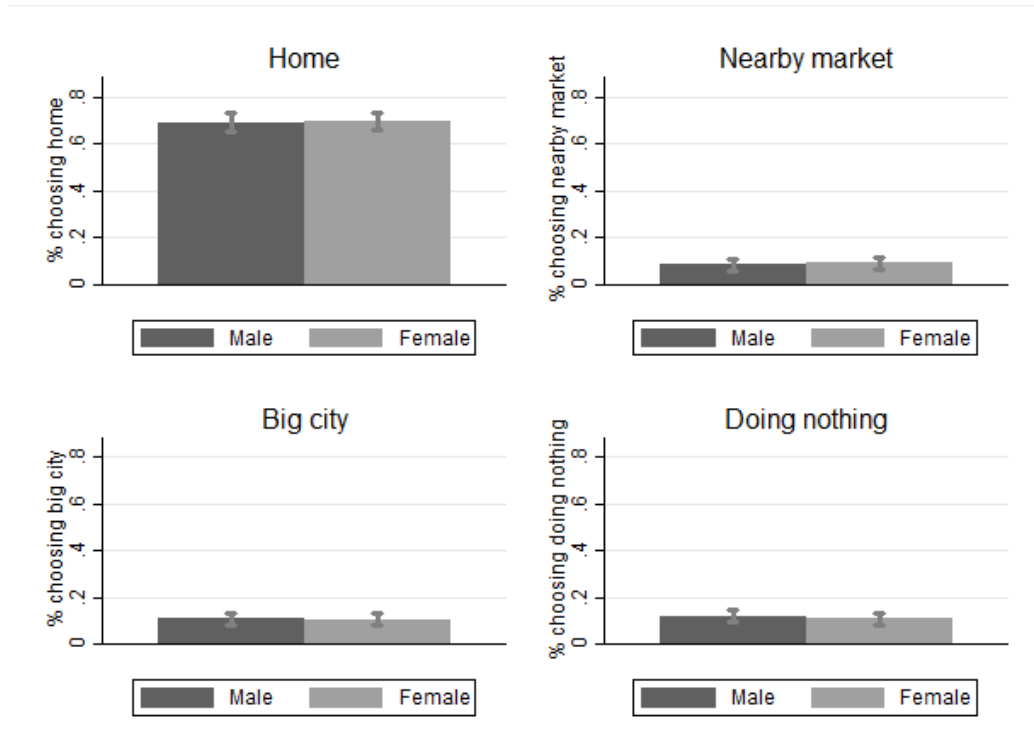
Note: Preferred business opportunities is a multivariate variable with values 0 for 'Do nothing', 1 for 'Business: home', 2 for 'Business: nearby market' and 3 for 'Business: big city'; 'demands advice' are binary variables equal to 1 if the respondent agrees to advice for free or at any prices; 'Willing to pay for partner/expert advice' are binary variables equal to 1 if the respondent agrees to pay a positive price for advice; and 'advice' refers to the two best options selected by male partner or expert for any kind of question asked (knowledge, abstract reasoning or both).

Figure A1: Profits correctly ranked, by respondent gender and question version



Note: *x-axis* shows the version of the game played by men and women. Version 1 involved increasing levels of profits, version 2 involved decreasing level of profits. The *y-axis* measures percentage of respondents who were able to rank business opportunities by profits correctly.

Figure A2: Female guess of male preference for business location



Note: *x-axis* shows the business opportunity by location (or doing nothing) that the female respondent thinks the male selected for her. 'Male' refers to the actual male responses. The *y-axis* displays the percentage of male or female respondents with the displayed preference.

Table A9: Correlates of business preferences

Dependent variable: <i>Prefer business outside home</i>				
	(1)	(2)	(3)	(4)
<i>ITT</i>	0.008 (0.033)			
Business exists		-0.142 (0.068)*		
Set up business			-0.138 (0.071)*	
Shut down business			0.158 (0.076)*	
Existing family business	0.015 (0.031)	0.006 (0.034)	0.006 (0.033)	
Female respondent: agency index	-0.024 (0.024)	-0.020 (0.023)	-0.020 (0.023)	
Female respondent: has young children	-0.068 (0.053)	-0.069 (0.054)	-0.069 (0.053)	
Female respondent: with nuclear family	-0.018 (0.054)	-0.018 (0.053)	-0.017 (0.054)	
N	491	491	491	
R ²	0.060	0.063	0.064	

Note: Results are from an OLS regression with dependent variable coded as 0 for business operations inside the home; = 1 for business outside the home. *ITT* is a dummy variable that is equal to one if the female respondent belonged to the RCT treatment sample. *Existing family business* is a dummy variable equal to one if there was an existing business in the household at baseline. *Set up business* is dummy variable equal to 1 if the respondent set up a business since baseline; *Business shut down* is a dummy variable equal to 1 if the respondent has shut down up a business that was set since the baseline. *Agency index* is created using Anderson (2008) from variables that measure if the respondent can make household decisions (clothing, footwear, medical, recreation, social visits, joining credit groups, purchases for self, purchases for others, marriage, investment) and feels confident in her ability to support the household (for 4 weeks) on her own. *Female has young children* is a dummy variable equal to 1 if the female respondent has children aged 5 or less. All regressions include controls for female respondent age, marital status, occupation, an index of her decision making power in the household; household assets; and the version of survey administered at endline.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A10: Correlate means of business preferences

	No Business (1)	Business at home (2)	Business outside (3)	Equality (<i>p</i>) (4)
Age (years)	37.99	37.03	37.01	0.783
Dummy: Married	0.86	0.89	0.81	0.026**
Dummy: Can read and write	0.55	0.52	0.50	0.869
Dummy: Household head	0.45	0.42	0.40	0.790
Dummy: Spouse of household head	0.40	0.43	0.44	0.850
Number of children in household	2.62	2.87	2.51	0.288
Dummy: Housewife	0.26	0.30	0.28	0.758
Dummy: Self employed	0.18	0.19	0.14	0.505
Dummy: Had a business in the past	0.25	0.25	0.17	0.079*
Dummy: Can support household for 4 weeks	0.84	0.81	0.83	0.756
Index: Makes household decisions	0.46	0.15	-0.18	0.257
Dummy: Not allowed to work	0.01	0.00	0.04	0.280
Dummy: Household has a business	0.25	0.22	0.23	0.775
Dummy: Mother has/had a business	0.05	0.17	0.21	0.016**
Avg monthly household expenditure	12052.05	13260.80	12644.59	0.308
Missing household expenditure	0.11	0.03	0.06	0.189
Dummy: Household owns home	0.71	0.82	0.78	0.088*
Index: Household assets	0.00	0.11	0.08	0.938
Dummy: Household has outstanding loan(s)	0.04	0.03	0.02	0.566
Dummy: Household has bank account(s)	0.00	0.03	0.02	0.075*
Numeracy score (out of 3)	1.79	1.64	1.88	0.240
Digit span test score	2.22	2.16	2.25	0.727
Risk measure (higher is more averse)	2.88	3.04	3.12	0.644
Patience measure (higher is more patient)	3.84	3.37	3.51	0.243
Patience measure in far frame	3.74	3.13	3.19	0.045**
Dummy: Present bias	0.16	0.15	0.14	0.923
Dummy: Future bias	0.25	0.31	0.32	0.394
<i>N</i>	73	372	119	

Note: All the calculations in this Table are based on an OLS regression of respondent characteristic on preferences for business location. Standard errors clustered at the branch level. Equality test refer to coefficient equality across columns (1), (2) and (3).

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A11: Correlate means of demand for husbands' advice

	Wants advice (1)	Does not want advice (2)	Equality (<i>p</i>) (3)
Age (years)	37.25	36.71	0.584
Dummy: Married	0.89	0.78	0.004***
Dummy: Can read and write	0.48	0.66	0.008***
Dummy: Household head	0.43	0.40	0.619
Dummy: Spouse of household head	0.45	0.35	0.141
Number of children in household	2.80	2.59	0.491
Dummy: Housewife	0.28	0.31	0.676
Dummy: Self employed	0.18	0.20	0.763
Dummy: Had a business in the past	0.22	0.28	0.397
Dummy: Can support household for 4 weeks	0.81	0.83	0.786
Index: Makes household decisions	0.08	0.29	0.508
Dummy: Not allowed to work	0.01	0.04	0.200
Dummy: Household has a business	0.24	0.15	0.024**
Dummy: Mother has/had a business	0.17	0.12	0.398
Avg monthly household expenditure	12875.15	13402.89	0.389
Missing household expenditure	0.05	0.04	0.718
Dummy: Household owns home	0.81	0.75	0.476
Index: Household assets	-0.02	0.53	0.015**
Dummy: Household has outstanding loan(s)	0.03	0.04	0.537
Dummy: Household has bank account(s)	0.02	0.05	0.208
Numeracy score (out of 3)	1.55	2.40	0.000***
Digit span test score	2.10	2.55	0.001***
Risk measure (higher is more averse)	2.99	3.25	0.119
Patience measure (higher is more patient)	3.37	3.85	0.028**
Patience measure in far frame	3.12	3.69	0.027**
Dummy: Present bias	0.14	0.20	0.173
Dummy: Future bias	0.29	0.34	0.179
<i>N</i>	458	106	

Note: All the calculations in this Table are based on an OLS regression of respondent characteristic on positive demand for advice from the husband. Standard errors clustered at the branch level. Equality test refer to coefficient equality across columns (1) and (2).

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A12: Correlate means of demand for experts' advice

	Wants advice (1)	Does not want advice (2)	Equality (<i>p</i>) (3)
Age (years)	37.34	36.80	0.564
Dummy: Married	0.87	0.88	0.756
Dummy: Can read and write	0.50	0.54	0.332
Dummy: Household head	0.42	0.41	0.832
Dummy: Spouse of household head	0.43	0.42	0.859
Number of children in household	2.80	2.68	0.536
Dummy: Housewife	0.27	0.31	0.467
Dummy: Self employed	0.19	0.16	0.488
Dummy: Had a business in the past	0.24	0.22	0.530
Dummy: Can support household for 4 weeks	0.81	0.84	0.427
Index: Makes household decisions	0.20	-0.03	0.425
Dummy: Not allowed to work	0.02	0.00	0.163
Dummy: Household has a business	0.23	0.21	0.625
Dummy: Mother has/had a business	0.16	0.17	0.699
Avg monthly household expenditure	13055.11	12828.44	0.439
Missing household expenditure	0.05	0.04	0.889
Dummy: Household owns home	0.82	0.75	0.128
Index: Household assets	0.08	0.10	0.859
Dummy: Household has outstanding loan(s)	0.03	0.02	0.450
Dummy: Household has bank account(s)	0.02	0.02	0.454
Numeracy score (out of 3)	1.53	2.04	0.001***
Digit span test score	2.17	2.23	0.380
Risk measure (higher is more averse)	2.92	3.24	0.078*
Patience measure (higher is more patient)	3.49	3.40	0.733
Patience measure in far frame	3.21	3.24	0.875
Dummy: Present bias	0.14	0.17	0.206
Dummy: Future bias	0.32	0.27	0.312
<i>N</i>	363	201	

Note: All the calculations in this Table are based on an OLS regression of respondent characteristic on positive demand for advice from the husband. Standard errors clustered at the branch level. Equality test refer to coefficient equality across columns (1) and (2).

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix: For Online Publication

Construction of the variables

Table OA.1: **Data Appendix**

VARIABLE	DEFINITION	SOURCE
$Treatment_i$	A dummy variable for whether individual i was offered the product t .	Individual contract offers.
Age	The age of individual i (in complete years).	Baseline questionnaire .
Married	A dummy variable for whether individual i is currently married.	Baseline questionnaire.
Household head	A dummy variable for whether individual i is head of her household.	Baseline questionnaire.
Spouse of household head	A dummy variable for whether individual i is the spouse of the household head.	Baseline questionnaire.
Literate	A dummy variable for whether individual i assess that she can read and write.	Baseline questionnaire.
Number of young children	A continuous variable for the number of children in the household to which individual i belongs.	Baseline questionnaire; variable coded to count the number of individuals aged 5 or younger in the household.
Number of children	A continuous variable for the number of children in the household to which individual i belongs.	Baseline questionnaire; variable coded to count the number of individuals aged 16 or younger in the household.
Self employed	Individual i is currently self employed i.e has a business.	Baseline questionnaire.
Business in the past	A dummy variable for whether individual i has owned a business in the past.	Baseline questionnaire.
Mother ever had a business	A dummy variable for whether individual i 's mother ever owned a business.	Midline questionnaire.
Household has existing business	A dummy variable for whether household members (other than individual i ') currently have a business.	Midline questionnaire.
Monthly household expenditure	Household expenditure in an average month (PKR).	Baseline questionnaire; variable coded by summing up individual expenditure items.
Home owner	A dummy variable for whether someone in the household owns the household home.	Baseline questionnaire.
Asset index	An index created for the assets owned by the household using Principle Component Analysis. Survey records if household has the following: utilities, TV, radio, internet, cable, mobile phone, fridge, freezer, microwave, AC, washing machine, sewing machine and iron	Baseline questionnaire.

Confidence	A dummy variable for whether individual i is confident she can financially support her family for 4 weeks.	Baseline questionnaire.
Empowerment index	An index that measures if individual i can make decisions (clothing, footwear, medical, recreation, visits, joining credit groups, purchases for self or others, investment, marriage) on her own using the Principle Component Analysis.	Baseline questionnaire.
Agency index	Inverse variance-covariance index (Anderson, 2008) created out of Confidence and Employment Index variables.	Baseline questionnaire.
Allowed to work	A dummy variable for whether individual i feels household members will allow her to look for work.	Baseline questionnaire.
Bank account	A dummy variable for whether someone in the household has a bank account.	Baseline questionnaire.
Took loans in last year	A dummy variable for whether household members took out a new loan in the last one year, other than the treatment product.	Baseline questionnaire.
Set up a business	A dummy variable for whether individual i set up a business since treatment loan disbursal.	Midline & Endline questionnaires; coded by calculating how long ago was a new business set up.
Business exists	A dummy variable for individual i has set up a new business since treatment loan disbursal that still exists.	Midline & Endline questionnaires; coded by calculating if an existing business was set after the treatment was offered.
Shut down business	A dummy variable for if a new business set up by individual i since treatment loan disbursal has shut been down.	Midline & Endline questionnaires.

FAMILY 8: NUMERACY, WORKING MEMORY AND PREFERENCES

Numeracy score	The number of basic mathematical questions answered correctly by individual i .	Midline questionnaire; coded as the total number of correct answers.
Digit span level	The highest level reached in the digit span questions by individual i .	Midline questionnaire; coded as the highest level answered correctly before making repeating incorrectly.
Risk Aversion	The highest level reached in the hypothetical question asking for individual to select between a risky option and increasing amounts of certain payoff by individual i .	Midline questionnaire.
Time (near)	The highest level reached in the hypothetical question asking for individual i to select between a payoff tomorrow and increasing amounts of payoff one month from tomorrow.	Midline questionnaire.
Time (far)	The highest level reached in the hypothetical question asking for individual i to select between a payoff in 5 months from now and increasing amounts of payoff in 6 months.	Midline questionnaire.

No business	A dummy variable for if individual i prefers that the female respondent not set up a business.	Incentivised questions administered at endline.
Business at home	A dummy variable for if individual i prefers that the female respondent set up a business that can be operated from the home.	Incentivised questions administered at endline.
Business outside home	A dummy variable for if individual i prefers that the female respondent set up a business that is operated from outside the home (in nearby neighborhood or city).	Incentivised questions administered at endline.
Wants advice from husband	A dummy variable for if individual i demands advice from husband.	Incentivised questions administered at endline.
Wants advice from expert	A dummy variable for if individual i demands advice from an expert.	Incentivised questions administered at endline.
Willing to pay for advice from husband	A dummy variable for if individual i is willing to pay a positive cost for advice from husband.	Incentivised questions administered at endline.
Willing to pay for advice from expert	A dummy variable for if individual i is willing to pay a positive cost for advice from an expert.	Incentivised questions administered at endline.
BranchDummy $_j$	Dummy variables for each branch j included in the intervention.	Individual contract offers (ID control section).
ID $_i$	Individual ID.	Baseline questionnaire (ID control section)

OA.1 Experiment script

Thank you for answering our survey and being a part of our research. Before we start with a small exercise, we would like to give you Rs. 300 as a compensation for your time in participating in this survey. These Rs. 300 are not a part of the activity and are yours to keep.

I would like to have brief conversation with your husband regarding our research. Can you please call him and give us 5 minutes alone in this room?

[Enumerator: If husband is available and willing to talk to us, proceed with the next questionnaire form. If husband not available, ask if it is possible to call him and agree with him on a time to visit again. If husband not available to talk on the phone, agree with the wife on a time to visit the household again when the husband will be present. If the husband is unwilling to talk to us, please record 77.

[Enumerator: If the respondent is unmarried or her husband does not live with her/is not a part of the household roster, then ask for the male household head. If household head is a female, then ask for the main male adult (18 or above) decision maker in the household. Step 1 is then to be administered to this male individual.]

If there is no husband and/or an adult male household member in the household then record 77.

Step 1: Male respondent Enumerator: [Communicate the following with the male respondent]

I will now ask you a few questions. Your answers in these questions can help you earn up to Rs. 100 so please answer carefully and honestly. Please ask for clarification if you do not understand any question. Your answers will remain completely confidential and not revealed with your name outside this house. None of the responses here will be recorded with your name.

[Enumerator: Please make sure that the female respondent cannot hear what you are saying to the male household member]

Step 1: with male husband/household head/main male decision maker Record Name. Record Relationship with main female respondent.

1. There are 3 business opportunities: Version I:

1. Business A which is to be done at home and yields Rs.5,000 in sales every month and running cost is Rs. 2,000
2. Business B which is to be done by going to the nearby market and yields Rs. 10,000 every month and running cost is Rs. 6,000

3. Business C which is to be done by going to the big city to work with a big distributor and yields Rs. 16,000 every month and running cost is Rs. 10,000

Version II:

1. Business A which is to be done at home and yields Rs.5,000 in sales every month and running cost is Rs. 1,000
2. Business B which is to be done by going to the nearby market and yields Rs. 10,000 every month and running cost is Rs. 7,000
3. Business C which is to be done by going to the big city to work with a big distributor and yields Rs. 16,000 every month and running cost is Rs. 14,000.

Rank these in order of increasing profit levels. If you get the ranking correct you will get Rs.100. [Enumerator: please show the respondent the paper with the 3 options and record his response].

2. Imagine a situation where your wife has managed to obtain a loan so finance is not a constraint. Consider the same business options that I just gave you plus the option of 'doing nothing'. Of the 4 options, which would you choose for her?

Before I talk to your wife I would also like to ask you to answer a question. Please let us know of the two possible answers to the following question. Please note that the choices you make may be given as advice to your wife for the same question. If she gets the correct answer, she will earn up to Rs.200.

[Ask version 1/2/3/4 as randomised]

Version 1: Who has the highest wickets in one day cricket? A.Wasim Akram, B. Muttiah Muralithran, C. Shane Warne, D.Waqar Younis

Version 2: In medicine, which of these is usually denoted by 120/80 for an adult? A: Normal Pulse B: Normal Hearing C: Normal vision D: Normal Blood Pressure

Version 3: Starting from the junior most, arrange these ranks in the Pakistan Army in ascending order of seniority: 1. Lieutenant Colonel, 2. general, 3. Colonel, 4.Lieutenant General A.1243 B. 3421 C. 2431 D.1342

Version 4: Which of these cannot be the same for two different people? A. Skin Colour B. Fingerprints C. Blood Group D. Eye Colour.

Please also look at the following pattern. Here are a group of pictures that follow some order. Can you guess what the next picture in this sequence will be? You have the following options. Again, let us know which two shapes could complete the pattern. Please note that the choices you make may be given as advice to your wife for the completing the pattern. If she gets the correct answer, she will earn up to Rs.200.

[Show version 1/2/3/4 as randomised]

[If correct profit ranking] Thank you for your time. You won Rs. 100 from your answer to the first question that I will hand to you now.

I will now like to talk to (female respondent) again to complete the survey with her.

[Enumerator: Please hand over the money won (and get proof of payment.)]

[If incorrect ranking] Thank you for your time. Unfortunately, you did not rank the options correctly and therefore, I am unable to pay you Rs. 100.

I will now like to talk to (female respondent) again to complete the survey with her.

Step 2: Female respondent Enumerator: Communicate the following to the female respondent: I will now ask you a few more questions. Your answers in these questions can help you earn up to Rs. 200 so please answer carefully and honestly. Please ask for clarification if you do not understand any question. Your answers will remain completely confidential. None of the responses here will be recorded with your name. 1. There are 3 business opportunities: Version I:

1. Business A which is to be done at home and yields Rs.5,000 in sales every month and running cost is Rs. 2,000
2. Business B which is to be done by going to the nearby market and yields Rs. 10,000 every month and running cost is Rs. 6,000
3. Business C which is to be done by going to the big city to work with a big distributor and yields Rs. 16,000 every month and running cost is Rs. 10,000

Version II:

1. Business A which is to be done at home and yields Rs.5,000 in sales every month and running cost is Rs. 1,000
2. Business B which is to be done by going to the nearby market and yields Rs. 10,000 every month and running cost is Rs. 7,000
3. Business C which is to be done by going to the big city to work with a big distributor and yields Rs. 16,000 every month and running cost is Rs. 14,000.

Rank these in order of increasing profit levels. If you get the ranking correct you will get Rs.100. [Enumerator: please show the respondent the paper with the 3 options and record her response].

2. Imagine a situation where you have managed to obtain a loan so finance is not a constraint and you do not have to consider whether you will be able to obtain permission from your husband//male decision maker. From the business plans specified in step 1 (with the added option of 'doing nothing'), which one would you choose for yourself? [Enumerator: hand the paper to the respondent with 4 options and ask them to select. Once selected, put the answer in the envelope and seal it]. Please tick on the paper, fold it and then give it

to me. I will put it in an envelope and seal it. This will not be revealed to anyone in your household and will only be known to the research team who will never tell anyone.

3. Consider the same business options as in step 2 (3 businesses plus the option to do nothing). Imagine again a situation where you have managed to obtain a loan so finance is not a constraint. Which of the 4 options will your husband/household head choose for you? Your husband//male decision maker was asked to choose for you from these 4 options and you will get Rs.100 if your answer matches his.[Enumerator provide a new piece of paper with 4 options]. Please tick on the paper. [Enumerator: please enter on tablet her choice]

If she chooses the doing nothing option, then ask her why she chose this option: [Enumerator: do not prompt. Multiple responses are allowed. For example if she says she and her household members don't think it is suitable for her to run a business, then tick 1 and 2]

1. Husband/household head doesn't think it's suitable for her to run a business.
2. She doesn't think it is suitable to run a business.
3. Husband/household head thinks she is not capable.
4. She doesn't think she is capable.
5. There are other better uses of the money.

Advice taking

Part I: knowledge question [Randomise order between part I and part II]

We will now ask you a question for which if you give the correct answer you will get Rs.200. We will also offer you the opportunity to get advice on the answer for the question we ask you from your husband/household head or an expert with knowledge of the field we have asked you the question about. Please listen to the question first and then wait for us to offer you the opportunity to take advice before you give your answer.

[Ask version 1/2/3/4 as randomised]

In this envelope there is a voucher for Rs.0, Rs. 50 or Rs. 100 for advice from either husband or an expert. We will now offer you to get advice from husband and/or an expert for giving up this amount from your winnings. We will open this envelope later to reveal what amount is written in it and who you have the opportunity to get advice from but before that for all amounts, we will ask you what you would want to do.

Whatever you decide, we will implement it once the envelope is opened. Please note that the advice will be two correct choices in the opinion of the expert.

[Enumerator: make sure respondent understands that we will implement the choice that she makes now once the envelope is opened]

1. Would you be willing to pay Rs. 0 to get advice from your husband?
2. Would you be willing to pay Rs.50 to get advice from your husband?

3. Would you be willing to pay Rs.100 to get advice from your husband?
4. Would you be willing to pay Rs. 0 to get advice from an expert?
5. Would you be willing to pay Rs. 50 to get advice from an expert?
6. Would you be willing to pay Rs. 100 o get advice from an expert?

[Enumerator: Open envelope: Advice from husband/expert and voucher amount 0/50/100. Accordingly implement choice. If expert choice is written on the voucher and woman willing to take it for the voucher amount, show options B and D as two possible correct choices. If husband choice is written on the voucher and woman is willing to take it for the voucher amount, show the two cards the husband chose.]

Part II: Abstract reasoning question

We will now ask you a question for which if you give the correct answer you will get Rs.200. We will also offer you the opportunity to get advice on the answer for the question we ask you from your husband/household head or an expert with knowledge of the field we have asked you the question about. Please listen to the question first and then wait for us to offer you the opportunity to take advice before you give your answer.

The question is: [randomised] Here are a group of pictures that follow some order. Can you guess what the next picture in this sequence will be? You have the following options. [Enumerator: Show the respondent the graphic cards and then ask them to select their best guess. Enter their guess here].

[Show and ask version 1/2/3/4 as randomised]

In this envelope there is a voucher for Rs.0, Rs. 50 or Rs. 100 for advice from either husband/male decision maker or an expert. We will now offer you to get advice from husband/male decision maker and/or an expert for giving up this amount from your winnings. We will open this envelope later to reveal what amount is written in it and who you have the opportunity to get advice from but before that for all amounts, we will ask you what you would want to do.

Whatever you decide, we will implement it once the envelope is opened. Please note that the advice will be two correct choices in the opinion of husband/male decision maker or the expert.

[Enumerator: make sure respondent understands that we will implement the choice that she makes now once the envelope is opened]

1. Would you be willing to pay Rs. 0 to get advice from your husband/male decision maker?
2. Would you be willing to pay Rs.50 to get advice from your husband/male decision maker?

3. Would you be willing to pay Rs.100 to get advice from your husband/male decision maker?
4. Would you be willing to pay Rs. 0 to get advice from an expert?
5. Would you be willing to pay Rs. 50 to get advice from an expert?
6. Would you be willing to pay Rs. 100 o get advice from an expert?

[Enumerator: Open envelope: Advice from husband/male decision maker or expert and voucher amount 0/50/100. Accordingly implement choice. If expert choice is written on the voucher and woman willing to take it for the voucher amount, show options B and D as two possible correct choices. If husband/male decision maker choice is written on the voucher and woman is willing to take it for the voucher amount, show the two cards the husband chose.]

Payment: [Profit ranking questions: Your answer matches that of your husband/male decision maker whom we asked earlier. Therefore, you win Rs 100./ Your answer does not match that of your husband/household member. Therefore we cannot pay you Rs. 100.]

[Your answer to the [knowledge and/or abstract reasoning question] was correct. You win (additional) Rs. 200 (or Rs. 400 if both correct)/ Your answer to the [knowledge/abstract reasoning question] was incorrect. Therefore you do not get the Rs. 200 from that question. Deduct the applicable cost of advice if the respondent has positive earnings and opted for advice.]