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

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Preface

The Centre for Research in Economics and Business (CREB) was established in 2007 to conduct policy-oriented research with a rigorous academic perspective on key development issues facing Pakistan. In addition, CREB (i) facilitates and coordinates research by faculty at the Lahore School of Economics, (ii) hosts visiting international scholars undertaking research on Pakistan, and (iii) administers the Lahore School's postgraduate program leading to the MPhil and PhD degrees.

An important goal of CREB is to promote public debate on policy issues through conferences, seminars, and publications. In this connection, CREB organizes the Lahore School's Annual Conference on the Management of the Pakistan Economy, the proceedings of which are published in a special issue of the Lahore Journal of Economics.

The CREB Working Paper Series was initiated in 2008 to bring to a wider audience the research being carried out at the Centre. It is hoped that these papers will promote discussion on the subject and contribute to a better understanding of economic and business processes and development issues in Pakistan. Comments and feedback on these papers are welcome.

Since the second half of 2018 we have had issues with our regular editing services, as a result of which there has been a growing backlog of working papers that had been approved by the editorial committee. To avoid further delays in dissemination of the ongoing research, we decided to publish approved but unedited working papers online. Working paper No 03-18, December 2018 was the first such paper.

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 only observed in the short term. Moreover, four out of five new micro-enterprises are home-based. Through novel incentivized 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 from outsiders, even when it can increase task earnings. Our findings indicate that internalized gender norms may contribute to explaining the small scale and brief duration 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, 17

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1   Introduction

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; Meager, 2019). 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. Recent studies have identified social factors limiting female autonomous decision making and control over resources as an important obstacle to the effectiveness of microfinance and business training programs (Jakiela and Ozier, 2015; Mel et al., 2014; Field et al., 2010, 2016).[1] In spite of this growing literature, little evidence exists on the influence of gender norms on decisions relevant for business survival and growth in developing countries.

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 conduct a Randomised Control Trial (RCT) offering women micro-loans and training to set up a new enterprise. We confirm the short-lived impact of microcredit on business outcomes of the women. In addition, we find that most of the businesses set up by women were at home.[2]

In order to understand the limited impact on business creation and survival, we use incentivized behavioural tasks to elicit preferences for business location and willingness to pay for advice from non-household members. We find that women prefer home-based businesses, and in doing so are willing to give up almost 60% of median profits. This may, at least in part, be due to safety concerns with going out of their homes. However, we show that such home-bias extends to demand for advice, where safety is not a concern: even when advice from non-household members has instrumental value, is free and can be obtained while at home, 40% of the women forgo it. Women prefer to ask their male partners for advice, even though the average quality of such advice is poor. Access to finance, instrumented with being treated within the RCT, is not able to shift these preferences. Finally, we show that preferences appear to be correlated with prior experiences: women who recently (in the previous 2 years) closed their business are more likely to choose a business outside the home and the advice of experts.

We interpret the empirical results through the perspective of the seminal paper by Akerlof and Kranton (2000), which argues that gender-specific rules of behavior provide men and women with an 'identity' or sense of self. We exploit the fact that we elicit preferences for location from both men and women to support this interpretation. Contrary to

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[1] See Buvinìc and Furst-Nichols (2016) and Buvinìc and O'Donnell (2017) for a review highlighting constraints on women's ability to work outside the home or interact with non-household members.

[2] Of the 158 new businesses set up over two years by women in our sample, 128 were based at home. 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.

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. We provide suggestive evidence in support of this interpretation and against other potential mechanisms. These results and theoretical perspective suggest that the women in our sample have internalised gender-specific rules of behavior, and that the disutility incurred by contravening these rules can influence women's use of microcredit and explain the small impact of finance in our setting.

Indeed, our results offer another possible explanation for the limited effectiveness of traditional microfinance, which lies in its inability to shift norm-driven behavior. 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 important sources of information for setting up or expanding a business, a home-bias in preferences for business location and demand for advice can help in explaining why female-run businesses do not grow or survive. The results on prior experience being correlated with selecting business outside the household and taking advice of experts support our assumption that being confined in one's home is not conducive to business growth.

We make four contributions to the literature. First, we contribute to the literature on gender identity by exploring another decision domain where identity may undermine the effects of development policies empowering women economically. Existing studies find, for instance, that women refrain from participating in the labour force because they are likely to earn more than their male partners (Bertrand et al., 2015). 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. We combine this literature with that 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.

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, and specifically their perception of prevailing social norms, 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, rather than finance existing enterprises owned by the household. 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)- but they are also 18 percentage points more likely to shut down a new business over the same period. We identify a novel dimension that may be correlated with business survival, home-bias in location and advice-taking, and test its relevance through novel incentivized tasks. Our findings 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. Such gender norms may have been shaped by various considerations. There may be stigma attached to women leaving the home in our setting: working 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. Besides,

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[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.

social norms, female mobility may be severely restricted by a lack of safe transport options, making leaving the household for work an uncommon choice for women: 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 *conformer* 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 incentivized 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 the 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] On the other hand, it is also possible that gender norms are internalized: in this case, 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.*

We can also identify sources of heterogeneity in these preferences, consistent with the model. Norms-related costs associated with businesses outside the home may be higher for 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

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[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 report making household decisions on their own. This is similar to the proportions reported in other studies in Pakistan, e.g. Afzal et al. (2018).

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 setting and design

3.1 Women's economic activity in Pakistan

Pakistan ranks low among countries worldwide in terms of gender inequality, displaying worse outcomes for women than men across a wide range of domains, from education and health to labor market and economic opportunities, and political empowerment (Forum, 2020). Pakistan has one of the lowest female labor force participation rates in South Asia: at 24%, it is lower than the female labor force participation rates in Sri Lanka (35%), Bangladesh (36%), Nepal (82%) and Afghanistan (49%), and comparable only to that of India at 24%.[6] A national survey reveals that a quarter of women who are not working say they would like to work (Field and Vyborny, 2016). However, a combination of gender norms, responsibilities at home and mobility constraints is likely to deter women from working outside the home. Gender norms appear to be important in determining female labor market participation: 40% of the women who are willing to work, but do not, cite lack of permission by their husband or father to work outside the home as the main reason for their lack of employment, while 15% claim that it is their own personal preference to only work from home (Field and Vyborny, 2016).

These patterns are common to the specific setting of our study. The study sample is drawn from peri-urban areas of three districts of 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;[7] and the three districts are ranked 31st, 19th and 13th in terms of educational attainment, respectively, out of 36 districts in the province 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.[8] According to a representative survey conducted by the Punjab Commission on the Status of Women (2019), female labor force participation rate across Bahawalpur, Gujrat and Sialkot are 32.9%, 13.5% and 10.8%, respectively. Of the women who do not work, 31% say this is because of a lack of support from family, 22% report being unable to work due to responsibilities at home and

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[6] From https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS, compiled by the World Bank (2019).

[7] Inflation adjusted estimates from Pakistan Social and Living Standards Measurement survey 2010-11.

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

20% feel they are underqualified for the jobs. Only 3% of the sample reports not working due to because of a lack of transport to their potential workplace.

Our data provide insights on the empowerment level among women in our sample. We interview 630 women, randomly split between treatment and control groups, in three annual rounds of survey. All women in our sample 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 within this sample of women desirous of setting up an enterprise, cultural norms may discourage employment outside the home, particularly if it requires regularly venturing out alone. A little under one-third of our respondents (28%) report 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. Women's decision making power within the household varies across decision domains: while at baseline 4 out of every 5 respondents report making autonomous decisions about small clothing and footwear purchases, recreation, travel and visiting friends, only 37% of the respondents report making investment decisions alone.

To summarise, data at the country, district and individual level confirms the presence in the study setting of gender norms severely restricting agency, mobility and access to markets for women. In what follows, we will provide evidence of how economically relevant decisions by these women conform to these norms, to the detriment of efficiency.

3.2 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 entry loan of PKR 10,000 (~$ 67) on average. 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 to PKR 40,000 (~$67-267), to be repaid over a year, with repayments starting from the month after disbursement.[9] 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 suf-

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[9] 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.

ficient household income to repay the loan, were eligible to receive the loan and training.[10] 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.[11]

3.3 Preference elicitation task I: Location of Business

In this and the next sub-sections, we describe the protocol of the two incentivized 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

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[10] 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.".

[11] 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.

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.[12] Respondents earned PKR 100 for correctly ranking the business profits. Second, we asked the male 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.[13] 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.

Through this simple task we try to measure overall preferences over locations, in a general attempt to separate economic reasons for location preferences from non-economic ones, such as social norms, safety concerns, etc. While this procedure allows us to determine whether a certain business location is preferred because of its profitability, it cannot distinguish between the different non-economic reasons for preferring it.[14] On the other hand, our task has the advantage to make the consequences of these non-economic factors on the efficiency of the resulting choice very clear. In the real world, instead, giving up a higher profit location for business might be efficient for the household, once the business' location, its profitability, safety and other attributes, which are likely to be interrelated and hard to observe (Field and Vyborny, 2016), are taken into account. 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. In spite of the limitations of the design, in the analysis we exploit the available data to examine specific factors and competing explanations behind our results.

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

[13] 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.

[14] A feature of the task design may result in risk aversion also playing a role in the location decision: to maintain realism, the costs of the home-based business were always lower than those of businesses located outside, regardless of the profit ranking.

3.4   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.

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 for advice from the male partner and once for advice from an expert.

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

Step 5: Advice-taking choice is implemented, corresponding to the randomly drawn price and source of advice combination. If applicable, advice is provided.

Step 6: The respondent selects final answer for each question.

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

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 invited to pick the two options that he deemed most likely to be correct. To incentivize 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.

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.[15] 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* to have purchased 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.

3.5   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.

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[15] 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.

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

Number of respondents:

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 contained 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 included 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 the incentivized 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 3.3 and 3.4, this was only done when both the female and male respondents were at home, which was possible in 585 instances. 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 A2 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 reported in Section 3.[16] 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

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[16] Variable construction and survey questions are described in the Online Appendix table 5

baseline variables produces a $p-value$ of 0.98 (column 5 of table A2).

4   Results

In this Section, we first briefly present the results from the RCT that motivated us to examine the role of home-bias in business-related decisions: this evidence concerns the limited impact of microfinance, and the large share and high vulnerability of home-based businesses in our study setting. The small sample size and high attrition rates characterizing the RCT make us cautious in drawing conclusions from its results. Still, we consider them suggestive evidence in support of our assumption that home bias is detrimental to business profits and survival, and of our focus of analysis on incentivized decisions explicitly capturing it in the domain of business location and advice taking. We end the Section by discussing sources of variation in task behavior, which offer support to our identification of gender norms as key explanations.

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) and is reported under each coefficient of interest in square brackets.

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

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

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 cummulative 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 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 attrition rate of 23% at midline and 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 A3). Athey and Imbens (2017) recommend adjusting for covariate differences to remove potential biases in a sample that is affected by non-random missing data. The literature recommends several methods for obtaining consistent estimates in the presence of such missing data (see Millan and Macours (2017) for a review). In our analysis, we deal with attrition in three main ways used in literature. First, we estimate equation (1) for each outcome using using Inverse Probability Weights (IPW) capturing successful interviews (Wooldridge, 2002). The IPW procedure consists of estimating the probability of being surveyed, conditional on a set covariates available at baseline. The probability weights are used to adjust the differences in baseline characteristics between the control and treatment group arising from attrition. Second, we estimate 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. Third, we estimate equation (1) with all baseline characteristics that are systematically related to attrition included as controls. These results are shown in Appendix Table A4. [17]

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

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[17] In addition, Lee (2009) proposes to construct lower and upper bounds for treatment effects by using a small set of covariates and trimming the sample by cell from either the above or below. However, to apply these bounds, we must assume that treatment assignment effects attrition in only one direction. We do not believe this monotonicity assumption to be valid in our context. We still provide the lower and upper limits of treatment effects using the bounding procedure by Lee (2009) in the Appendix.

Table A4).[18]

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	0.060	0.037	0.039	0.098	0.098
	(0.038)	(0.038)	(0.025)	(0.024)	(0.049)**	(0.049)**
	[0.069]	[0.069]	[0.064]	[0.064]	[0.088]	[0.088]
Treatment$_{(2years)}$	0.001	-0.001	0.178^{AAA}	0.179^{AAA}	0.179^{AAA}	0.177^{AAA}
	(0.012)	(0.013)	(0.044)***	(0.046)***	(0.047)***	(0.047)***
	[0.055]	[0.055]	[0.087]	[0.087]	[0.100]	[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	IPW	PDS	IPW	PDS	IPW	PDS
controls		Lasso		Lasso		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, ^{A}Significance at 10% level.

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 A6 and A7 of the Appendix.

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

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[18] Table A5 in the Appendix shows the upper and lower bounds of treatment effects using the Lee (2009) bounds technique.

the impacts of finance on business outcomes for existing businesses, not new businesses.[19] 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 possible 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 A8, 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 reallocation of funds into their husbands' businesses (Bernhardt et al., 2017).[20] 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. Overall, our data thus provide little support to common explanations for the limited impact of microfinance on female-owned businesses.

The RCT data reveal another interesting pattern, which motivates the experimental analysis reported in what follows. Among the enterprises set up by women in our sample, a large majority were located inside the home. Indeed, 128 out of the 158 (81%) new businesses were set up and operated from the home. We also observe higher shares of business closure among home-based businesses, suggesting lower profitability. In fact, 78.1% of home-based enterprises in our sample had closed down by the time of the last followup survey, while this figure is only 65% for businesses located outside the home (p = 0.000). The relevance of this last figure must be taken with caution, as only 26 businesses in our sample were set outside the home.

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[19] 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 on most household business and consumption outcomes, except on households with existing businesses, where outcomes for business are generally positive and larger.

[20] In an analysis similar to (Bernhardt et al., 2017), we test if the treatment leads to more enterprise set up by husband's of respondents. We find evidence of this to be the case - husbands of treated respondents are 6 percentage points more likely to have a business at midline. However, we do not have this data at endline and are unable to test for longer term effects.

In what follows, we therefore ask whether social norms and preferences, which keep female-run business restricted to the home, may be partly responsible for the limited effectiveness of microfinance found by our study, as well as others'. In so far as these norms restrict the sector, scale and market of the business, they may place a boundary on any returns to investment. In addition, household responsibilities may represent a greater obstacle to business operations within than outside the home, if devoting time to the business is harder for women when they are in close proximity to dependents and responsibilities at home. While it seems safe to assume that for these reasons home based businesses are likely to be less profitable, more vulnerable, and have lower growth prospects, empirical evidence supporting this assumption is scant. We rely on survey data, collected by the authors from a different sample of 1766 existing businesses operated by women in Pakistan, to offer support to our assumption.[21] Also among these female entrepreneurs, only 35% (629) have businesses outside the home. Both monthly sales and profits for these businesses are, on average, higher than those of businesses based at home (by 48% and 69%, respectively). Very few businesses (5%) in that sample have employees, but among those who do, businesses at home are more likely to have unpaid workers. These figures confirm the costs, in terms of scale and profitability, of operating a business from the home. Yet, in spite of these costs, prevailing social norms and safety concerns may induce women and their families to prefer that female-owned businesses are home-based.

We address the question of the role of gender norms on economic decisions relevant for business success through the analysis of our preference tasks. Data from these tasks are available for the entire RCT sample, rather than from the restricted and self-selected group of women who are able to set up a business. The design of the tasks allows us to test if preferences for home-based businesses 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 that we conducted at endline. Table A9 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 men and 13% of women prefer that the women not set up a business at all, if finance is not a constraint. We move beyond these aggregate patterns, and 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.

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[21]   See https://www.socialscienceregistry.org/trials/2980 for trial registry.

Figure 2: Business preferences by gender
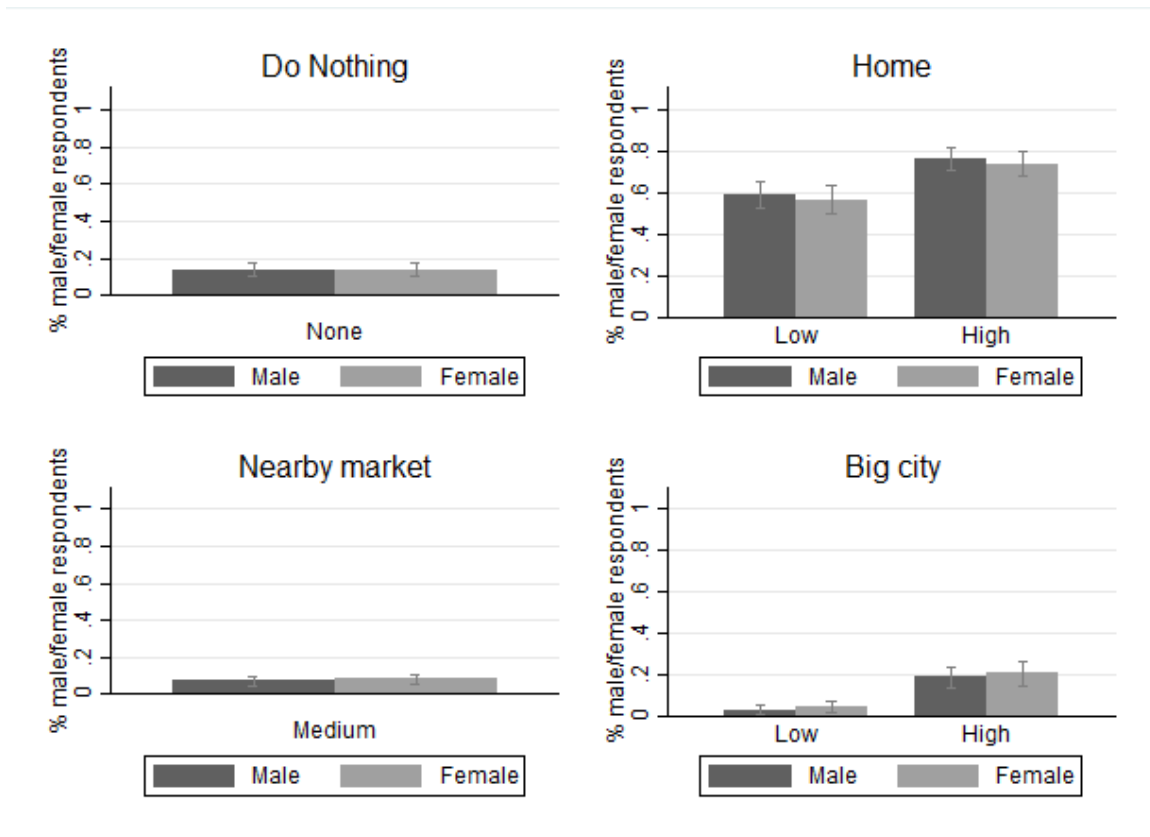
Note: *x-axis* shows the business opportunity selected by men for women or by women for themselves, by the level of profits associated with each option (None, Low, Medium or High). The *y-axis* displays the percentage of response by respondents who were able to rank business opportunities by profits 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% 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% on average) prefer doing nothing to conducting a business in the local market (8% on average), the share of subjects opting for a business located in a city market varies between 4% when it is the least profitable scenario, to 20% 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.

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Third, preferences of male and female respondents are almost indistinguishable: women are, on average, slightly more likely to prefer businesses located outside than inside the house, but these differences are not statistically significant. In Appendix Figure A2, we show for each location preference, the proportion of participating households where the male and female preferences coincide. Male and female respondents from the same household agree 76.3% of the times, with the consensus highest when the preference is for home (80.8%) and lowest when the male preference is for a business location in the nearby market (56.3%).

These results suggest that women may have internalized norms on the appropriateness of female enterprise and appropriate location. Indeed, among women that were not working and not seeking work, 27% reported this was primarily due household members not allowing it. However, a considerable proportion (35%) stated that main reason they were not working was that they themselves did not want to venture outside the household.

Beside internalized gender norms, other reasons can lie behind these results. While our experimental design does not allow us to identify the influence of each potential reason separately, we offer some discussion and evidence in the attempt to rule out alternative explanations. First, it is possible that security concerns may limit female mobility and physical interactions with outsiders even in the absence of social norms. The evidence on demand for advice, discussed below, suggests that a 'home-bias' exists also in domains that do not require venturing outside the house or interacting with outsiders. Second, it is possible that these results are driven by a lack of understanding of the questions asked. We test if the respondents can correctly rank profits and find that around 80% 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. This suggests a limited role for comprehension issues. Moreover, we control for understanding in our analysis.[22] Third, the similarity between male and female preferences, instead of being driven by shared norms, 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 A3: the difference between male responses and female guesses are both economically and statistically insignificant. Since our experimental design was specifically aimed at minimising such concerns - for instance, female responses were kept 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.

Overall, our results on location preferences seem to be robust to alternative explanations, and indicative for a home-bias consistent with internalized social norms on gender mobility. We now turn to the evidence on preferences for advice, which paints a similar picture.

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[22] 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.

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.[23] Such advice was helpful in giving 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 was thus strictly lower than the expected return from it. The respondent was not required in this scenario to venture outside the home to obtain advice 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 therefore have opted for advice from either source at any price, and certainly when it was free.[24]

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 from both sources decreases significantly with the cost of advice. As the price of advice goes from PKR 0 to 100, the share of women willing to obtain it falls from 80 to 32% in the case of partner's advice, and from 63 to 20% in the case of expert advice. 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). It is thus worth noticing that about 40% 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.

Household members' advice was correct only 32% of the times. On the contrary, Advice provided by the expert was useful. Comparing performance between respondents who opted for expert's advice and those who opted for husband's advice, we find that the share of correct responses is 87.4% among the former, compared to 77.6% among the latter (p = 0.047). Relative to the success rate among women who opted for advice but were not randomly selected to receive it, shares of correct answers are not significantly higher among women receiving husband's advice.

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. Indeed, opting for only partner's advice did not maximise a woman's likelihood to correctly answer questions in this task. Yet, a considerable number of women did not want to ask for expert advice, even when the advice was free and non-binding. Second, even if women did not know ex-ante about the relative quality of advice from husbands and experts, the definition of 'expert' implied greater knowledge and higher instrumental value of advice. Therefore, expert advice should have been sought more often relative to the partner's advice, if maximizing reward was the dominant concern. The fact that we find the opposite thus indicates that women are willing to forgo advice from outsiders, even when advice is free and can increase the likelihood of

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[23] Table A9 in the appendix provides a brief summary of preferences displayed by female respondents.
[24] The expected returns from costly advice depend on beliefs on its usefulness, which we don't collect.

Figure 3: Female demand for advice
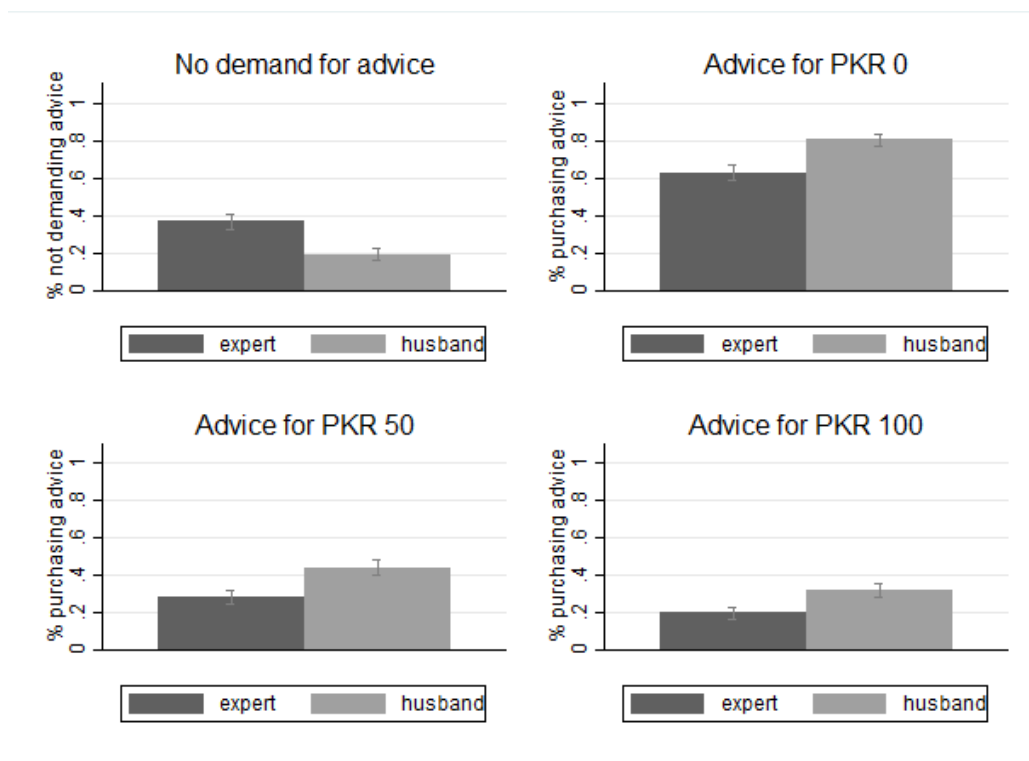
Note: Each panel shows the demand for different 'prices' of advice. *No demand for advice* is a binary variable equal to one if the respondent indicated she did not want advice at any purchase price, including 0. *Advice for 0, 50, 100* refer to the purchase price that the respondent was willing to pay 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.

earning a reward.[25] Such a decision, if taken in the real-world, can prove extremely costly for a startup business.

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

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[25] 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.

are shown in Table 4 and 5. The treatment has no statistically significant impact on either preferences for business location or advice.[26]

The inability of finance to overcome home bias can contribute to explaining why recent studies, as well as ours, 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 fails to shift preferences over business location and advice suggests that these preferences are not driven by gender-specific credit or liquidity constraints.[27]

We then examine the 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 outside the home[28] and for advice from an expert. A possible explanation, consistent with our assumptions, is that these women identified lack of advice from peers and having restricted business operations within the home as contributing to the failure of their businesses, and updated their preferences along these dimensions.

Next, we explore whether preferences for location and advice 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. In terms of preferences for location, 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.[29] None of the other variables are significantly correlated with preferences for location.

Preferences for home-based businesses in the task may be driven by risk aversion, since the costs associated with home location were always lowest across all scenarios, regardless of profit levels. To test for the role of risk preferences, we use data collected from an incentivized Binswanger (1980) risk elicitation task conducted at midline with approximately

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

[27] 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. 21 responses were not clearly marked and data for 21 has been dropped from the analysis of business preferences. These women are not statistically different in any dimension from the sample that has been used in the analysis.

[28] These results are robust to excluding the respondents who prefer no business at all (Appendix Table A10).

[29] These effects are small and disappear when we exclude women who prefer no business. See Appendix Table A10.

Table 4: Correlates of preference for business

Dependent variable: *Business preference*			
	(1)	(2)	(3)
ITT	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	-0.052	-0.060
	(0.165)	(0.173)	(0.173)
Female respondent: agency index	-0.158	-0.139	-0.134
	(0.127)	(0.129)	(0.127)
Female respondent: has young children	-0.059	-0.067	-0.073
	(0.222)	(0.230)	(0.224)
Female respondent: with nuclear family	-0.272	-0.276	-0.242
	(0.160)*	(0.154)*	(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)
ITT	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. 21 observations were dropped due to data entry errors. $***p < 0.01, **p < 0.05, *p < 0.1$.

one-third of the RCT sample.[30] We find results to be qualitatively similar when we control for an individual's risk aversion level; further, location preferences do not seem to vary with risk preferences.[31]

Turning to preferences for advice, the existence of a household business does make it more likely that the woman asks for advice form 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.[32]

5   Discussion and Conclusion

Findings from a RCT with aspiring female entrepreneurs in Pakistan show relatively large but transitory effects on business creation and survival. We designed incentivized behavioural tasks to examine how home-bias in preferences for business location and advice may explain why female-run businesses are short-lived. These 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 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

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[30] RCT participants were randomly selected and invited to participate in the incentivized tasks. Data on risk preferences is available for 236 endline participants

[31] Results are available in Appendix table A11.

[32] In Appendix Table A12, 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 A13). Numeracy scores and risk aversion levels also correlate similarly with demand for advice from experts (Appendix Table A14).

provides an alternative explanation of why female-run enterprises tend to remain small and unprofitable.[33]

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: the tasks, 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 meaningfully contribute to household income by expanding their market. Given the internalization 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.

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

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Appendix

Table A1: **Major reason reported by women for not working (Punjab Commission on the Status of Women, 2019)**

	Bahawalpur	Gujrat	Sialkot	Total	Equality (p)
Lack of family support/permission	0.28	0.37	0.27	0.31	0.005***
Responsibilities at home	0.27	0.17	0.22	0.22	0.003***
Don't want to work with men	0.09	0.11	0.07	0.09	0.087*
Lack of accommodation	0.00	0.03	0.02	0.01	0.001***
Lack of qualification/training	0.18	0.15	0.30	0.20	0.000***
Lack of 'appropriate' jobs	0.15	0.11	0.09	0.12	0.025**
Lack of transport	0.01	0.05	0.02	0.03	0.002***
Other	0.01	0.00	0.01	0.01	0.304
N	402	461	355		

Note: The table summarizes proportion of women interviewed by the Punjab Commission on Status of Women (2019) who have reported the reason provided in each row as the main reason that has kept them from participating in the labor force. N provides the total number of women who are not working who responded to this question, out of 587 women in Bahawalpur, 649 in Gujrat and 631 in Sialkot who randomly selected for interview and were not participating in the labor force. 'Other' includes reasons such as a prolonged illness, physical disability, old age or feeling no desire to work. Column (4) shows the $p - values$ for statistical significance of the coefficient on the variable in the row when it is regressed against district dummies. $* * *p < 0.01, * * p < 0.05, *p < 0.1$.

Table A2: Sample characteristics and balance

	N	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
$p-value$ 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 A3: **Predicting attrition**

	Not Attrited (1)	Not Attrited (2)	Not Attrited (3)	*Sharpened q-values* (4)
Treatment Assignment	0.088***	0.052***	0.105	
Family 1: Demographics				
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**
Family 2: Occupation and experience				
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
Family 3: Household assets and income				
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
Family 4: Intrahousehold agency and autonomy				
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

	(1)	(2)	(3)	(4)
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, [A]Significance 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 A4: 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, ^{A}Significance at 10% level.

Lee (2009) bounds on treatment effects on enterprise

Table A5: Lee (2009) bounds for treatment effect on enterprise creation and survival

	1 year			2 year		
	Business exists	Shuts down business	Set up business	Business exists	Shuts down business	Set up business
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.062	0.038	0.100	0.001	0.178	0.179
	(0.019)***	(0.023)*	(0.028)***	(0.019)	(0.023)***	(0.028)***
Lower bound	-0.059	-0.022	0.017	-0.018	0.118	0.134
	(0.029)**	(0.027)	(0.05)	(0.029)	(0.037)***	(0.036)***
Upper bound	0.064	0.087	0.151	0.016	0.152	0.168
	(0.027)**	(0.022)***	(0.033)***	-0.021	(0.031)***	(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 A6: 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	98.226	0.016	0.008	0.199 0.202^{AAA}	0.202^{AAA}
	(702.455)	(732.903)	(0.153)	(0.148)	(0.058)***	(0.060)***
	[1516.875]	[1516.875]	[0.360]	[0.360]	[0.105]	[0.105]
Treatment$_{(2years)}$	-404.400	-409.788	-0.126	-0.137	0.016	0.013
	(805.325)	(854.604)	(0.156)	(0.149)	(0.021)	(0.024)
	[2070.535]	[2070.535]	[0.441]	[0.441]	[0.083]	[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, ^{A}Significance at 10% level.

Table A7: 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	-0.028	0.156	0.165	0.012	0.020
	(0.045)	(0.047)	(0.135)	(0.126)	(0.088)	(0.086)
	[0.112]	[0.112]	[0.472]	[0.472]	[0.212]	[0.212]
Treatment$_{(2years)}$	0.031	0.029	-0.046	-0.004	0.021	0.032
	(0.054)	(0.057)	(0.215)	(0.222)	(0.102)	(0.110)
	[0.110]	[0.110]	[0.559]	[0.559]	[0.257]	[0.257]
Conf$_{t=0}$	-0.014	-0.029				
	(0.042)	(0.043)				
Emp. index$_{t=0}$			0.071	0.064		
			(0.037)*	(0.037)*		
Agency index$_{t=0}$					0.007	-0.000
					(0.044)	(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	IPW	PDS	IPW	PDS	IPW	PDS
controls		Lasso		Lasso		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, ^{A}Significance at 10% level.

Heterogeneity in effects on business status

Table A8: Heterogeneity in treatment effects by baseline characteristics

Baseline characteristic:	Another business in hh			Has existing business			Has had business in past		
New business:	Exists	Shut down	Set up	Exists	Shut down	Set up	Exists	Shut down	Set up
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment$_{(1year)}$	0.058	0.061**	0.119**	0.057	0.040	0.097	0.073	0.052*	0.125*
	(0.034)	(0.023)	(0.045)	(0.041)	(0.026)	(0.054)	(0.044)	(0.023)	(0.052)
Treatment$_{(1year)}$ * Baseline characteristic	0.007	-0.103**	-0.097	0.010	-0.008	0.002	-0.057	-0.055	-0.112
	(0.067)	(0.037)	(0.092)	(0.043)	(0.061)	(0.052)	(0.061)	(0.035)	(0.072)
Treatment$_{(2years)}$	-0.004	0.204***	0.200***	-0.008	0.178***	0.170***	0.015	0.200***	0.215***
	(0.018)	(0.044)	(0.046)	(0.014)	(0.051)	(0.051)	(0.011)	(0.050)	(0.052)
Treatment$_{(2years)}$ * Baseline characteristic	0.011	-0.116	-0.105	0.037	0.008	0.045	-0.068	-0.093	-0.160
	(0.053)	(0.083)	(0.102)	(0.035)	(0.041)	(0.050)	(0.041)	(0.054)	(0.088)

Baseline characteristic:	Has children under 5			Has above median empowerment			Has above median agency		
New business:	Exists	Shut down	Set up	Exists	Shut down	Set up	Exists	Shut down	Set up
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Treatment$_{(1year)}$	0.044	0.038	0.082	0.048	0.046	0.094	0.027	0.038	0.064
	(0.039)	(0.026)	(0.048)	(0.043)	(0.041)	(0.067)	(0.038)	(0.033)	(0.057)
Treatment$_{(1year)}$ * Baseline characteristic	0.050*	0.001	0.052	0.018	-0.010	0.008	0.062**	0.001	0.063
	(0.024)	(0.054)	(0.051)	(0.028)	(0.044)	(0.054)	(0.023)	(0.042)	(0.051)
Treatment$_{(2years)}$	-0.014	0.162***	0.148**	0.003	0.173**	0.176**	-0.031	0.159**	0.128*
	(0.012)	(0.049)	(0.049)	(0.027)	(0.064)	(0.065)	(0.018)	(0.055)	(0.058)
Treatment$_{(2years)}$ * Baseline characteristic	0.039	0.054	0.093	-0.005	0.010	0.004	0.055*	0.038	0.093
	(0.030)	(0.057)	(0.057)	(0.034)	(0.058)	(0.058)	(0.024)	(0.055)	(0.062)
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. $***p < 0.01$, $**p < 0.05$, $*p < 0.1$.

41

Preferences for business location and advice

Table A9: Descriptive data on responses in experiments

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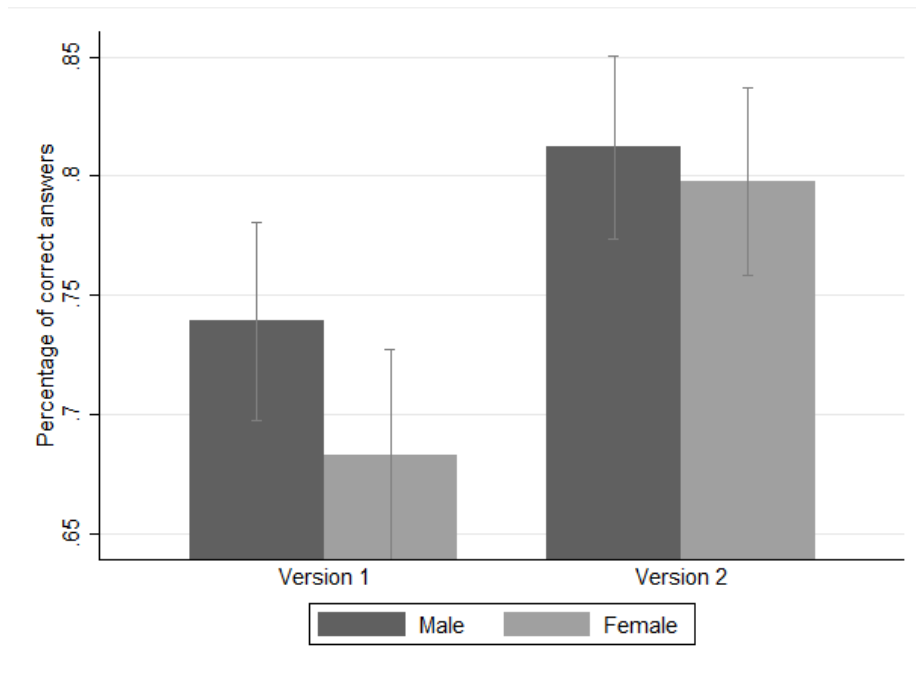
Note: *x-axis* shows the version of the game played by men and women. Version 1 involved increasing levels of profits, version 2 involved decreasing level of profits. The *y-axis* measures percentage of respondents who were able to rank business opportunities by profits correctly.

Figure A2: Proportion of household pairs that agree on preferred location
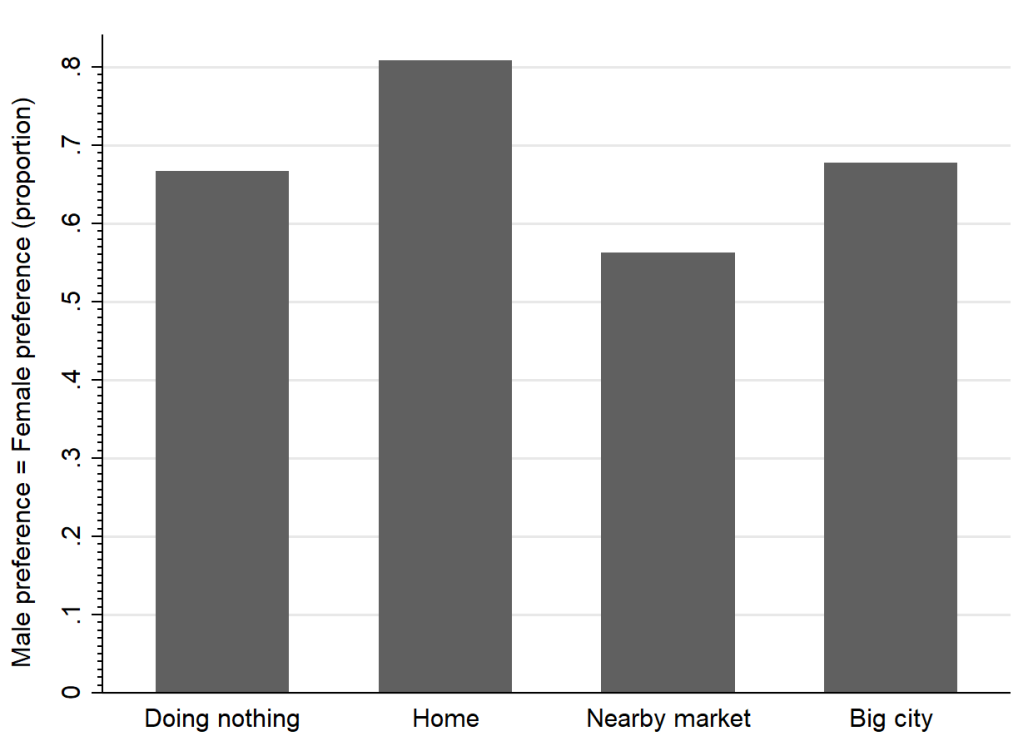
Note: *x-axis* shows the business opportunity by location (or doing nothing) that respondents selected for the female to engage in. The *y-axis* displays the proportion of respondents who display the same preference as their household member. Values range from 56-81%, with 56% of the households in agreement when the preferred location is 'Nearby market' to 81% agreeing when the preferred location is 'Home'.

Figure A3: Female guess of male preference for business location
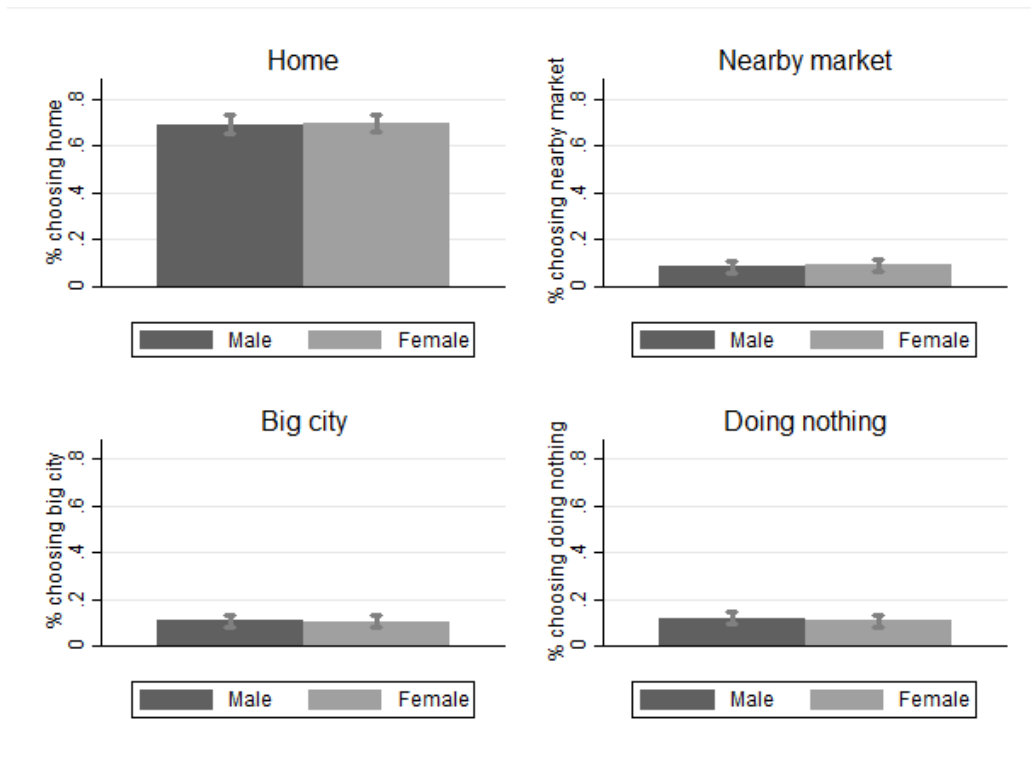
Note: *x-axis* shows the business opportunity by location (or doing nothing) that the female respondent thinks the male selected for her. 'Male' refers to the actual male responses. The *y-axis* displays the percentage of male or female respondents with the displayed preference.

Table A10: Correlates of preference for business

Dependent variable: *Prefer business outside home*			
	(1)	(2)	(3)
ITT	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	0.006	0.006
	(0.031)	(0.034)	(0.033)
Female respondent: agency index	-0.024	-0.020	-0.020
	(0.024)	(0.023)	(0.023)
Female respondent: has young children	-0.068	-0.069	-0.069
	(0.053)	(0.054)	(0.053)
Female respondent: with nuclear family	-0.018	-0.018	-0.017
	(0.054)	(0.053)	(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 A11: Correlates of preference for business, controlling for risk aversion

Dependent variable: *Business preference*			
	(1)	(2)	(3)
ITT	0.254		
	(0.258)		
Business exists		-0.925	
		(0.470)**	
Set up business			-0.831
			(0.455)*
Shut down business			1.221
			(0.553)**
Risk preferences	0.112	0.089	0.085
	(0.091)	(0.089)	(0.083)
Existing family business	-0.085	-0.130	-0.151
	(0.313)	(0.310)	(0.303)
Female respondent: agency index	-0.129	-0.095	-0.091
	(0.239)	(0.247)	(0.242)
Female respondent: has young children	-0.051	-0.021	-0.034
	(0.388)	(0.401)	(0.396)
Female respondent: with nuclear family	-0.314	-0.364	-0.310
	(0.290)	(0.273)	(0.276)
N	226	226	226
Pseudo R^2	0.026	0.028	0.031

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. *Risk preferences* measures individual response to Binswanger (1980) risk elicitation task, ranging from 1 to 6; increasing values represent lower levels of risk aversion. *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 A12: **Correlate means of business preferences**

	No Business (1)	Business at home (2)	Business outside (3)	Equality (p) (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
N	73	372	119	

Note: All the calculations in this Table are based on an OLS regression of respondent characteristic on preferences for business location. Risk and time preferences are derived from unincentivized question asked at endline. 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 A13: **Correlate means of demand for husbands' advice**

	Wants advice (1)	Does not want advice (2)	Equality (p) (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
N	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. Risk and time preferences are derived from unincentivized question asked at endline. 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 A14: **Correlate means of demand for experts' advice**

	Wants advice (1)	Does not want advice (2)	Equality (p) (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
N	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. Risk and time preferences are derived from unincentivized question asked at endline. Standard errors clustered at the branch level. Equality test refer to coefficient equality across columns (1) and (2).

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

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