

# **Identity and Female Enterprise: Experimental Evidence from Pakistan\***

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## **Abstract**

We examine the role of gender norms and identity on business preferences of women. We use incentivized experiments with 1149 men and women in Pakistan to establish the presence of a ‘home-bias’ in where a business run by the woman should be operated. Households in our sample prefer women set up a business but operate it from within the home; limiting the potential to expand the business operations outside the home. We find that microcredit is unable to influence these preferences, challenging popular development practice aimed at encouraging female-run microenterprise through access to finance. Women also exhibit a ‘home-bias’ in their demand for advice; more likely to prefer the advice of a male household member than that of a field expert outside the household. Taken together, results indicate internalized gender norms can constrain the size and sustainability of businesses operated by women and can explain

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# 1 Introduction

Microfinance has long been credited with the power to bring about social and economic change. In general, microcredit has the potential to directly affect household income; and in particular, by targeting women it can effectively improve female autonomy and household welfare (Aghion and Morduch, 2005; Pitt et al., 2006). However, recent evidence on the effect of access to microcredit has shown limited effect on businesses by women.<sup>1</sup> Existing literature has cited lack of technical expertise (Blattman et al., 2015), cooperation in the household (de Mel et al., 2009, 2012) and spousal trust (Fiala, 2015) as possible reasons for the failure of microcredit to improve business outcomes for women. This study adds to existing literature by exploring the role of internalized gender norms on likelihood of women setting up their own business. *Identification* with and *internalization* of gender norms present a relevant framework for considering gender roles and household division of labor.

In their seminal paper, Akerlof and Kranton (2000) hypothesize that men and women internalize gender specific rules of behavior that provide them with an ‘identity’ or sense of self. We hypothesize that disutility incurred by contravening gender rules can limit the use of microcredit for female enterprise and can explain the small impact of finance. In a randomised control trial in 2014 to provide microloans to women in peri-urban areas of Pakistan, we found a significant but small impact (12%) on business creation (Said et al., 2017) implying that finance was not the binding constraint.

We use the RCT sample in 2016 - one year after the treatment product had been fully paid off - and test for the presence of internalized gender norms and identity and their impact on business preferences. We do this in two main ways. First, in a context where socially unacceptable preferences are less likely to be exhibited, we elicit male and female preferences individually, allowing females the ‘moral wriggle room’ and anonymity to provide honest opinions (Dana et al., 2007). We find that 69% of the men prefer that their female partners set up an enterprise at home compared to 18% who would prefer a potentially larger business that would involve her venturing outside the home. Female preferences are qualitatively similar, with a slightly larger proportion preferring to set up an enterprise that would require visits outside the home (20%) and a smaller proportion preferring an enterprise at home (66%). These results hold even after we control for different levels of profits that can be earned if the business is not restricted to one that is confined to the house. Further, we exploit the fact that the women in our sample were involved in a micro-finance RCT in 2014. We find that the *home-biasedness* in preferences of the women, and their male partners, who were randomly allocated to receive a loan are unaffected by the provision of microcredit.

Second, we investigate if the the reluctance to interact outside of the household extends to other behavior that can have an impact on business outcomes. We present a series of test

<sup>1</sup> See for instance, (Angelucci et al., 2015; Banerjee et al., 2015; Ginè and Mansuri, 2011; Said et al., 2017).

questions to women that were rewarded if answered correctly and provided them with the option of ‘advice’ from either their male partner or a field specialist. We find that even when advice from expert has instrumental value, women are more likely to ask their male partners for advice. In fact, 40% of the women forgo advice from an expert even when it is free.

To the best of our knowledge, this is the first study to look at the role of internalized gender norms on the decision by a woman to set up an enterprise. We add to the vast literature on microfinance that has looked at the impact of loans on business outcomes for women by exploring a constraint that has not been investigated before. We also add to a strand of literature that uses gender identity to explain behavior in a variety of contexts. The inclusion of gender as an identity helps explain why affirmative action has limited effect in the case of gender quotas in Indian politics (Mueller, 2016) and why women who disagree with patriarchal notions of division of labour in rural Bangladesh report lower levels of subjective wellbeing (Seymour and Floro, 2016). Literature also documents the ways in which gender identity can manifest itself. Codazzi et al. (2017) find that female labour force participation is lower in couples in Brazil when the female is more qualified than her male partner<sup>2</sup>; Delavande and Zafar (2017) provide evidence for gender discrimination to be more pronounced among men with lower socio-economic status; and Dhar et al. (2015) document lower aspirations for continuing education among girls with parents who have patriarchal views about a woman’s role in the society.

We add to existing literature on social learning and advice-taking that has found a low willingness to pay for advice and information from peers in general.<sup>3</sup> Golman and Loewenstein (2015) hypothesize that a lack of demand may reflect a need to avoid finding out about negative outcomes. We contribute to literature by differentiating between advice from within and outside the household.

So far as consultation and advice from peers can be considered an important source of information for setting up or expanding a business, a lack of demand for advice is one explanation for why female-run businesses do not grow or survive. However, when considered with the *home-bias* in business location, we find that women in our sample have a distinctly inward-looking preferences for advice that can limit the impact of female-run businesses on household income and welfare. Finally, our results suggest that microcredit fails to change these preferences and may not be the binding constraint on the creation or growth of enterprise by women.

In the remainder of the paper, we describe the study design and implementation (Section 2) and estimation strategy (Section 3). We discuss results in Section 4 and conclude in Section 5.

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<sup>2</sup> Preliminary findings from randomised control trial with MBA students in the US indicate women under report their career ambitions when they will be visible to men (Bursztyn et al., 2017). In fact, women who do earn higher than their male partners, report lower levels of marital satisfaction (Bertrand et al., 2015).

<sup>3</sup> See (Stone and Zafar, 2014; Cole and Fernando, 2012; Barham et al., 2017) for demand in lab and field experiments on advice-taking Weizsacker (2008) provides a review of studies on social learning.

## 2 Experiment Setting and Design

### 2.1 Setting and implementation

Our experiment uses incentivized survey questions administered to a sample of women participating in a microfinance RCT in peri-urban areas of Punjab, Pakistan (see [Said et al. \(2017\)](#) for details). Pakistan is an interesting setting for exploring the relationship between gender norms and enterprise. The promise that microcredit holds for economic empowerment of women through home-based enterprise is significant given restrictions on female mobility outside the home. These restrictions have kept female participation in the labor force well below that in other countries with similar income ([Field and Vyborny, 2016](#)). Indeed, one out of every three woman who works in Pakistan, work out of home. Of the women who do not work, 40% report this is because their family members will not allow them to work outside the home. A further 15% report that they themselves would not like to work outside the home.<sup>4</sup>

The RCT was administered in August 2014 with randomly selected women given a small, 12-month loan of PKR 30,000 ( $\approx$  \$30)<sup>5</sup> to set up an enterprise. Loan recipients were also given a small workshop at the time of disbursement on basic marketing and accounting concepts.<sup>6</sup> Baseline surveys for the RCT were administered in August 2014; followed by a midline survey in 2015, once the loan had been fully repaid; and endline survey in 2016.

A component of the endline activities required interviews with male members of the household.<sup>7</sup> We were able to conduct interviews with males in 585 households that participated in the RCT. We were unable to accurately record private preferences of 21 female respondents, providing us with a final sample of 564 women and 585 men.<sup>8</sup>

Table A1 in appendix A presents descriptives of the 564 women in our final sample. The average female respondent is 37 years old and married. About half of the respondents are housewives, while 30% of the sample either had a business, or works as a salaried or day laborer. The median female has low decision-making power in the household. Of the 585 male respondents, 74% were husbands, 12% were sons and 4% were brothers of female

<sup>4</sup> From the Pakistan Time Use Survey 2007, as calculated by [Field and Vyborny \(2016\)](#).

<sup>5</sup> PKR 30,000 represents the median loan size PKR 30,000. Loan size ranged between PKR 10,000 for first time borrowers to PKR 40,000 for four repeat borrowers.

<sup>6</sup> The workshop was conducted in groups of 2-3 new clients and took less than 3 hours. Loan officers discussed concepts such as setting goals and deadlines for their business; and the importance of keeping household expenditures separate from business expenditures.

<sup>7</sup> We interviewed adult, male decision makers in the household if the female respondent was unmarried or in case the husband was unavailable.

<sup>8</sup> To preserve anonymity of female responses in one part of the survey females were asked to record their preferences on a paper and put it in a sealed envelope. Due to errors in data entry, we could not match identifiers for 21 women and their data was dropped from the analysis. These women are not statistically different in any dimension from the sample that has been used in the following analysis.

respondents.

## 2.2 Experiment design

Akerlof and Kranton (2000) assume two social categories that prescribe specific rules of behavior that individuals internalize and provides a sense of self. Individual utility is a function of the satisfaction (dissatisfaction) derived from own and others' conformity (contravention) of the rules for their category. Choice of preferred activity provides an individual with positive utility while an activity that does not match her taste earns zero utility.

In the context of our sample of aspiring or current female entrepreneurs, *conformers* prescribe to the following rule: Men go out of the home to earn; women are caretakers of the household. Women can set up an enterprise to augment household finances or for her own use, but only after consultation with the household members and never an enterprise that involves her regularly venturing out of the household. By extension, nor would she prefer to interact with outsiders, for instance to seek the advice for business. This sub-game equilibrium corresponds to women acting as *proxies* of men or the society at large by internalizing the gender norm - they prefer to not venture outside the household, neither for business nor for advice. A woman would contravene conventional household and social norms and setting up an enterprise that requires her to venture outside of the home. By engaging in an enterprise outside the home, this woman will not be considered a true *conformer* and experience a loss of identity. This is likely to happen when sufficient individuals belong to the *contravening* group for behavioral prescriptions to change or for their actions to not cause social anxiety. Incentivized survey questions allow us to test if the average female preference for business reflects that of a *proxy* who has internalized gender norms; or if indeed women would prefer to venture outside the household and are restricted from doing so due to household sanctions.

We have data on demographics, household decision making parameters, access to finance and household expenses and assets from the follow-up survey conducted in August 2016. In addition, we administered incentivized questions to female respondents and their male partners at the end of the follow-up questionnaire. Men were always interviewed first. Men and women were not allowed to sit together and could not communicate their responses to each other. Further, we randomized the version of question administered at the household level to avoid information spillover between respondent households in the same community. All earnings were revealed at the end of the male and female questionnaire, respectively. Appendix B contains the protocol followed by the enumerators for the two experiments.

### **2.2.1 Elicitation of business preferences**

We use incentivized survey questions to elicit male and female preferences for whether the female respondent should operate a business and if she should, then where should such a business be operated from.

*Step 1:* We separately asked men and women to rank business opportunities in increasing levels of profit. They were presented with three opportunities, with differing levels of income and expenditure. More importantly, the business opportunities differed in where the business activities had to be conducted: at home, by going to the nearby market or by going to the nearest big city to work with a distributor. In one version of the questionnaire, these opportunities were associated with increasing levels of profits; that is, profits increased from a business at home to one in the big city. In another version, these opportunities were associated with decreasing levels of profits, with the highest profits to be made at home and the lowest when going to the big city. This randomization of the direction in which profits change as we vary business location allows us to separate location preferences from profit considerations.

Respondents earned PKR 100<sup>9</sup> for ranking opportunities in increasing order of profits. This step allows us to check respondent understanding of profit levels. Subsequent decisions could then be separated from considerations of aptitude in estimating profits from costs and revenues.

*Step 2 (male):* We asked each male respondent which of the three business opportunities would he prefer for the female respondent. They could also choose for her to do none of the three.

*Step 2 (female):* The corresponding question asked to women had two parts: first, they were asked to imagine a hypothetical situation where access to finance or permission from household members was not a constraint and then to provide their preference for one of the three businesses or doing nothing. This part of the survey was not incentivized. To elicit honest responses these decisions were recorded privately - respondent marked their preferences on a piece of paper that they submitted to the enumerator in a sealed envelope.<sup>10</sup> Next, we test for the accuracy with which women can predict male preferences. They were rewarded PKR 100 if they could correctly guess what their male partners had said in response to the same question.

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<sup>9</sup> PKR 100  $\approx$  \$1

<sup>10</sup> While the rest of the survey was conducted on a tablet, we used paper to record the response to this question. Paper was used for two reasons: Direct entry on tablets was not something that was not as easily understood by the sample as ticking a preferred option on a piece of paper. In addition, confidentiality was more credibly maintained once their answer was sealed in an envelope, unseen by the enumerator who was interviewing the participant and seen only by the researcher who would enter the data later.

### 2.2.2 Elicitation of demand for advice

We elicit measures of female demand for advice from the male partners or from an ‘expert’. The expert is introduced as someone with expertise in the field relating to the question asked. We use one question testing knowledge and one testing abstract reasoning using Raven’s matrices. We inform the female respondents that they will be rewarded with PKR 200 for every question they answer correctly.

*Step 1:* We ask men one knowledge and one abstract reasoning question and ask them to provide two possible answers for each question. Men are informed that we may provide the two responses to their female partners as ‘advice’ and that each question that his female partner answers correctly will earn her PKR 200 ( $\approx$  \$2).

*Step 2:* We ask the female respondent the same knowledge and abstract reasoning questions. Before providing final answers, they are also provided the opportunity to ‘purchase’ advice for each question from the male partner or an expert for PKR. 0, 50 or 100 ( $\approx$  \$0, \$0.5 or \$1, respectively). The ‘advice’ will be in the form of two answers that her male partner or the expert thinks is the correct answer. By design, the two options included in the expert’s ‘advice’ always had the correct answer.

We elicited female demand for advice from two types of advisers (expert or husband) at these three levels of cost. The actual cost and adviser available to the respondent was randomized and disclosed after she had indicated her preference for advice at that cost.

*Step 3:* We implement the choice women make about purchasing advice and ask them to provide the answer to each question asked. Note, while advice narrows down choice by listing the two answers male partner or expert thinks are correct, it does not eliminate all risk and women still have to make a final decision.

Note that the cost of advice is strictly less (or free) than the expected rewards. Therefore, in expectation, women should rationally take advantage of advice to maximize reward. In fact, ‘expert’ advice should be sought more in comparison to male advice if maximizing reward is the dominant concern. Appendix B lists the knowledge and puzzle questions that were asked. Questions were randomized at the household level.

## 3 Estimation strategy

We use data collected from these two experiments to measure the extent of ‘home bias’ in demand for enterprise and advice. That is, we test if women tend to be *proxies* of gender prescriptions or if they prefer *profit maximizing* ventures that can be extended out of the household when needed. Women are less likely to engage in business activities outside the household if costs from loss of identity and reprimand from other members of the household or society exceeds the utility from a large business. We measure if the men are

likely to be in favor of their household member setting up a business, or the location of her business, by directly eliciting their preference on this decision.

We estimate an ordered logit model to explore correlation between preferences for business and individual characteristics (1):

$$y_{j,i} = \beta_0 + \beta_1 \cdot \text{Female}_i + \alpha_1 \cdot z_{i0} + \varepsilon_i \quad (1)$$

Where  $y_i$  is the preference for business location ( $y_i = 0, 1, 2, 3$  for *nothing, home, nearby market, big city*) of individual  $i$ ,  $\text{Female}_i$  is a binary variable equal to 1 if the individual is female.  $\beta_1$  provides the average difference between male and female preferences.  $z_{i0}$  include variables that measure female characteristics such as marital status, literacy, current occupation and decision making power in the household. We use the ? method to create an index out of variables measuring female role in household decisions about clothing, food, medical expenditure, finance and recreation.<sup>11</sup> All regressions control for age of the female respondent, household assets and the version of questionnaire that was administered.<sup>12</sup> All standard errors are clustered at the household level.

Second, we exploit one source of random variation in our sample - half of the sample was randomly selected to receive an enterprise loan to set up a new business. Variable  $\text{ITT}_i$  is defined as a binary variable equal to 1 if the  $i$ th female was part of the treated group, 0 otherwise. We test if access to finance can affect business location preferences. That is, we estimate the following:

$$y_{j,i} = \beta_0 + \beta_1 \cdot \text{Female}_i + \beta_2 \cdot \text{ITT}_i + \beta_3 \cdot \text{Female}_i \cdot \text{ITT}_i + \alpha_1 \cdot z_{i0} + \varepsilon_i \quad (2)$$

Third, we elicit female demand for advice. We elicit measures of female demand for advice from the male partners or from a field expert. Women who conform to gender norms will prefer to not interact with outsiders. We investigate if the demand for advice is driven by whether a woman conforms to in or the out-group activity. That is, if business preferences is correlated with the need to obtain male feedback and advice.

$$y_{j,i} = \beta_0 + \beta_1 \cdot \text{Female}_i + \beta_2 \cdot \text{WTP}_i + \beta_3 \cdot \text{WTP}_{\text{expert}_i} + \alpha_1 \cdot z_{i0} + \varepsilon_i \quad (3)$$

Where  $y_i$  is still the preference for business location ( $y_i = 0, 1, 2, 3$  for *nothing, home, nearby market, big city*) by individual  $i$ .  $\text{WTP}_i$  is a binary variable equal to 1 if the female is willing to pay a positive price to obtain advice. Women who are considering to set up an enterprise that requires going out of the household, contradicting gender norms, may feel a greater need for advice. Conversely, women who conform to gender norms may do the opposite. Finally, we test if the willingness to pay for advice varies by the identity of

<sup>11</sup> 'Household' denotes the female and her male partner participating in the experiment from her household. However, all results discussed later are robust to clustering of errors at the individual level.

<sup>12</sup> Business opportunities were associated with increasing levels of profits in Version 1 and decreasing levels of profits in Version 2. Survey version was randomised at the household level.

the adviser.  $WTP_{expert_i}$  is a binary variable equal to 1 if the female is willing to pay a positive price to obtain advice from an expert. Social norms that restrict interactions with outsiders may also be reflected in a lower demand for advice from experts outside the household.

## 4 Results

### 4.1 Preference for enterprise

Average understanding of profit levels is high - 76% of the respondents correctly rank profits. The likelihood of providing the correct ranking is not statistically different across the question versions. Women are only 3.5% less likely than men to rank correctly once we control for female characteristics, version and household effects, a difference that is economically small, though statistically significant.<sup>13</sup> It is also worth noting that women are well aware of male preferences (see Figure A2 in Appendix A). That is, it is highly unlikely for a woman in this sample to prefer a different business opportunity from that of her male partner because she is unaware of what he may prefer.

Figure 1, shows male and female preferences for the different business opportunities, by location and profit levels. Recall, in one version of the experiment, business at home was associated with the highest profits in the options given; in the other, it was a business with operations in the city that was associated with the highest profits. Business operated in the nearby local market was always associated with intermediate or ‘medium levels of profits. Few respondents prefer for the women to do nothing (approximately 14% of both men and women). Interestingly, demand for profits is non-monotonic and respondents in our sample do not always opt for the option associated with the highest profits.

The apparent anomaly in profit maximizing behavior can be explained when we take into account the ‘location’ that each business opportunity involves. The high demand for an opportunity that afford low profits is driven by female preference for a business at home. Preference for a business restricted to the home is the median response in our female sample (table A2 in appendix A). Demand for business at home is significantly larger than the demand for a business operated outside the home, even when business operations outside the home are associated with high profits. That is, location takes precedence over the profit considerations. Second, there is no statistically or economically significant difference in the preferences displayed by both men and women. There is a strong and clear preference for home based businesses among both men and women. In terms of the utility model put forward by [Akerlof and Kranton \(2000\)](#), the average woman in our sample has internalized

<sup>13</sup> See Figure A1 in appendix A for average responses by gender and question version.

the prescribed gender norms and displays an insignificant preference to contravene these norms in favor of venturing outside the home.

Figure 1: 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.

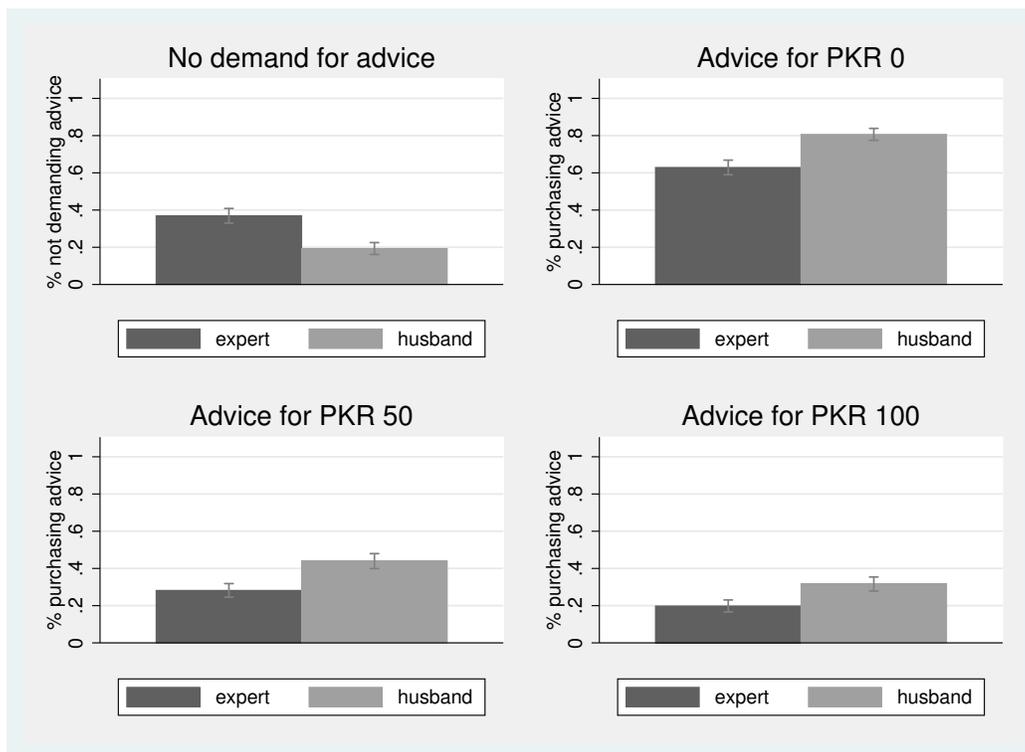
## 4.2 Preference for advice

We next look at the average demand for advice for different source and cost of advice. As expected, the demand for advice from both male partner and expert falls with increasing cost (see figure 2 for average demand on knowledge or abstract reasoning questions).<sup>14</sup> Demand for partner’s advice is significantly higher at all costs than that for an expert implying a ‘home-bias’ in whose advice women prefer (Appendix A, table A2).

<sup>14</sup> Figure A3 in Appendix A disaggregates demand for advice by type of question. Questions on abstract reasoning were perceived to be more difficult than the knowledge questions. Demand for advice on abstract reasoning questions is slightly higher than for advice on knowledge questions. We also find that knowledge questions were twice as more likely to be answered correctly than the abstract questions.

This result is striking for two reasons. One, displaying a preference for advice from expert and male partner were no mutually exclusive. Respondents could display a demand for both. The experiment design randomized the provider and cost of advice for implementation of advice. Yet, many women (40% of the sample) did not want to ask for expert advice, even when the advice was free and non-binding; and when preferring advice from expert did not preclude preferring advice from the male partner. Two, the expert was defined as someone with expertise in the question topic or field. The implication being that advice from the expert is more likely to have the correct answer. In fact, one of the two options provided by the expert was always the correct answer. In contrast, only 32% of the male respondents provided the correct answer in their advice.<sup>15</sup> Women are willing to forgo advice from outsiders, even at a cost. That is, even when advice is free and may increase the likelihood of earning a reward.

Figure 2: 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.

<sup>15</sup> Correspondingly, women who received advice containing the correct answer from male partners were 12% more likely to correctly answer the question asked; women who received advice from experts were 24% more likely to provide the correct answer.

### 4.3 Correlates of business preferences

In Table 1 we show results from an ordered logit regression investigating the correlates of business preferences. The dependent variable is coded to represent increasing levels of business ‘location preference’. That is, *business location* is 0 if the respondent chooses ‘do nothing’, 1 for business operation within the home, 2 for business operations in the nearby market and 3 for business operations in the city.

In line with the average preferences for men and women shown in figure 1, business preferences do not differ by gender of the respondent (column 1). However, respondent pairs where the female is literate are more likely to prefer a business with operations outside the home. Respondent pair where the female is a housewife or self-employed are less likely to prefer a business outside the home compared to households where the female works for salary or daily wages. Women who work for salary are likely to work outside the home and are therefore not averse to a business outside the home. Experience and exposure to the world outside the home is an important correlate of these preferences - women who are willing to contravene gender norms by seeking paid employment outside the home are also less likely to prefer a business where operations are restricted to home.

Interestingly, preferences do not change in favor of business operations outside the home if the female has higher decision making power. Contrary to anecdotal evidence, married women with arguably greater responsibilities at home are not more or less likely to prefer a business at home than unmarried women (column 1).

Next, we investigate if preferences can be influenced by external circumstances. Specifically, we look at the impact of access to finance on male and female preferences. Random variation in access to finance provides half of our sample, the *Intent to treat* or *ITT* sample, with an option to contravene gender prescriptions through investment in or expansion of the business. We would expect to see a change in preferences for women who prefer to limit themselves to home-based businesses because they lack the financial resources to do more. Table 1 shows an insignificant impact of finance on business preferences held by both men and women from treated households (column 2).<sup>16</sup> Static bias for home-based enterprises and the inability of finance to counter *home bias* can explain why recent studies have found finance to have an insignificant impact on female-run business creation or growth (see, for instance, (Duflo et al., 2013; Angelucci et al., 2015; Banerjee et al., 2014; Crepon et al., 2015; Tarozzi et al., 2014; Said et al., 2017))

Combined with these results, where the dominant choice is for business operations to be constrained to the household, a general lack of demand for non-binding advice that can optimize returns provides another explanation for why female microenterprises in similar settings experience limited growth. Home-based businesses that are unwilling to learn from peers are likely to experience low growth and less likely to survive over time. We

<sup>16</sup> Since women are only partnered with male members of the household in this experiment, we cannot test the extent to which social sanctions outside the household are binding.

Table 1: Correlates of business preferences

Dependent variable: <i>Business location</i>	(1)	(2)	(3)
Female	0.033 (0.071)	-0.067 (0.100)	
<i>ITT</i>		-0.148 (0.177)	
<i>ITT</i> × Female		0.193 (0.143)	
Willing to pay for advice			0.614 (0.235)***
Willing to pay for advice from an expert			-0.814 (0.350)***
Female respondent is married	-0.451 (0.303)	-0.449 (0.303)	-0.468 (0.340)
Female respondent is literate	0.426 (0.179)**	0.428 (0.179)**	0.393 (0.199)**
Female respondent is a housewife	-0.513 (0.167)***	-0.521 (0.173)***	-0.519 (0.181)***
Female respondent is self employed	-0.394 (0.217)*	-0.396 (0.217)*	-0.388 (0.246)**
Index: Female respondent makes household decisions herself	-0.010 (0.086)	-0.009 (0.086)	-0.024 (0.096)
N	1149	1149	564
Pseudo $R^2$	0.0251	0.0255	0.0330

Note: *Business location* = 0 for doing nothing; = 1 for business operations inside the home; = 2 for business in the nearby market; = 3 for business operations in the city. *ITT* is a dummy variable that is equal to one if the female respondent belonged to the RCT treatment sample. *Willing to pay* is a dummy if the respondent is willing to pay at least PKR 50; index of female decision-making is constructed out of variables measuring if the female is involved in food, clothing, medical, financial decision making in the household. All regressions include controls for female respondent age and an index of decision making power in the household; household assets; and the version of survey administered. All errors clustered at the household level. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

test for correlation between willingness to obtain advice and the business decisions made by women. Results are shown in column (3) of table 1. The willingness to pay for advice is lower among women who prefer to do nothing or would prefer a business operation that is restricted to within or near the home. However, women are far more likely to ask for advice from a household member than a field expert who is outside the household. That is, in addition to business preferences, we also see a significant *home bias* in the demand for advice. In addition, similar to the case for business preferences, microcredit does not affect the demand for advice (see Table A3 in appendix A). Taken together, business and advice preferences can help explain why female-run enterprises tend to remain at a smaller scale that can be operated within the home.

These results support the hypothesis of internalized gender norms and the presence of a *home bias* in business preferences: female preferences are statistically similar to that of the males. In the context of [Akerlof and Kranton \(2000\)](#) model discussed above, women are *proxies* of men, having internalized the norms that dictate division of labor between men and women. High levels of individual anxiety, disutility or social sanctions would keep a preference for out-group activities low. Results from the two incentivized experiments reveal that finance may not be the binding constraint on growth or sustainability of female-run businesses. Reluctance to expand a home based enterprise outside the home can explain why enterprise growth from access to finance has remain limited.

## 5 Conclusions

We conduct two experiments to elicit preference for business and advice in a sample of microfinance borrowers. Our results provide us with 4 key insights: One, we see a significant home-bias in the preferred location of business. Both men and women in our sample would prefer that the female set up or operate a business from her home. These preferences are reflective of a defined set of socio-cultural norms that frown upon women setting outside the home. In addition, male and female preferences coincide, despite female preferences being anonymous. Under the gender identity framework of [Akerlof and Kranton \(2000\)](#), this implies that women have internalized gender norms.

Second, we find that microcredit is unable to influence these norms, providing a possible reason for the lack of an effect on business outcomes measured in recent impact evaluations ([Angelucci et al., 2015](#); [Banerjee et al., 2014](#); [Said et al., 2017](#)).

Third, we find evidence of home bias in even the individuals women would like to approach for advice. Women prefer to obtain advice from their male partners, despite higher instrumental value from advice from a field expert.

Fourth, home bias in preference for advice and business are correlated. That is, home-based female business women may prefer to keep the scale of her business small by not fully

exploiting the supplier networks, client base and employee market outside the vicinity of her home. In addition, she is unlikely to take advantage of experience and advice of peers or experts outside the household.

Taken together, 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 her business to avoid venturing outside the household. They may also be reluctant to obtain advice, especially from people outside her household, even if that advice can lead to immediate gains. For instance, a reluctance to obtain advice from experienced entrepreneurs could potentially limit growth of a business. Our results also imply that development programs need to go beyond providing just finance and business knowledge training by, for instance, marketing how women can provide a meaningful contribution to the household income by expanding their market. Given the apparent internalization of gender norms, programs that focus on cooperative rather than confrontational household dynamics are likely to see larger effect.

There is an important caveat to these findings: our experiments, though incentivized, rely on preferences for a hypothetical business that can be set up if access to finance is not an issue. We do not have data that can test out if these preferences are acted upon. The loans provided in the RCT were small in size and may have been insufficient on its own to sustain business or to have a long term impact on long-held preferences. Larger or a sustained line of credit may indeed have the power to change preferences and encourage business growth even if it means leaving the home.

This study adds to the existing literature exploring low growth in female enterprise. 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 source from the household (de Mel et al., 2012; Fiala, 2015), results show that gender identity and internalised norms can also constrain the growth of businesses run by women. We contribute to the literature on gender identity by exploring another decision where identity may undermine what development policies aim to achieve by empowering women economically. For instance, Bertrand et al. (2015) find that women in Brazil are less likely to participate in the labour force because they are likely to earn more than their male partners. This contradicts the gender norm that prescribes men to be the primary income earners. Similarly, Mueller (2016) shows that female politicians in India are unlikely to make pro-female policies choices and may be proxies of male representatives. Finally, similar to existing findings on advice-taking and social learning, we find advice is undervalued.<sup>17</sup> We add to the literature by differentiating the identity of adviser and show that the demand for advice is lower for an individual who does not belong to the household even if forgoing advice comes at an economic cost.

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<sup>17</sup> see Barham et al. (2017) and Stone and Zafar (2014). Weizsacker (2008) provides a review of literature and concludes preference for information from peers is only slightly higher than preference for random decisions.

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## **Appendix A Tables and Figures**

Table A1: Descriptive data from female respondents

	<b>N</b>	<b>Mean</b>	<b>S.Dev.</b>	<b>Median</b>	<b>Min.</b>	<b>Max.</b>
<b>Age (years)</b>	564	37.1	10.0	37.0	1.0	66.0
<b>Dummy: Respondent is currently married</b>	564	0.9	0.3	1.0	0.0	1.0
<b>Dummy: Respondent can read and write</b>	564	0.5	0.5	1.0	0.0	1.0
<b>Dummy: Respondent has completed primary education or less</b>	564	0.2	0.4	0.0	0.0	1.0
<b>Dummy: Respondent has completed at least secondary education</b>	564	0.2	0.4	0.0	0.0	1.0
<b>Index: Assets owned by the household</b>	564	0.2	1.4	0.4	-6.1	3.1
<b>Dummy: Respondent is a housewife</b>	564	0.5	0.5	1.0	0.0	1.0
<b>Dummy: Respondent is self-employed</b>	564	0.1	0.3	0.0	0.0	1.0
<b>Dummy: Respondent is a labourer</b>	564	0.1	0.3	0.0	0.0	1.0
<b>Dummy: Respondent is a salaried worker</b>	564	0.1	0.2	0.0	0.0	1.0
<b>Index: Respondent makes decisions in the household herself</b>	564	-0.0	2.5	-0.4	-3.0	3.1
<b>Number of household decisions the female makes herself</b>	564	4.3	3.7	3.0	0.0	9.0
<b>Respondent belongs to the RCT treatment sample</b>	564	0.5	0.5	1.0	0.0	1.0

Note: Decisions in the household include clothing and footwear, recreation, medical expenses, visiting friends, purchasing small items for self, purchasing for household members, investing surplus money, participating in a ROSCA or applying for a loan.

Table A2: Descriptive data on female response in experiments

	<b>N</b>	<b>Mean</b>	<b>S. Dev.</b>	<b>Median</b>	<b>Min.</b>	<b>Max.</b>
<b>Preferred business opportunity</b>	564	1.2	0.8	1.0	0.0	3.0
<b>Dummy: Wants partner advice</b>	564	0.8	0.4	1.0	0.0	1.0
<b>Dummy: Wants expert advice</b>	564	0.6	0.5	1.0	0.0	1.0
<b>Dummy: Is willing to pay a non-zero price for partner advice</b>	564	0.3	0.5	0.0	0.0	1.0
<b>Dummy: Is willing to pay a non-zero price for expert advice</b>	564	0.2	0.4	0.0	0.0	1.0

Note: Preferred business opportunities is a multivariate variable with values 0 for 'Do nothin', 1 for 'Business: home', 2 for 'Business: nearby market' and 3 for 'Business: big city'; 'wants advice' are binary variables equal to 1 if the respondent agrees to advice for free or at non-zero prices; 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).

Table A3 provides the effect of the treatment (*ITT*) on the demand for advice.

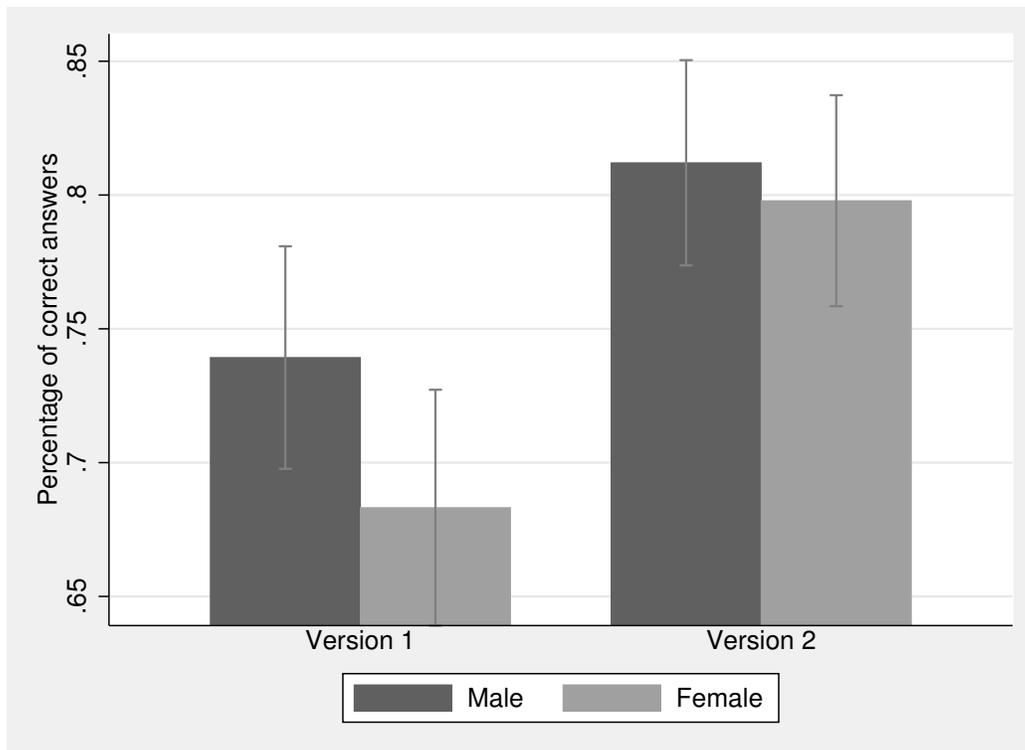
Table A3: Correlates of willingness to pay for advice

Dependent variable:	<i>WTP</i> (1)	<i>WTPexpert</i> (2)
<i>ITT</i>	0.062 (0.206)	0.054 (0.259)
Female respondent is married	0.313 (0.298)	0.492 (0.405)
Female respondent is a housewife	0.034 (0.210)	0.365 (0.265)
Female respondent is self employed	0.692 (0.337)**	0.489 (0.404)
Index: Female respondent makes household decisions herself	0.742 (0.109)***	0.858 (0.169)***
N	564	564
Pseudo $R^2$	0.229	0.238

Note: *WTP* is a dummy variable equal to 1 when the respondent is willing to pay at least PKR 50 to obtain (any) advice. *WTPexpert* is a dummy variable equal to 1 when the respondent is willing to pay at least PKR 50 to obtain expert advice. *ITT* is a dummy variable that is equal to one if the female respondent belonged to the RCT treatment sample. Index of female decision-making is constructed out of variables measuring if the female is involved in food, clothing, medical, financial decision making in the household. All regressions include controls for female respondent age and an index of decision making power in the household and household assets. All errors clustered at the household level. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

The figure below shows the percentage of total men and women who ranked profits correctly, for each version of the question asked. In version 1, business operated from home, local market, city were associated with increasing levels of profits. In version 2, they were associated with decreasing levels of profits. Respondents were more likely to rank profits in version 2 than in version 1. However, the difference in proportion who answer either version correctly is only significant for women.

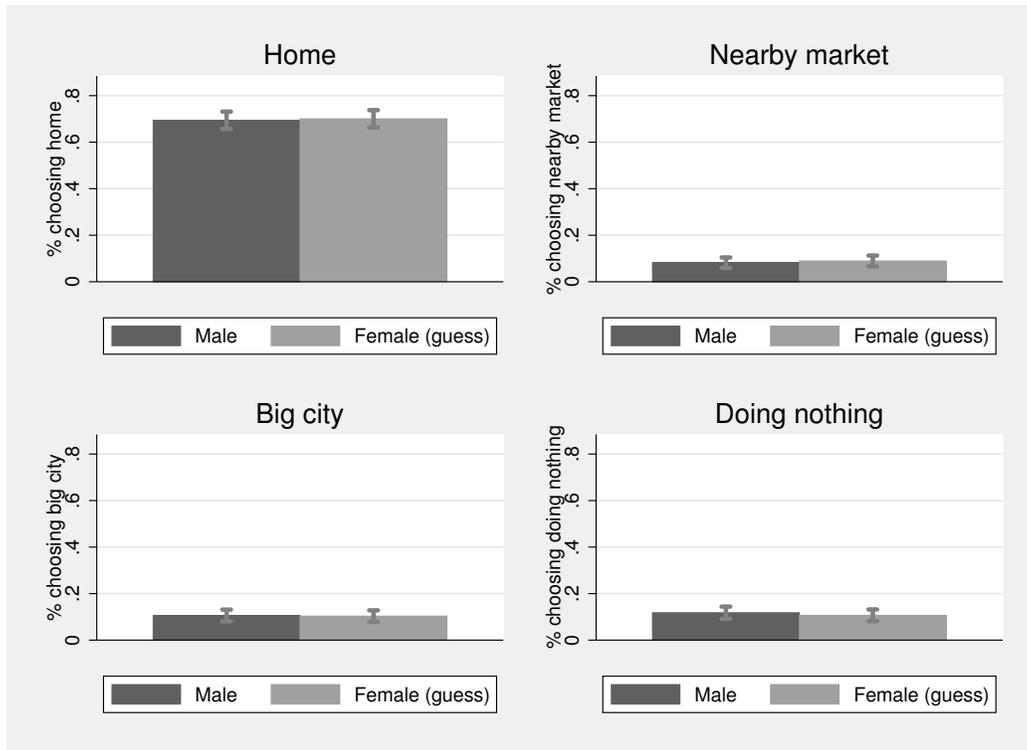
Figure A1: Profits correctly ranked, by respondent gender and question version



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.

The figure below plots male preferences and women’s guess of the preferences of her male partner. Differences between the actual male response and female guess are both economically and statistically insignificant.

Figure A2: Female guess of male preference for business location

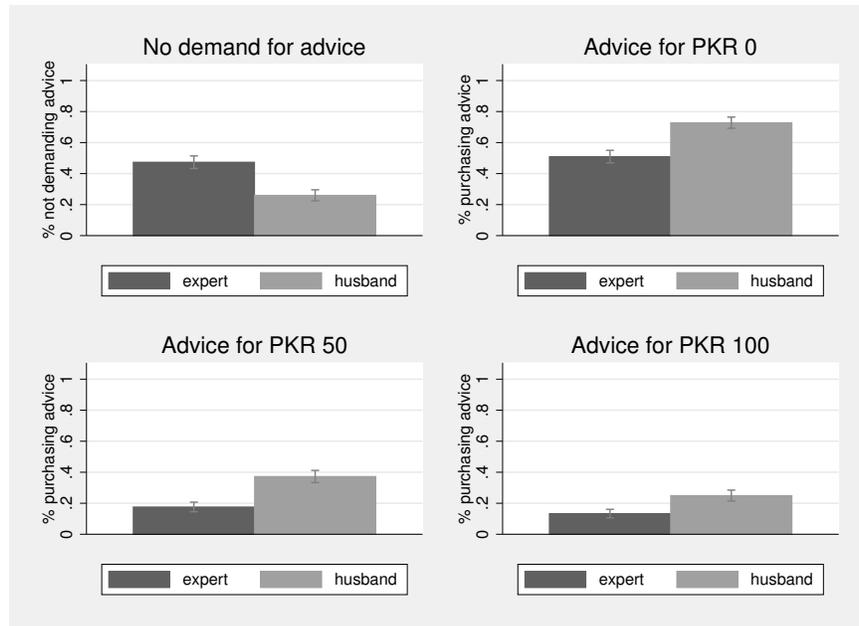


Note: *x-axis* shows the business opportunity by location (or doing nothing) that the female respondent thinks the male selected for her. ‘Male’ refers to the actual male responses. The *y-axis* displays the percentage of male or female respondents with the displayed preference.

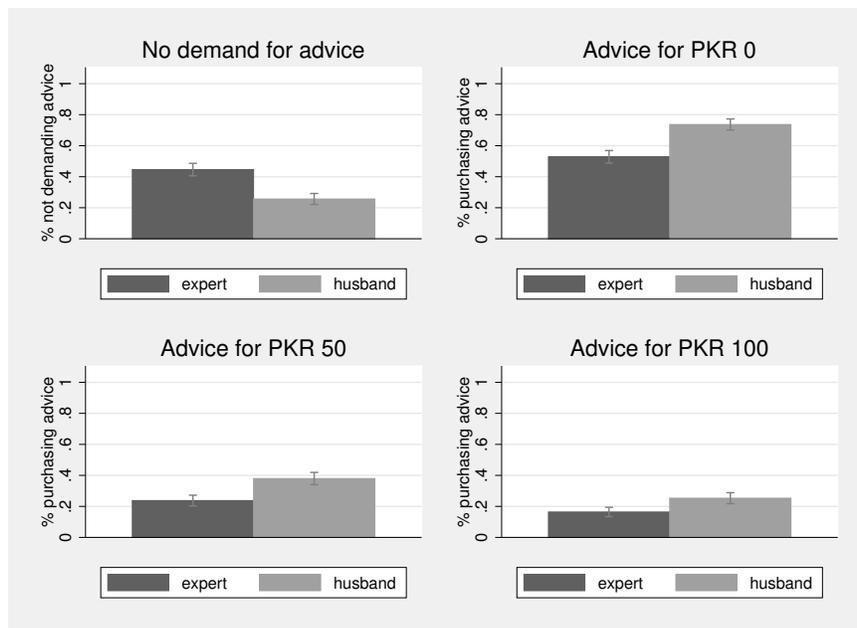
Figure A3 displays demand for advice for knowledge and non-verbal questions, at price PKR 0, 50, 100 ( $\approx 0,0.5,1$ ). Demand decreases as price increases. Demand for advice is lower for knowledge questions than for non-verbal questions. Demand for expert advice is always lower than the demand for advice from male household member.

Figure A3: Female demand for advice

(a) Advice on knowledge questions



(b) Advice on abstract reasoning questions



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. *x-axis* shows the ‘advisor’. The *y-axis* displays the percentage of female respondents who were willing to pay the given price to obtain advice.

## **Appendix B Experiment script**

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

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

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

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

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

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

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

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

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

1. There are 3 business opportunities: Version I:

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

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

Version II:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Version II:

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

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

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

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

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

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

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

### **Advice taking**

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

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

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

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

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

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

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

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

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

*Part II: Abstract reasoning question*

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

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

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

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

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

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

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

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

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

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

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