

# Whose voice matters? An experimental examination of women empowerment in microfinance\*

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**This version: June 2016**

## Abstract

Offering microfinance loans to women to empower them may be ineffective if borrowers hand over control of loans to their husbands. We conduct a lab-in-the-field experiment to examine potential gender bias in intra-household decision making in rural Bangladesh. The experiment mimics a real-life scenario in which a microfinance loan is offered to either the wife or the husband and the borrower can decide whether or not to transfer the decision to his/her spouse. We find that women are more likely to let their spouses make decisions than men. Different treatments in the experiment test the underlying causes. Our findings suggest that women's decision to transfer decision making is driven both by their lower decision-making power and their belief in their spouses' higher financial capabilities. We also examine subjects' control over the use of earnings and find that offering credit to women has no effect on their control over household expenditures.

**Keywords:** Microfinance, women empowerment, gender bias, intra-household bargaining, field experiment.

**JEL Classification:** C91, C93, D13, O12

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\* We thank Oriana Bandiera, Catherine Eckel, Gaurav Datt, Gigi Foster, Lata Gangadharan, Phil Grossman, Bob Gregory, John List, and Russell Smyth, seminar participants at the Australian National University, University of Adelaide, University of Queensland, Queensland University of Technology, Monash University, and Economic Research Group in Dhaka, conference participants at the Australasian Development Economics Workshop, Economic Science Association World Meeting, and Western Economic Association International. We are grateful for generous funding supports from Australian research council, AusAID (DFAT), and Monash University. Firoz Ahmed, Mahbub Sarkar and Mujahid Islam provided excellent supports for the field work, with a dedicated team of local enumerators.

## 1. Introduction

Microfinance programs in developing countries commonly direct to lending to women, with the objective of female empowerment. Duflo (2012) demonstrates evidence that poverty and a lack of opportunity lead to inequality between men and women. Despite apparent progress in narrowing gender inequality over the last 20 years, women in most parts of developing countries remain in a relatively disadvantageous position in many ways, including access to education, labor market opportunities, legal rights, and political participation. In rural Bangladesh, women rarely participate in productive activities, even when their households are in deprived condition. While there is no significant gender gap in access to education<sup>2</sup>, the fact that women's income-earning potential has not been realized is usually attributed to the social gender bias that restricts their access to economic resources and opportunities. Microfinance is thus claimed to provide women with better access to economic resources so they can participate in income-earning activities and contribute to their household's income, and, at the same time, improve their mobility, bargaining power, and decision making.

Whether these objectives of microfinance lending can be achieved in reality remains a significant question. The existing empirical findings are inconclusive. Some researchers have found positive outcomes of women empowerment, such as increases in women's participation in decision making, ownership of household assets, freedom and mobility, or political awareness (Hashemi, Schuler, & Riley, 1996; Pitt, Khandker, & Cartwright, 2006). Most studies, though, have not found sufficient evidence of significant improvement in women empowerment outcomes and some have even shown negative outcomes, for example, increased family tension and violence and passive control of loans (Goetz & Gupta, 1996; Montgomery, Bhattacharya, Hulme, & Mosley, 1996). Case studies and anecdotes in the literature have been suggesting that microfinance loans do not actually reach women. For example, Kabeer (2001) reviewed a number of anecdotes reporting that microfinance loans given to women were mainly controlled by male members of the household. This would not only confine households to limited economic opportunities, but also negate the empowerment effect of microfinance. The existing survey data, however, do not allow an examination of this, given the difficulty of conveying survey questions and interpreting data on decision making and bargaining power. The question of whether women have any voice in the control over their loans thus has not been fully addressed.

Our paper offers an experimental approach that examines the underlying factors in the intra-household decision making of investing and allocating resources that hinder women from benefiting from microfinance. In particular, we aim to investigate whether gender bias exists in intra-household decision making, causing women to hand over the control of loans to their spouses, and, if so, which factors are responsible for the bias. The set-up of a lab experiment in the field where we could have control over certain factors that can affect the intra-household interactions permits us to do this and offers important insights that might not be obtained from survey data. Previous lab-in-the-field experiments have proven their ability to explore complex intra-household problems. For example, they have examined the effect of

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<sup>2</sup> The government has been providing various programs promoting girls' education in rural areas, such as the female stipend program to secondary school girls in rural areas (Begum, Islam and Smyth, 2014).

asymmetric information and control over money between spouses on money hiding (Ashraf, 2009 and Castilla, 2014) and income pooling (Mani, 2011; Iversen, Jackson, Kebede, Munro, & Verschoor, 2011; Munro, Bateman, & McNally, 2008), or the effect of income entitlement on household consumption choice (Dasgupta & Mani, 2015). Lab-in-the-field experiments have also been used to study gender issues (Gneezy, Leonard, & List, 2009; Barr, Dekker, & Fafchamps, 2012) and microfinance questions (Cassar, Crowley, & Wydick, 2007; Giné, Jakiela, Karlan, & Morduch, 2010). Intra-household interactions and their implications for household's choices have also been studied in a number of field experiments, with a focus on explaining women's decision to participate in different credit organizations (including Roscas in Kenya, as in Anderson & Baland, 2002 and microfinance in Southern Mexico, as in Allen, Armendáriz, Karlan, & Mullainathan, 2010), households' fertility choice (Ashraf, Field, & Lee, 2010), and households' savings (Schaner, 2011).

To our best knowledge, the question of control over microfinance loans has not been examined in the experimental literature. In the context of microfinance, the answer to this question is key to women empowerment since women are not empowered if they are unwilling or unable to make their own decisions on how the loan is used and how the earnings from the loan are spent. Our experiment is centered around the microfinance framework, in which a household is offered a loan and an opportunity to invest in a project that involves risk. We conducted a lab-in-the-field experiment with married-couple subjects in the rural villages of Bangladesh. We model a household decision-making process in which poor households in rural Bangladesh are offered an opportunity to invest in either a safer or a riskier project, represented by lottery choices. The subjects played in pairs, where one was the "borrower" and the other the "partner." The borrower had the "transfer" option, which was to either make his/her own decision on which project to invest in or to let his/her partner make the decision.

We focus on examining whether there is any difference between male borrowers and female borrowers in terms of their transfer decision, which reflects gender bias in intra-household decision making. In our main treatments, partners in each pair were real married couples. We ran treatment variations to tease out possible reasons for a gender bias. In the no-secret treatments, information on each partner's options and decisions were fully disclosed to their respective partner; in the secret treatments they remained fully private. These conditions were used to examine different factors that potentially cause the gender difference in spouses' decision making, particularly to isolate the effect of between-spouse imbalance in decision-making power from other factors like between-spouse capacity difference.

Bangladesh provides an ideal context in which to situate our study. First, it is a major market for microfinance institutions. Second, in Bangladesh social and cultural norms define women's role to be mainly in the domestic domain, thus women are expected to have lower bargaining and decision-making power than their spouses (for examples, see Duflo, 2012 and Armendáriz & Morduch, 2010). Other than religion and social norms, household characteristics including individual employment (Anderson, 2009, Rahman & Rao, 2004), income (Anderson & Eswaran, 2009), and ownership of assets (Agarwal, 1994, Kabeer, 1999) also dictate the inferior position of women in the decision-making process. In rural

Bangladesh women are mostly confined to limited choices of occupation within their households. The institution of purdah, which is commonly practiced among Muslims and upper-caste Hindus, promotes the seclusion of women and enforces their exclusion from public spaces, thus preventing them from employment opportunities outside their households (Amin, 1997, Kabeer, 2001). However, even in the absence of imbalance in decision-making power, it is also possible that women voluntarily pass control of loans to their husbands. Kabeer (2001, p.69) presented testimonies from women who consider conformity with purdah as “a voluntary adherence to status norms rather than as a direct manifestation of male control.”

In addition to subjects’ control over loan use, or the transfer decision in the game, we also examine whether there is a gender difference in control over earnings from the investment, which was reflected by subjects’ responses to survey questions on how they planned to use earnings from the game and how they actually used the earnings (which was asked two weeks after the experiment).

We find robust evidence of a gender difference in intra-household decision making. We find that women were more likely to let their spouses make investment decisions than their male counterparts in both the secret and the no-secret treatments, but not in the random-couple treatment. The difference was more pronounced in the no-secret treatment than in the secret treatment. The findings suggest that the gender bias in intra-household decision making was driven both by intra-household imbalance of decision-making power, which prevented female borrowers from making their own decisions under the full information disclosure condition, and by intra-household imbalance of competence, due to which women voluntarily let their spouses make decisions, even in an asymmetric information condition. Our survey data also support these findings. We also find that women were more likely to let their spouses take control over household expenditures, irrespective of which spouse was offered the opportunity to invest and irrespective of whether or not the woman borrowers transferred the control of investment.

## **2. Experimental Design**

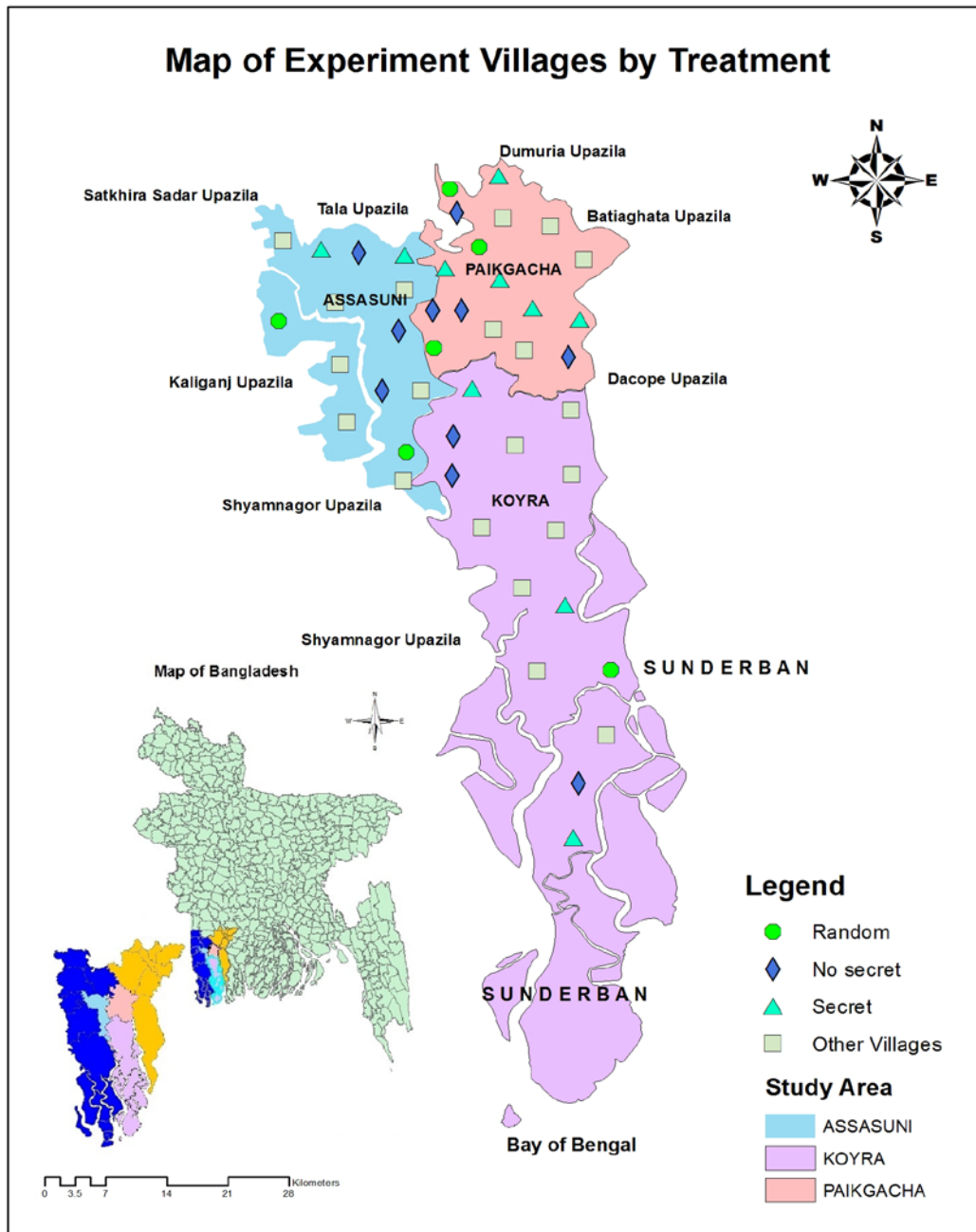
### **2.1 Experimental setting**

The experiment was conducted with 826 married couples who were 18–55 years old in 26 rural villages in three upazilas (Assasuni, Koyra, and Paikgacha) of the Khulna and Satkhira districts in June–July 2014. The map of the villages is shown in Figure 1. Recruiters randomly went door to door and invited 832 respondents and their spouses to participate in a study to better understand financial matters. The respondents were told that both husband and wife would need to be present to participate in the survey and the experiment, and that both would make decisions about a real-life scenario to earn a considerable amount of money. There were six couples who were invited and surveyed but did not show up on the experiment day.<sup>3</sup> Each subject received a 100 taka (approximately USD 1.5 and an adult’s

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<sup>3</sup> The majority of the working populations in the area are self-employed or day laborers, and thus participating in the experiment was expected not to disrupt their daily income-earning activities.

average half-day daily wage) fee for showing up and had the opportunity to earn more money. Subjects spent about 2.5 to 3 hours in a given session. Each couple could earn up to 2100 taka by participating in the survey and the experiment. The recruiters also conducted a household-level survey with one of the spouses that gathered information on general household characteristics.<sup>4</sup>



**Figure 1**

<sup>4</sup> The experiment and surveys were administered by locally recruited enumerators, who are fluent in the local dialect. Both recruiters and research assistants were trained by the authors, and had previous experience in conducting similar field experiments. The experiments were piloted in several stages by the authors, and the instructions were revised accordingly to ensure that the subjects understand the games. One of the authors is local and has been running several randomized field experiments in these and neighboring areas. However, this study was conducted in different villages and was undertaken independently from the others projects.

In each village, we selected a local school as the experiment venue. Only one experiment session was conducted in each village, to avoid any contamination of the experiment through information leakage. We conducted the experiment on two treatment groups (of six treatments in total) at the same time in each session. The treatment groups were randomly assigned across villages. Each session consisted of 31–32 couples, so each treatment group in each village had 15–16 couples. An individual-level survey was conducted for each spouse privately and separately after the experiment was completed, so that the survey questions did not prime subjects about the purpose of the experiment. The survey questions included subjects’ general awareness and mobility, earnings and assets, household finance and decision-making matters, understanding of risk, and other individual preferences (see online appendix II). Another follow-up survey was conducted two weeks after the experiment day.

## 2.2. Experiment procedure

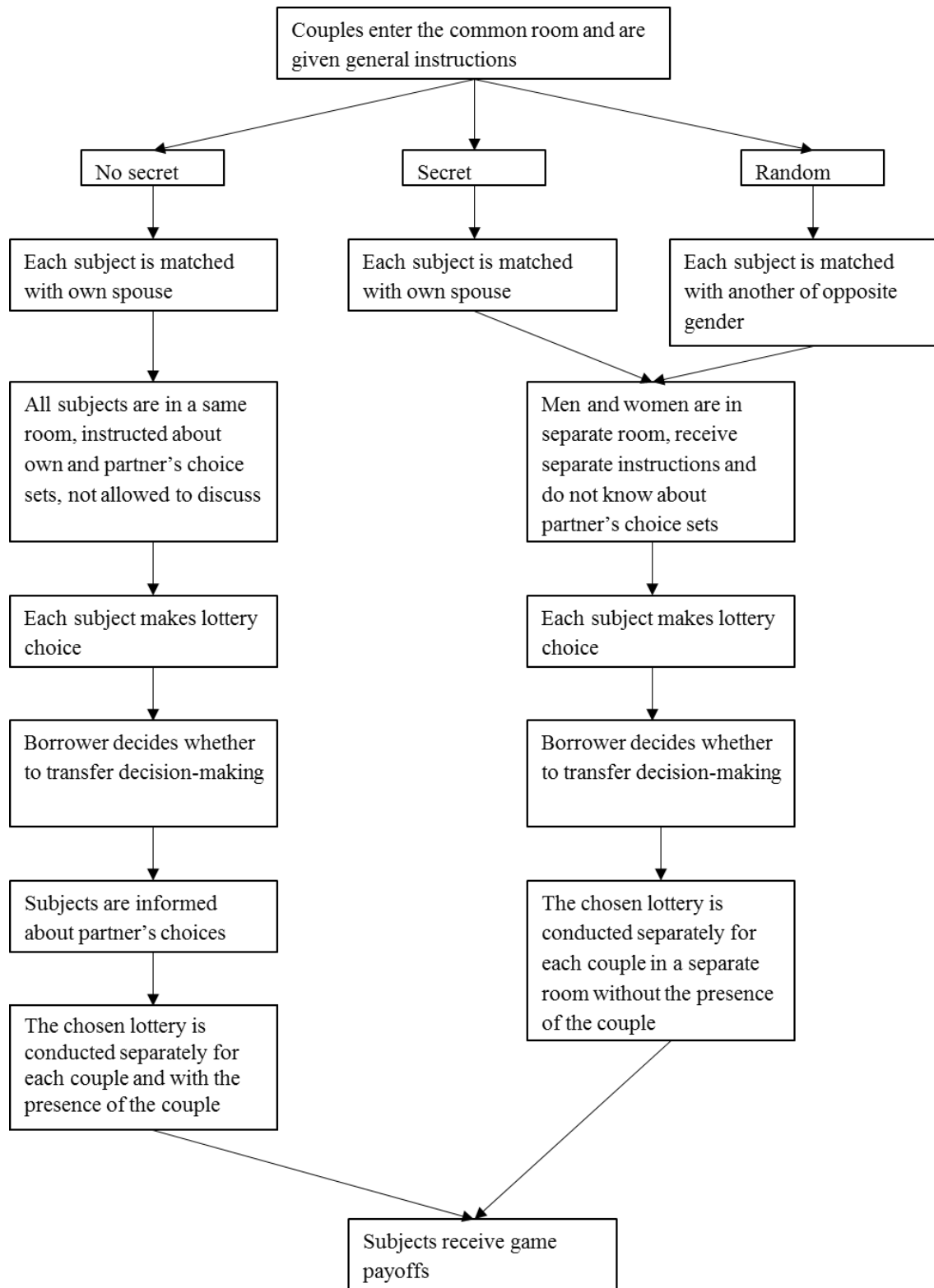
The detailed instructions for the experiment are shown in the appendix (see online appendix I). The game involves each subject being matched with another subject of the opposite gender to be his/her game partner and both having to make separate investment choices for the chance of earning money for both himself/herself and his/her partner. In the secret and no-secret conditions this was husband and wife. In the random-couple condition it was a random individual of the opposite gender. More details on the conditions are explained in section 2.3. The game procedure is illustrated in the flow chart in Figure 2. Each subject was endowed with 300 taka at the beginning of the game. In each pair, one partner played the role of the “borrower” and the other partner the “partner.”<sup>5</sup> The borrower was given the opportunity to invest his/her own 300 taka and his/her partner’s 300 taka. They could either invest in a safe lottery or a risky lottery<sup>6</sup>. The lotteries’ payoffs and risk are presented in Table 1. The lotteries have the same set of events: TRIPLE, KEEP, and LOSE, to ensure any outcome from choosing a lottery would be possible to be obtained by choosing the other lottery. This feature is critical for the design of our treatments, which is discussed in Section 2.3. TRIPLE means the payoff triples the initial investment, so each player would receive 900 taka. KEEP means the payoff remains the same as the initial investment, which is 300 taka. LOSE means the player would receive zero, losing their initial investment.<sup>7</sup> The risky lottery has a higher expected payoff, but also carries a higher risk. Given the lotteries are relatively complicated for our subject pool, we provided visual demonstration and elaborate training and practices before the subjects made their decision. We explained the lotteries by showing see-through bottles that contained balls in three different colors to reflect three different payoffs.

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<sup>5</sup> We use the terms Partner A and Partner B to refer to the borrower and the partner, respectively, in the actual game instructions.

<sup>6</sup> In the real experiment, we called the Safe lottery Paan and the Risky lottery Supari. Paan and Supari are the betel leaf and betel nut that are usually chewed together by the locals in Bangladesh (and other South Asian countries) for a stimulant effect. Since they are generally consumed together, using their names as the lottery names could prevent subjects from having a preference for one lottery over the other irrespective of their payoffs and risk profiles.

<sup>7</sup> For simplicity we used final payoff distributions, not framing the choice in an investment context. Equivalent scenarios can easily be constructed. For example, if the couple borrows 1,000 taka 20% interest, and the project that the couple would invest in could generate a profit of 3,000 taka, 1,800 taka, or 1,200 taka, the final payoff distribution of this investment is exactly like that of our lottery.



**Figure 2. Experimental procedure**

**Table 1: Lottery payoffs and risk**

Lottery	Event	Possibility	Payoff (taka per person)	Expected payoff (taka)	Risk (taka)
Safe	TRIPLE	1/10	900	330	66.41
	KEEP	8/10	300		
	LOSE	1/10	0		
Risky	TRIPLE	4/10	900	420	128.69
	KEEP	2/10	300		
	LOSE	4/10	0		

Note: Risk is calculated as the standard deviation from the expected payoff.

After making the decision on which lottery to invest in, the borrower was asked to make a decision on whether he/she wanted to use his/her own lottery choice, regardless of what his/her partner chose or to use the partner's choice if the partner's choice was different from his/her own choice. The borrower had to make this transfer decision without discussing it with his/her partner or knowing his/her partner's choice; therefore, we are able to determine by whom the final decision was made. We chose this way of phrasing the task over the alternative of simply asking to them transfer the choice, to highlight the potential conflict when the partners made different lottery choices from each other. Subjects might not take the decision to transfer the investment seriously if they were not made aware of the potential conflict, expecting the spouses would make the same decision as theirs.

At the same time, the partner was also asked which lottery he/she would choose if he/she was to invest his/her endowment and his/her partner's endowment. The final payoff, which was based on the actual result of the chosen lotteries, was determined according to these choices from both partners and distributed equally between them.

The post-game survey included a question regarding the purpose for which each subject planned to spend the game payoff. The response options included: (1) to keep it for him/herself for later use, (2) to give it to his/her spouse, (3) to buy something for him/herself, (4) to buy something for his/her spouse, (5) to buy something for his/her children or common use, and (6) others. We also made home visits to all subjects two weeks after the experiment day and asked them what they actually spent the game payoff on. The options included: (1) kept for him/herself for later use, (2) gave to his/her spouse, (3) bought something for him/herself, (4) bought something for his/her spouse, (5) bought something for children or common use, and (6) others.

### 2.3. Treatments and hypotheses

The recruited subjects were divided into one of six treatment groups, which are different in two dimensions (see the online appendix I for detailed instructions and differences among these treatment groups). In the first dimension, the treatments differed based on the roles of each gender: (1) women played the role of the borrower and men the role of the partner or (2) women played the role of the partner and men the role of the borrower.

There are three conditions in the second dimension. In the no-secret condition, subjects and their spouses were in the same room, but were separated: all men were on one side and all women were on the other side of the room. Therefore, the instructions for each partner were



fully disclosed to the other. Subjects were told that their spouses would be their game partners. They were also informed that all the choices they made would be revealed to their spouses after they had all made their decisions. However, men and women were strictly prohibited from talking to each other; thus, no discussion was allowed between spouses and spouses made their decision without knowing their partners' choice(s). In the secret condition, men were in one room and women were in another room. The instructors gave different instructions to men and women separately. The subjects were told that their partners were their spouses, but were not informed of the instructions given to their spouses and the decisions that their spouses made. They were told that all their options and their decisions would be kept confidential and private from their spouses. To sum up, the secret and no-secret conditions differed in terms of whether men and women were in the same room and whether the options offered to and the choices made by one subject would be revealed to his/her partner<sup>8</sup>.

Although it might be impossible to hide the money received after the game finished in the household context, a borrower in the secret condition could always hide his/her choices from his/her partner due to two features of our experiment: (1) the lotteries had the same possible payoffs and only differed in the probability of each payoff and (2) for the secret treatments the lotteries were carried out in a different room to determine each couple's payoff by the instructors without the presence of the couple. The instructors conducted one lottery separately for each couple based on their final choice.

To examine whether women are more likely than men to pass the control of the investment to their spouse, we compare the female borrower's decision on whose lottery choice to use with that of the male borrower. Analyzing the difference between the no-secret and the secret treatment allows us to isolate the underlying factors that drive the spouse's decision on whether to keep, or to transfer, control of the investment. The borrowers might hand over the control of the investment to their spouses involuntarily due to their lower decision-making power or voluntarily if they think that their spouses are in a better position to make the investment decision. We thus test the following hypotheses:

*H1: Women feel obliged to transfer the control of their loan to their spouses due to their lower decision-making power. Women are thus more likely to transfer the decision making when information is fully disclosed between spouses than they do when information is not fully disclosed.*

*H2: Women transferred the control of their loans to their spouses voluntarily. Women thus transferred the decision making even when they could hide their options and decisions from their spouses.*

The asymmetric information between spouses in the secret treatment created the opportunity for one spouse to hide their choices from the other. Hence, the borrower (e.g., wife) would not be influenced by perceived power imbalance with her spouse (e.g. husband), and transfers in that condition could be attributed to the borrower's perception of his/her spouse's superior

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<sup>8</sup> Although it is not essential to have subjects in the same room to ensure the non-secrecy of the no-secret treatments, the setting made the subjects clearly understand that all their options and decisions were revealed to their partners.

competence. We are aware that the elimination of the power imbalance may not be complete. There is no way that the spouse could verify the borrower's choice, but a borrower may still fear that somehow the spouse would figure it out.<sup>9</sup> In any case, any *difference* between the secret and the no-secret treatment can be unambiguously attributed to a power imbalance between the spouses. Even in the worst case that *all* transfers in the secret treatment were motivated by some residual fear, more transfers in the no-secret treatment would show that power matters. To address the problem of potential fear in the secret treatment, we combined the experiment results with survey data on subjects' perception on gender and intra-household relations to test hypothesis *H2*.

While the secret and no-secret conditions allow us to isolate the effect of imbalance in decision-making power from the voluntary transfer of control, it is still possible that potential gender differences in transfer behavior merely reflect a general perception about gender ability, irrespective of the intra-household interactions we are interested in. Gender differences have been widely studied in lab experiments, among which those most related to our experiment are those that examined differences in self-confidence<sup>10</sup>. Women are generally less self-confident in nature. Women might also be less confident due to their usual lack of involvement in financial decision-making. In our context in which women were given an opportunity to make an investment decision that involved risk, women's lower self-confidence could make them inclined to transfer the control of loans to men in general, but not necessarily their spouses. We thus introduced another condition in which each subject was randomly and anonymously matched to another subject of the opposite gender who was not his/her real-life spouse. The subjects were made fully aware of this matching condition. Other than this condition, the additional treatments have the same conditions as the secret treatment. If gender differences in this treatment are absent or very small, we can rule out that a general gender bias outside the household explains our data. Other than that, the treatment is not designed to test specific hypotheses.

### 3. Descriptive statistics

Table 2 summarizes the demographic characteristics among secret, no-secret, and random-couple treatments. The treatments are generally balanced in most of the characteristics, except for a slight difference in the number of household members between the secret and no-secret treatments. The households are relatively poor compared with the average Bangladesh rural population, as we target households that are targeted by microfinance programs. The annual income per capita in the three treatments range between 15,000 and 16,000 taka, compared with the national level of 25,560 taka (HIES Survey Report, 2010). The schooling gap between husband and wife is relatively small.<sup>11</sup>

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<sup>9</sup> The 'fear' here is mostly asymmetric. It is only the wife who might worry that her choices will become known to her husband. The husband has usually more power so probably won't 'fear' what the wife knows.

<sup>10</sup> See Niederle and Vesterlund (2011) for a review of literature on gender difference in competitiveness and self-confidence.

<sup>11</sup> This is partly attributed to the Female Secondary School Stipend Program, which was introduced nationwide in 1994 (see, for example, Begum, Islam, & Smyth 2014), and other programs targeting girls in rural Bangladesh to address the gender imbalance in schooling at that time.

**Table 2: Demographic characteristics across treatments**

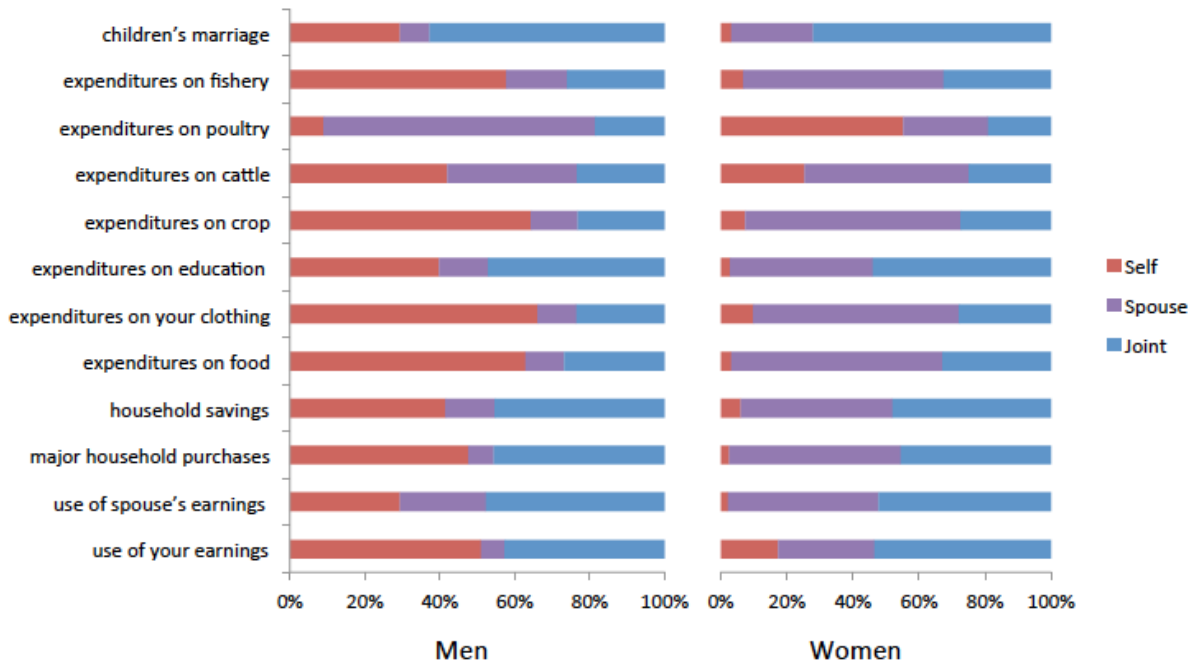
	Mean						t-test p-value		
	No secret		Secret		Random		No secret-Secret	Secret-Random	No secret-Random
no. couples	319		316		191				
Muslim	0.80	(0.40)	0.78	(0.41)	0.75	(0.43)	0.65	0.47	0.26
No. household members	4.69	(1.37)	4.50	(1.18)	4.66	(1.46)	0.06*	0.16	0.87
Annual income Per capital (taka)	15,376	(8,277)	16,235	(10,864)	16,038	(7,533)	0.26	0.83	0.37
No. years of marriage	16.96	(7.22)	16.78	(7.86)	16.61	(7.79)	0.77	0.81	0.61
Wife's age	34.05	(6.83)	34.85	(7.66)	34.26	(7.15)	0.16	0.39	0.74
Husband's age	40.13	(7.38)	41.03	(7.93)	40.69	(7.19)	0.14	0.62	0.41
Wife's education	4.44	(3.79)	4.28	(4.23)	4.68	(3.14)	0.62	0.26	0.46
Husband's education	4.89	(4.25)	4.44	(4.72)	4.80	(3.83)	0.20	0.37	0.81
age gap	6.08	(2.49)	6.18	(2.24)	6.43	(2.48)	0.61	0.25	0.13
schooling gap	0.45	(3.16)	0.16	(2.98)	0.12	(3.03)	0.23	0.88	0.24

In Table 3, we report a number of indicators of subjects' social capital and mobility by gender. All the indicators show a significant gender gap. Women are less exposed to radio, television, and social gatherings than men. Women are less frequently seen in public places, and in places outside their villages and are also more likely to seek permission from their spouses to go to these places. While most women (82%) earn income from home activities (such as breeding chickens), only 13% of them participated in any income-earning work outside their home in the last year. In contrast, 65% of men obtain income from work outside the home. Women also earn much less than men.

**Table 3: Social capital and mobility**

	% / Mean (Std.)			
	Men		Women	
Do you read the newspaper at least once a week?	26.27		10.90	
Do you listen to the radio or watch TV at least once a week?	50.97		34.02	
Do you participate in any club/ committee/ meeting group at least once a month?	37.89		27.00	
Do you go on your own at least once a month to:				
public places in your village	79.78		48.55	
places outside your village	71.31		36.44	
Do you need to seek permission of your spouse to go to:				
public places in your village	14.16		89.71	
places outside your village	14.89		87.17	
Did you do any income-earning work outside the home in the last one year?	65.01		12.59	
Did you do any income-earning work on your own at home in the last one year?	63.32		81.84	
How much is your annual earnings in the last one year? (taka)	69,831	(33,446)	8,340	(27,218)

Figure 3 shows who is/are the main decision-maker/s in different family matters, based on subjects' responses to our survey questions. Although the questions were addressed to wives and husbands individually and separately, there is generally not much discrepancy between their answers. The decision-making role seems to be dominated by men in all aspects, except in the spending for poultry. As poultry farming is commonly women's main and only income-earning activity, this could be the only area where women can have more control than their spouse. Women do not have much say, even in the use of their own earnings. Only 16% of women seemed to make decisions on the use of their own income.

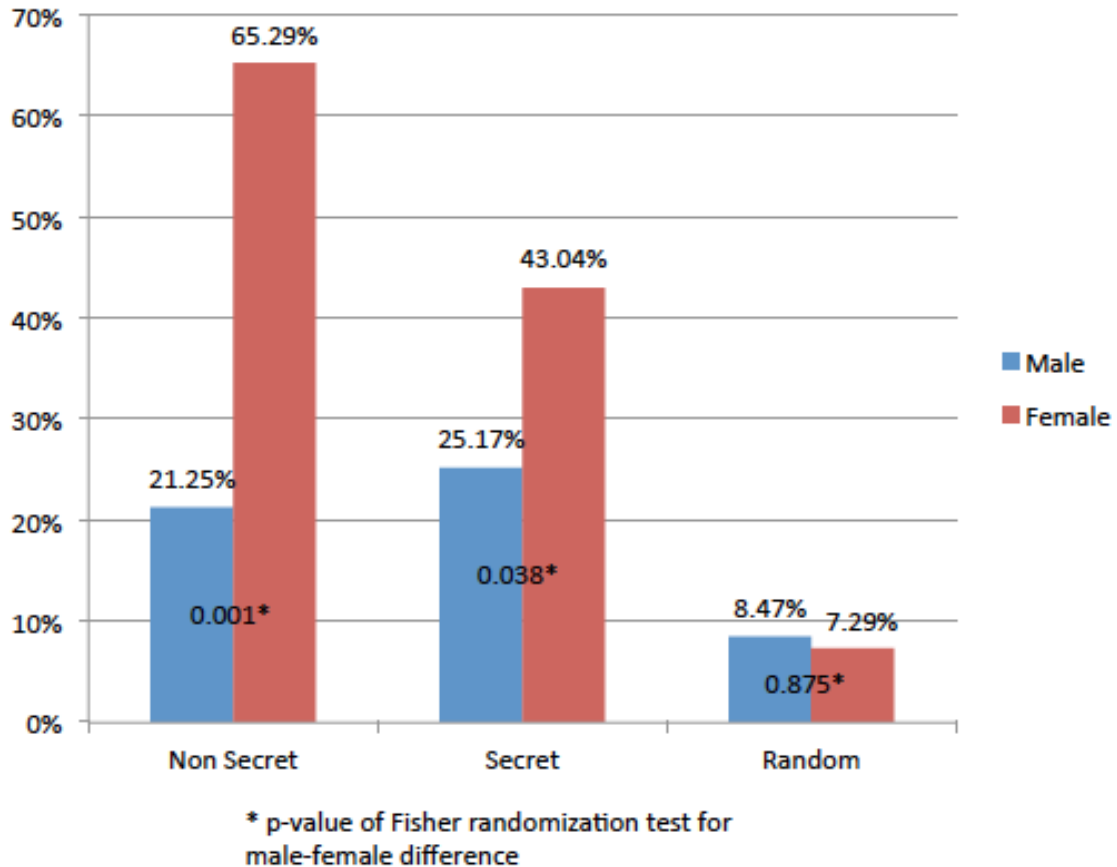


**Figure 3. Intra-household decision making**

## 4. Results

### 4.1. Decision making in investments

We first examine the likelihood that decision making with respect to the lottery choice will be transferred by gender in the three treatments. Table 4 (Panel A) and Figure 4 report the transfer rates by gender and treatment at the village level. The male (female) transfer rate is defined as the number of male (female) subjects in the village who played “the borrower” and chose to transfer the decision making of the lottery choice to their partners divided by the total number of participating couples in that village. The female-male transfer rate is the difference between the female's and the male's transfer rate. The village-level analysis would offer the most conservative estimates, which are less likely to be affected by random factors that are not related to our treatment conditions, such as possible interactions among couples within a village.



**Figure 4. Village-level transfer rates**

We run Fisher’s two-sample randomization test to compare the village-level transfer rates between treatments.<sup>12</sup> The results in Table 4 show that the female transfer rate is significantly higher than the male transfer rate in both the no-secret and secret treatments, but not in the random-couple treatment. As can be seen from Figure 4, the average female transfer rate is relatively high at 65.3% in the non-secret treatment and 43% in the secret treatment, compared with the male transfer rates of 21.3% and 25.2%, respectively. There is no statistically significant difference between males and females in the random-couple treatment and both transfer rates are less than 10%. The female transfer rate and the female-male transfer rate both are significantly higher in the non-secret treatment than in the secret treatment while the male transfer rate is not different between the two treatments (Panel A, Table 4). In Panel B of Table 4, we show the transfer rates using the decision at the individual level. We performed Fisher’s exact test to compare the difference between treatments. The transfer rates and the one-sided p-values from the test reflect the same results as the village-level findings.

<sup>12</sup> This test examines whether two independent samples are likely to be drawn from a same distribution. It is considered more powerful than the more widely used Mann-Whitney U-test since it uses the actual values of the variables rather than the ranks. See Moir (1998) for a discussion of the properties of the test.

**Table 4: Male and female transfer rate**

Treatment		Mean	Std.	Fisher randomization test one-sided p-value		
<b>Panel A: village level</b>				Non secret- Secret	Secret- Random	
Male	Non Secret	0.213	0.107	0.827	0.017	
	Secret	0.252	0.098			
	Random	0.085	0.077			
Female	Non Secret	0.653	0.190	0.028	0.0002	
	Secret	0.430	0.283			
	Random	0.073	0.047			
Female-male	Non Secret	0.440	0.241	0.001	0.019	
	Secret	0.179	0.277	0.038		
	Random	-0.012	0.047	0.875		
<b>Panel B: Individual level</b>						
Male	Non Secret	0.213	0.410	0.244	0.001	
	Secret	0.252	0.435			
	Random	0.084	0.261			
Female	Non Secret	0.654	0.477	0.000	0.000	
	Secret	0.427	0.496			
	Random	0.073	0.261			
Female-male	Non Secret	0.442	0.050	0.000		
	Secret	0.175	0.053	0.001		
	Random	0.011	0.039	0.491		

In Table 5, we report results from the probit<sup>13</sup> regressions that control for various household characteristics and sub-district fixed effects. We run the following regression:

$$\begin{aligned}
Transfer_{is} = & \alpha_1 + \beta_1 Female_i + \gamma_1 NoSecret_i + \delta_1 Random_i \\
& + \theta_1 Female_i * NoSecret_i + \mu_1 Female_i * Random_i + \pi_1 X_i + v_s + \varepsilon_i \quad (1)
\end{aligned}$$

where  $Transfer_{is}$  is a dummy variable that equals one if subject  $i$  transferred the decision making of the lottery choice to his/her partner and equals zero otherwise.  $Female_i$  is a dummy variable that indicates the gender of subject  $i$ .  $NoSecret_{\square}$  and  $Random_i$  are dummy variables that indicate whether subject  $i$  was in the no-secret treatment and the random-couple treatment, respectively. The secret treatment is the base value and thus the coefficient  $\beta_1$  captures the gender effect on decision-making transferring in the secret treatment. The coefficients  $\theta_1$  and  $\mu_1$  show the difference in the gender effect of the no-secret treatment versus the secret treatment and the random-couple treatment versus the secret treatment, respectively.  $X_i$  is a vector of subject  $i$ 's household characteristics, which are the wife's age, husband's age, wife's schooling, husband's schooling, religion, number of household members, and household annual income per capita.  $v_s$  captures the sub-district fixed effects.

<sup>13</sup> We also ran a linear probability model (LPM) and the results are similar to those from the probit regressions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.22*** (0.027)	0.14*** (0.043)	0.15*** (0.043)	0.14*** (0.043)	0.15*** (0.043)	0.15** (0.064)	0.15** (0.070)
no-secret	0.078** (0.032)	-0.038 (0.046)	-0.043 (0.046)	-0.038 (0.047)	-0.045 (0.047)	-0.045 (0.047)	-0.045 (0.045)
Random	-0.32*** (0.044)	-0.21*** (0.063)	-0.21*** (0.062)	-0.22*** (0.063)	-0.22*** (0.063)	-0.22*** (0.060)	-0.22*** (0.058)
female*no-secret		0.21*** (0.061)	0.21*** (0.062)	0.21*** (0.061)	0.21*** (0.061)	0.21** (0.082)	0.21** (0.081)
female*random		-0.17* (0.090)	-0.18** (0.089)	-0.16* (0.090)	-0.17* (0.089)	-0.17** (0.078)	-0.17* (0.093)
+demographics controls			X		x	x	x
+ upazila (sub-district) FE				x	x	x	x
+ corrected standard error for village cluster						x	
+ corrected standard error for session cluster							x
N	826	826	826	826	826	826	826

This table shows results from probit regressions where the dependent variable is the probability of transferring the decision making of lottery choice in the game. Demographic controls are: wife's age, husband's age, wife's schooling, husband's schooling, religion, number of household members, annual income per capita. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression results displayed in Table 5 are similar across different specifications. Overall, they suggest the same conclusions as the results from the Fisher's tests. Women in the secret treatment were 14–15% more likely to transfer decision making than their male counterparts. In the secret treatment where each spouse's decision was not disclosed to the other spouse, we expect almost no effect of power imbalance (or at least less than in the no-secret treatment); thus women who let their spouses decide on the lottery choice in the secret treatment most likely were willing to do so in the absence of any threat. This finding is consistent with *H2*. However, we may not confirm *H2* if our secret treatment could not fully remove the threat. The gender gap is wider in the no-secret treatment than in the secret treatment by 21%. There is no significant difference between men in the secret treatment and those in the non-secret treatment; thus, the condition of information between spouses only affected the decision to transfer made by the wife, but not the husband. The wife was more likely to let her husband make the investment decision once all her options and decisions would be revealed to her husband. This suggests that there is decision-making power imbalance, in which women, but not men, have their decisions influenced by their spouses being aware of them making their own decision. This thus supports *H1*. Both men and women were less likely to transfer decision making in the random-couple treatment than in the secret treatment. Women are 17% less likely to transfer decision making in the random-couple treatment than in the secret treatment. The gender gap was absent in the random-couple treatment, as shown by the magnitude of coefficient  $\mu_1$ , which fully offsets the gender effect found in the secret treatment (coefficient  $\beta_1$ ). This suggests that the difference in the transfer decision between the wife and the husband is not driven by the belief that men are

generally better than women in making investment decisions, but most likely is due to household-specific factors.

We then ran the following regression on female subjects using survey data on spouses' characteristics and perceptions to confirm our conclusion for hypothesis *H1* and seek more evidence to test hypothesis *H2*.

$$Transfer_{i,s} = \alpha_2 + \beta_2 Secret_i + \gamma_2 VarY_i + \delta_2 Secret_i * VarY_i + v_s + \varepsilon_i \quad (2)$$

where  $VarY_i$  is a dummy variable that indicates one of the following: (1) the wife has a higher social capital index than the husband, (2) the wife has a high progressiveness index, (3) the wife thinks she is better than her husband at making financial decisions, (4) the wife thinks she is better than her husband at understanding the lottery, or (5) the wife thinks women are generally better than men at making financial decisions. The social capital index is a measure of how much a subject is exposed to social media and social networks and is based on each subject's responses to our three survey questions assessing whether the subject (1) reads the newspaper at least once a week, (2) listens to the radio or watch TV at least once a week, and (3) participates in any club/committee/meeting group at least once a month. Each positive response adds one-third to the social capital measure; thus, the measure can have a value ranging from zero to one. The progressiveness index reflects a subject's view on the intra-household relationship between spouses. It is calculated based on each subject's responses to our three survey questions assessing whether the subject (1) disagrees that important decisions in the family must be made by men, (2) agrees that a married woman should be allowed to work outside the home if she wants to, and (3) agrees that a wife has a right to express her opinion even when she disagrees with what her husband says. If the subject has the same view as at least two of the statements, she is considered to have a high progressiveness index. Variables (3), (4), and (5) are constructed from our survey questions that ask about each subject's own judgement about her ability relative to her spouse or a general man. Among the six variables, we expected the social capital index and progressiveness index to be more likely to correlate with women's decision-making power in the household, and thus their involuntary transfer decision and the variables on ability judgement to correlate with women's voluntary transfer decision. The education level, however, could correlate with women's involuntary and/or voluntary transfer decision.

Regression (2) is run only on the secret treatment and no-secret treatment. We exclude the random-couple treatment since variable  $VarY_i$  measures between-spouse characteristics and relations, thus only affecting the behavior of women toward their spouses, but not random men.

The results from running regression (2) are presented in Table 6. The coefficients in columns (1) and (2) reflect how the social capital index and progressiveness index correlate with women's transfer decisions, and the correlations are as expected. In the no-secret treatment, female borrowers who have a higher social capital index than their spouses or a high progressiveness index were (17% or 32% respectively) less likely to pass over the control of the investment than those who have low indexes. In the secret treatment, there is little



difference between the two types of female borrowers. This is consistent with hypothesis *H1* and also suggests that the secret treatment could remove the effect of imbalance in decision-making power between spouses, thus supporting hypothesis *H2*. Columns (3) and (4) show that women’s opinion on their understanding of the lottery and ability to make financial decisions relative to their spouses correlates with their transfer decision in both the secret and the no-secret treatment. In particular, women who think that they are better than their spouses at understanding the lottery and making financial decisions were less likely to hand over control of the investment. We find no effect of women’s opinion on their ability relative to men in general on their transfer decision (Table 6, column (5)). These findings are consistent with hypothesis *H2* and also suggest women might be willing to let their spouses make the investment decision due to their belief that their spouses are better at numerical and/or financial skills.

**Table 6: Probit Regressions: determinants of decision making, using spouses’ characteristics and perception data**

	(1)	(2)	(3)	(4)	(5)
Secret	-0.24*** (0.089)	-0.31*** (0.072)	-0.21* (0.12)	-0.26** (0.12)	-0.20* (0.10)
VarY	-0.17* (0.086)	-0.32*** (0.087)	-0.18** (0.085)	-0.15** (0.064)	0.0027 (0.096)
secret*VarY	0.24** (0.12)	0.27*** (0.10)	0.0077 (0.11)	0.053 (0.11)	-0.020 (0.14)
N	316	316	316	316	316
which VarY is used	higher social capital than spouse	progressive	better than spouse in making financial decision	better than spouse in understanding lottery	Better than men in making financial decision

This table shows results from probit regressions where the dependent variable is the probability of transferring the decision making of lottery choice in the game. All specifications control for upazila fixed effect and correct standard error for village cluster but do not include demographic controls. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 4.2. Risk-taking and decision making in investments

We examine whether there is a gender difference in risk-taking using subjects’ choice between the safe lottery and the risky lottery. Women are commonly found to be more risk-averse than men in the literature. However, we do not find a statistically significant difference between men and women in their choice of lottery (Table 7). We only find a gender difference in the secret treatment: women were about 17% less likely to take risk than men. The percentage of women choosing the risky lottery is higher than that of men in the no-secret treatment; however, the difference is not statistically significant. A possible explanation for the difference between the two treatments is that subjects’ risk-taking behavior was affected by whether their lottery choice was observed by their spouses. Since subjects in the no-secret treatment expected their choices to be disclosed to their spouses, they might not have revealed their true preferences in the lottery, but instead chose what they thought their spouse would choose. Meanwhile, subjects in the secret treatment did not have the same incentive to hide their true preference. We thus examine subjects’ guess on their

partners' choice of lottery.<sup>14</sup> Assuming the lottery choice in the secret treatment reflects subjects' own risk-taking preference, we find, on average, that women expected their spouses to be more risk-taking and men expected their spouses to be less risk-taking than themselves (statistically significant at 1% and 5%, respectively). We also find that women in the no-secret treatment were significantly more likely to choose the risky lottery than those in the secret treatment and women's guess for their spouse's lottery choice was not significantly different from their own choice. Although the percentage of men choosing the risky lottery was lower in the no-secret treatment than in the secret treatment, the difference is not statistically significant. This suggests that the effect of spousal observability on risk-taking, if it exists, is stronger for women than for men. Men and women in the random-couple treatment were not different in their levels of risk-taking, and both were less likely to choose the risky lottery than in the real-couple treatments. The lower level of risk-taking in the random-couple treatment suggests that subjects were more cautious when their decision might affect an outsider, who is not their family.

We then examine whether a subject's risk-taking behavior affected his/her decision to transfer the decision making of the lottery choice. In Table 8, we report the percentage of men and the percentage of women transferring decision making to their partners by their risk-taking behavior in each treatment. The last column of the table reports the one-sided p-values from Fisher's exact test on the difference between risk-averse and risk-loving subjects. The p-values indicate a significant difference between risk-averse and risk-loving men, but not between risk-averse and risk-loving women. In the secret and the no-secret treatments, risk-loving men were less likely to let their spouses make the decision than risk-averse men. As previously discussed, men expected their spouses to be less risk-taking than themselves; men who were risk lovers were thus more driven to stick to their own decision rather than to let their spouse decide. We also ran Fisher's exact one-sided test to test whether men's choice of lottery and their guess for their spouse's choice are less likely to be the same for risk-loving men and risk-averse men. The results confirm the hypothesis at the 1% confidence level. We do not find a similar effect among women. There is no difference in women's transfer decision between risk-loving and risk-averse women.<sup>15</sup>

	Men	Women	Fisher exact test one-sided p-value
All	31.36	31.11	0.479
No-secret	32.92	37.62	0.123
Secret	36.39	31.01	0.089
Random	20.42	20.42	0.550
Secret vs. no-secret	0.201	0.047	
Secret vs. random	0.000	0.006	
No-secret vs. random	0.001	0.000	

<sup>14</sup> The subjects were also asked to make a guess as to their partner's choice when making their own choice and any correct guess earned 50 taka.

<sup>15</sup> The detailed results of the tests are available upon request.

**Table 8: Male and female transfer rate by risk-taking behaviour**

	Treatment	Risk adverse		Risk lover		Fisher exact test one-sided p-value
Male	Non Secret	0.257	(0.044)	0.136	(0.045)	0.051*
	Secret	0.300	(0.044)	0.143	(0.051)	0.025**
	Random	0.091	(0.033)	0.056	(0.056)	0.529
Female	Non Secret	0.686	(0.046)	0.593	(0.067)	0.160
	Secret	0.404	(0.047)	0.479	(0.073)	0.240
	Random	0.053	(0.026)	0.143	(0.078)	0.175

### 4.3. Decision making in the spending of earnings

Aside from women’s control over their loans, another aspect of women empowerment through microfinance is the improvement of women’s control over household expenditures. Studies done by Pitt and Khandker (1996) and Hashemi, Schuler, and Riley (1996) are among those providing empirical evidence on the positive impact of offering credit to women on women’s purchasing power. However, like other empirical studies they cannot fully address potential selection bias related to microfinance program placement and participation choice. We thus examined whether female borrowers and female partners differed in their use of earnings from the game<sup>16</sup>. Since the roles of the borrowers and the partners were randomly allocated in our experiment, we are able to examine the effect of giving an opportunity to invest to the wife instead of the husband without facing selection bias. We examine both the tentative use of earnings and the actual use of earnings. The information on the tentative use of earnings was obtained immediately after the game ended.

We run Fisher’s exact test to compare the difference in each usage type between male borrowers and male partners, female borrowers and female partners, female borrowers and male borrowers, and female partners and male partners. We also run the two-sample Kolmogorov-Smirnov (K-S) test to test the difference in distribution of all usages. The K-S test is useful in this case in which there are more than two usage types. The results are reported in Table 9. There is no significant difference between female borrowers and female partners, in all usages separately and in the whole distribution, both in terms of tentative use and actual use. This suggests that giving credit to women may not affect their use of the earnings, particularly whether they plan to exercise control over the earnings by themselves or let their spouses take control.

<sup>16</sup> We use the sample of the no-secret treatment alone to conduct this analysis. Since the roles of the borrower and the partner and the difference between the borrower who handed over the control of investment and the borrower who did not are obscure to the spender in the secret treatment, we might not separately capture the difference in the use of earnings between female borrowers and the female partners as well as between the two types of female borrowers. On the other hand, due to the fact that borrowers and the partners in the random-couple treatment are not married couples, linking how married couples made decision on their use of earnings from the game with their experiment roles is not relevant.

**Table 9: Borrowers' tentative and actual use of game payoff**

	Difference between subject types and Fisher exact test one-sided p-value			
	Tentative use		Actual use	
	(1)	(2)	(3)	(4)
	Female borrower- Female partner	Female transferring- not transferring	Female borrower- Female partner	Female transferring- not transferring
keep/purchase for self	-0.06 (0.142)	-0.05 (0.282)	0.05 (0.244)	-0.01 (0.527)
give to spouse	0.02 (0.371)	0.13** (0.037)	-0.03 (0.327)	-0.04 (0.371)
purchase for spouse	-0.01 (0.495)	0.02 (0.438)	0.02 (0.365)	0.02 (0.438)
children/common use	0.04 (0.283)	-0.11 (0.15)	-0.03 (0.379)	0.03 (0.445)
Kolmogorov-Smirnov test	0.978	0.875	0.998	1.000

This table shows the difference in tentative and actual use of game payoff between different subject types with Fisher exact test one-sided p-value in the parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

As Kabeer (2001) suggested, conflicting conclusions about the impact of credit in empowering in the literature reflect differences in the questions posed in different studies, particularly between those that focused on processes of loan uses and those that focused on outcomes associated with access to loans. To determine whether there is any correlation between women's control over loan uses and their control over household expenditures, we test whether the two types of female borrowers, those who passed over the control of the investment and those who did not, differed in their tentative and actual use of earnings.<sup>17</sup> Table 9 displays the results. We found no significant differences for all usages, except for the probability of tentatively handing the earnings to one's spouse. The female borrowers who let their spouses make the investment decision were more likely to tentatively hand over the earnings than those who made the decision on their own. However, there is no such difference in terms of their actual use.

Figure 5 presents the distribution of earning usages by gender for all subjects, both the borrowers and the partners, in the no-secret treatment. Men and women had significant differences in their probability of tentatively keeping the earnings or spending them for themselves and their probability of tentatively handing over the earnings to their spouse. Women were more likely to tentatively give the earnings to their spouses and less likely to keep them or purchase something for themselves. There was no gender difference in the probability of tentatively spending on one's children or common use. Among all usages, spending on one's children or common use was the most frequently chosen (66–70%) for both men and women. Therefore, if we look at the tentative use of earnings, the financial household outcome would not considerably change regardless of whether the wife or the husband had the money in hand. The K-S test on the distribution of tentative earning usages also indicated no significant difference between men and women (p=0.44). However, the K-S

<sup>17</sup> We use the sample of the no-secret treatment alone to conduct this analysis. The same reason as above applies here.

test on the distribution of actual usages indicated a significant gender difference ( $p=0.002$ ). The difference lies in the probability of giving earnings to one’s spouse and the probability of spending on one’s children and common use. Women were more likely to hand over the earnings and less likely to spend them on their children or common use. This finding, in combination with the data on tentative use, suggests that women who planned to spend the earnings on their children or common use later decided to hand over the money to their spouses.

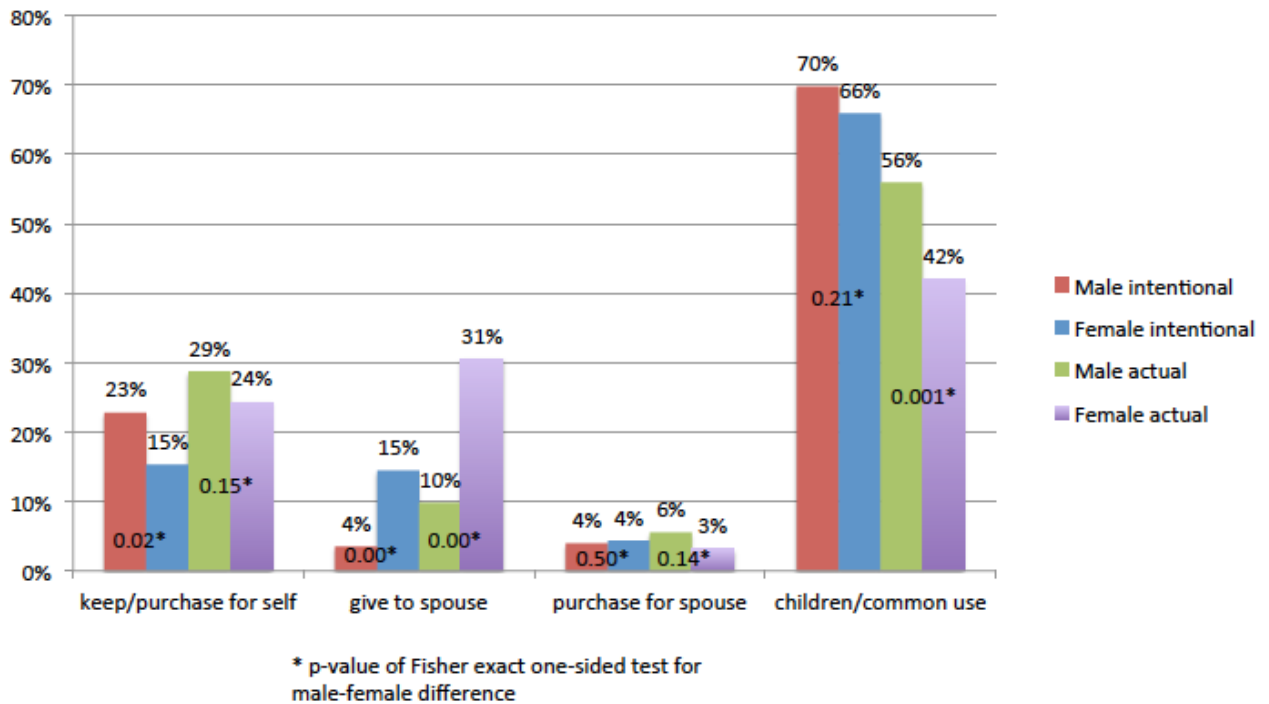


Figure 5. Tentative and actual use of game payoff by gender

#### 4.4. Robustness check on microfinance membership

Our subject pool was drawn from relatively low-income households, who are targeted clients by microfinance institutions. However, to ensure that our findings apply to microfinance borrowers, we run a robustness check on a smaller sample of households who are currently microfinance members and households who reported that they have a plan to obtain a microfinance loan in the near future. We call this sample “potential microfinance members” hereafter<sup>18</sup>. Appendix table A1 shows the basic household characteristics for potential microfinance members and those who are not. The p-values for the difference in characteristics indicate no statistical difference between these two samples, except for the

<sup>18</sup> To address the concern that our estimates of the gender effect might capture the effect of being a microfinance member, we also ran another robustness check on the sample of “potential microfinance members,” but excluding microfinance members whose memberships are longer than one year. The results were consistent with the main findings.

number of household members and household annual income per capita. The potential microfinance members are relatively poorer and have a larger household size.

We reproduced Table 4 using the smaller sample of potential microfinance members, and the results are reported in appendix Table A2. The findings are similar to those for the full sample. Fisher's randomization test p-values show a significant gender difference in the village-level transfer rate in the secret and no-secret treatments, but not in the random-couple treatment. There is also a significant difference in the female's transfer rate and female-male transfer rate between the secret and the no-secret treatments.

## **5. Conclusion**

The present paper analyzes the findings from a lab-in-the-field experiment that was designed to study the intra-household decision-making process between spouses in rural villages in Bangladesh. We focus on the control over loan use and household expenditures in the context of microfinance where a microfinance loan is offered to either spouse and they have the opportunity to invest in a risky and profitable project. We were motivated by anecdotes in the literature to explain the common phenomenon that female borrowers concede control over loan use to their husbands. We find evidence that a gender difference exists in intra-household decision making, which prevents women from taking control of their own loans. Women were more likely to let their spouses make decisions on which project to invest in, and their decision reflected both voluntary and involuntary reasons. Women voluntarily transferred control over loan use possibly due to their belief that their spouses were more capable of making financial decisions; thus, they conceded control even when their behavior could be hidden from their spouses. However, when information was fully disclosed between spouses, women's tendency to transfer the decision making increased, suggesting that women felt obliged to let their spouses make decisions, due to their relatively lower decision-making power. We do not find evidence of an effect based on gender differences such as self-confidence. We also find that women's decision to transfer the control over loan use is significantly correlated with differences in social capital between spouses and women's perception on husband-wife relationship.

These findings suggest that the women empowerment objective of microfinance could be adversely influenced by the gender difference in intra-household decision making. Offering women an opportunity to invest might not be directly translated into improving women's access to economic resources and stimulating their participation in their household's income-earning activities and decision-making process if women hand over the control of the investment to their spouses. As we find more than 60% of the women who were given an opportunity to invest let their spouses make the investment decision in the no-secret treatment, it is important to take into account the gender difference when designing microfinance programs and other policies that target household outcomes. For example, Bandiera, Burgess, Goldstein, Buehren, Gulesci, Rasul, and Sulaiman (2014) found that simultaneously providing vocational training and information on sex, reproduction, and marriage significantly improved both the economic and social positions of adolescent girls in Uganda. In the context of Bangladesh, Bandiera, Burgess, Das, Gulesci, Rasul, and Sulaiman

(2013) found that transfers of both assets and skills had a permanent and positive impact on the occupational choice and earnings of the poorest women.

In designing our experiment, we focus on modeling the investment opportunity that microfinance offers to poor households. We thus focus on the intra-household decision-making process in which the borrower and his/her spouse make an investment decision, taking into account the risk that is involved in the investment options. In their theoretical models of intra-household bargaining, Tassel (2004) and Ligon (2011) take into account the repayment obligation, which is another key aspect of microfinance, and show women transfer the control over microfinance loans so that their spouses would undertake the risk of repaying the loan and ensure the loan would not be terminated in the next period. These theoretical models suggest that in our experiment if loan repayment is required and earning negative payoffs is possible, women borrowers would be even more compelled to hand over the loan in consideration of the repayment obligation.

The paper also offers important insights into intra-household decision making in allocating household expenditures. Our analysis of the tentative use and actual use of the earnings from a loan investment shows that women were more likely to let their spouses take control over household expenditures, irrespective of which spouse was offered the opportunity to invest and irrespective of whether or not they transferred the control of loan use. At the same time, we do not find that women were more likely to spend on household common goods, possibly due to their lack of control over spending decisions. This brings into question the argument that increasing women's earned income could improve their control over household expenditures, at least in the short timeframe and the local context in our experiment setting.

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## Appendices

### Survey questions

<b>H. Personal opinions: Please tell me whether you agree or disagree with the statements H1-H5 and answer questions H6-H7</b>					
<b>H1</b>	The important decisions in the family should be made only by the men of the family.	Agree (1)		Disagree (2) Don't know (3)	
<b>H2</b>	A married woman should be allowed to work outside the home if she wants to.	Agree (1)		Disagree (2) Don't know (3)	
<b>H3</b>	The wife has a right to express her opinion even when she disagrees with what her husband is saying.	Agree (1)		Disagree (2) Don't know (3)	
<b>H4</b>	In general a woman should expect to have rights to do everything that a man can do.	Agree (1)		Disagree (2) Don't know (3)	
<b>H5</b>	In general the important decisions in the society should be made only by men.	Agree (1)		Disagree (2) Don't know (3)	
<b>H6</b>	In general are men or women better in working with numbers and making financial decisions?	Men (1)	Women (2)	They are the same (3)	Don't know (4)
<b>H7</b>	Are you or your wife/husband better in working with numbers and making financial decisions?	You (1)	Your wife/husband (2)	We are the same (3)	Don't know (4)
<b>H8</b>	Do you think you or your wife/husband understands the lottery in the game better?	You (1)	Your wife/husband (2)	We are the same (3)	Don't know (4)

**Table A1: Demographic characteristics: microfinance members vs. non members**

	Non microfinance members		(Potential) Microfinance members		Difference p-value
	Mean	Std.	Mean	Std.	
no. couples	246		580		
Muslim	0.77	0.42	0.78	0.41	0.70
No. household members	4.48	1.25	4.66	1.35	0.07*
Annual income per capital (taka)	16,815	11,546	15,452	7,982	0.06*
No. years of marriage	16.25	8.09	17.05	7.37	0.17
wife's age	34.33	7.73	34.44	7.01	0.85
Husband's age	40.70	8.19	40.57	7.27	0.81
Wife's schooling	4.27	3.78	4.50	3.85	0.43
Husband's schooling	4.40	4.30	4.82	4.36	0.20
Age gap	6.37	2.75	6.13	2.22	0.19
Schooling gap	0.13	3.13	0.32	3.03	0.41

**Table A2: Male and female transfer rate at village level – Microfinance members**

	Treatment	Mean	Std.	Fisher randomization test one-sided p-value	
				Non secret-Secret	Secret-Random
Male	Non Secret	0.233	(0.126)	0.636	0.009
	Secret	0.250	(0.092)		
	Random	0.113	(0.113)		
Female	Non Secret	0.659	(0.200)	0.061	0.002
	Secret	0.464	(0.322)		
	Random	0.063	(0.063)		
Female-male	Non Secret	0.426	(0.275)	0.002	0.055
	Secret	0.214	(0.287)		
	Random	-0.049	(-0.049)		

**Online Appendix**  
**Not for Publication**  
**Instructions for Enumerators**  
**Appendix-I**

General setting

Depending on the available facilities in each village, Enumerators can make flexible arrangements on specific set-ups, but need to adhere to the following conditions:

- We will play 2 game sessions in a same village on a same day and move to another village in the next day. In each village, the 2 sessions are played at the same time.
- Each session will last for 2.5 to 3 hours and require 3 separate rooms.
- We will invite 12-16 married couples (24-32 subjects) for each session, so 24-32 couples in each village. Before the experiment day, Enumerators will go door to door to invite married couples who must be between **18-55 years old** to participate in the experiment. Enumerators inform they can join the experiment only when both wife and husband can come on that day.
- During each home visit, Enumerators also conduct a survey on household's general demographics with one of the spouses who will participate in the experiment. Enumerators also give each couple a card with their household ID on it and ask them to bring it on the day of the experiment.
- We will need at least 1 Coordinator and 4 Enumerators in each session.
- We have 4 different game versions. We will play 1 version in each session and the 2 sessions in each village must be different. The list of which versions to run in each village will be provided to Enumerators.
- Stationery preparation for each session: ID cards, empty envelopes with IDs written on, lottery pots (2 for each room), lottery packages (1 per subjects or 1 per 4-5 subjects), choice forms, payment sheet, curtains to make booths inside rooms.

Instructions for each session

Please follow the following steps, where the red italic fonts are instructions to be read to participants.

(1) When subjects arrive, Coordinator and Enumerators gather them all into one room and ask them to sit/stand next to their spouses. Once everyone has settled in, Coordinator gives a brief introduction of the study:

*Hi everyone! Thank you for agreeing to participate in our study. To thank you for the time you spend with us in this study, we are giving each of you a 100 taka participation fee. In the game, you will be given an opportunity to earn more money. You will receive the participation fee and the extra money you earn in the game at the end of the study when you finish playing the game and answering the questionnaire. Now, before we start with the game, I will read through the consent form and let you*

*sign on the form if you agree to all the conditions. If you do not agree to any of the conditions, you can leave now and will not receive the 100 taka participation fee.*

(2) Coordinator reads the consent form and collects the signed forms from all subjects.

(3) Coordinator gives each subject an ID card, an empty envelope with the same ID written on it. Each ID has two parts: a number and an alphabet (either M for male subjects or F for female subjects) and Coordinator have to make sure that wife and husband from a same family have the same number, which is the same as the household ID on the card they were given during the home visits.

(4) Coordinator asks subjects to separate into a group of men and a group of women. Two Enumerators will be in charge of each group. The Enumerators instruct subjects in their group to leave the current room and go to their respective room (details below for different game versions). In each room, Enumerators go through the instructions and conduct the game with the subjects. Each subject is matched with his/her own spouse to be game partners. The instructions are different across 4 game versions and between two partners (A or B).

- Version 1: Real married couples; No secret; Women as Partner A, Men as Partner B
- Version 2: Real married couples; No secret; Men as Partner A, Women as Partner B
- Version 3: Real married couples; Secret; Women as Partner A, Men as Partner B
- Version 4: Real married couples; Secret; Men as Partner A, Women as Partner B

**The Secret and No secret conditions are different in terms of whether men and women will be in the same room and whether choices made by Partner A will be revealed to Partner B. For the No secret version, both men and women are in a same room but are separated: all men are on one side and all women are on the other side of the room (If the room is too small, Enumerators can divide the subjects into 2 rooms, but have to make sure wife and husband from a same family must be in a same room). Men and women are strictly prohibited to talk to each other. Enumerators give same instructions to all subjects, both men and women at the same time. Enumerators need to set up 2 booths in each room. For the secret version, men are in one room and women are in another room. Enumerators give different instructions separately to men and women. Enumerators need to set up 1 booth in each room.**

Coordinator and Enumerators now refer to the attached game instructions for each version and each partner type. The main tasks of the Enumerators include explaining the game rules to subjects, collecting the choice forms, carrying out the questionnaire and distributing payment. The Coordinator stays in a separate room and his main tasks are collecting choice forms from the Enumerators, carrying out the lottery, filling in the payment sheet and calculating payment.

(5) When Enumerators finish the game, Coordinator compiles subjects' choices and lottery results to calculate payment for each subject (the payment sheet attached). All money payments are put inside closed envelopes with the subjects' IDs. Coordinator gives Enumerators these envelopes to distribute in their groups. After all payment are made and being informed by the Coordinator that the subjects can leave, the Enumerators can end the session and let the subjects leave.

## Version 1

### Game instructions for all subjects: Partners A (women) and Partners B (men) in the same room

*(The following instructions are given to wives and husbands together, when they are seated at separate tables in a same room)*

- Enumerators read the following instructions:

*In this game, you and your spouse are playing as partners. We are giving 300 taka to each of you and 300 taka to your partner. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. After you make all decisions, we will give your choice form to your partner so that he/she is informed about what decisions you have made. But you are strictly prohibited from talking to each other during the game.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the total 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive.*

*We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)

3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)

4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out with the witness of both spouses from each couple.*

- Enumerators ask each subject to take turn to come to their respective booth to fill in the choice form No. 1. Men come to one booth and women come to another separate booth.

- After all subjects have filled in the choice forms, enumerators read the following instructions:

*Today we pick the wife as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on the wife's choice.*

*However, now we let the wife choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your husband has made or (2) to change to your husband's lottery choice if your husband's choice is different from your own choice. You have to make this decision before you actually know your husband's choice. So later if we find that wife's choice and husband's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether the wife chooses option (1) or (2) in this case. But if we find your choices are different from each other, we will use the wife's choice if you choose option (1), otherwise we will use the husband's choice if you choose option (2). For example, if the wife chooses Paan and the husband also chooses Paan, we will always use Paan. If the wife chooses Paan and the husband chooses Supari, we will use Paan if the wife chooses option (1) but will use Supari if the wife chooses option (2).*

*After you make your decision, you will exchange your choice forms with your husband so you and your husband will know about the choices made by each other. However, you are not allowed to change your choices at that point.*

- Enumerators ask only female subjects to come to their booth to fill in the choice form No. 2. The husbands remain seated.

- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.

- Enumerators swap the choice forms between wives and husbands so that each can view their partner's choice.

- Enumerators conduct the lottery for each couple in a booth with the presence of both spouses from that couple.

- Coordinator collects all the choice forms, records subject's choices and lottery outcomes and calculates final payments.



- Enumerators carry out the questionnaire.
- Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

## Version 2

Game instructions for all subjects: Partners A (men) and Partners B (women) in the same room

*(The following instructions are given to wives and husbands together, when they are seated at separate tables in a same room)*

- Enumerators read the following instructions:

*In this game, you and your spouse are playing as partners. We are giving 300 taka to you and 300 taka to your partner. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. After you make all decisions, we will give your choice form to your partner so that he/she is informed about what decisions you have made. But you are strictly prohibited from talking to each other during the game.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the **total 600 taka** in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive. We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)

2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)

3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)

4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out with the witness of both spouses from each couple.*

- Enumerators ask each subject to take turn to come to their respective booth to fill in the choice form No. 1. Men come to one booth and women come to another separate booth.

- After all subjects have filled in the choice forms, enumerators read the following instructions:

*Today we pick the husband as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on the husband's choice.*

*However, now we let the husband choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your wife has made or (2) to change to your wife's lottery choice if your wife's choice is different from your own choice. You have to make this decision before you actually know your wife's choice. So later if we find that wife's choice and husband's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether the husband chooses option (1) or (2) in this case. But if we find your choices are different from each other, we will use the husband's choice if you choose option (1), otherwise we will use the wife's choice if you choose option (2). For example, if the husband chooses Paan and the wife also chooses Paan, we will always use Paan. If the husband chooses Paan and the wife chooses Supari, we will use Paan if the husband chooses option (1) but will use Supari if the husband chooses option (2).*

*After you make your decision, you will exchange your choice forms with your wife so you and your wife will know about the choices made by each other. However, you are not allowed to change your choices at that point.*

- Enumerators ask only male subjects to come to their booth to fill in the choice form No. 2. The wives remain seated.

- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.

- Enumerators swap the choice forms between wives and husbands so that each can view their partner's choice.

- Enumerators conduct the lottery for each couple in a booth with the presence of both spouses from that couple.

- Coordinator collects all the choice forms, records subject's choices and lottery outcomes and calculates final payments.
- Enumerators carry out the questionnaire.
- Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

### Version 3

#### Game instructions for Partners A (women)

*(The following instructions are given to the wives separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, Coordinator conducts the lottery for each couple in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)*

- Enumerators read the following instructions:

*In this game, you and your spouse in the other room are playing as partners. We are giving 300 taka to you and 300 taka to your partner. **We are also giving you, but NOT your partner, the opportunity to invest the total 600 taka to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. All your decisions will be kept completely confidential and private from your partner. Since your partner is not in the room with you, he will not know what you receive, what choices you have, or what decision you make.***

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest **the total 600 taka** in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **lose** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive. We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators read the following instructions:

*As we said, today we pick you, not your husband, as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on your choice.*

*However, your husband in the other room is also asked about what he would choose between the 2 lotteries. And now we let you choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your husband has made or (2) to change to your husband's lottery choice if your husband's choice is different from your own choice. You have to make this decision without knowing your husband's choice. So later if we find that wife's choice and husband's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether you choose option (1) or (2) in this case. But if we find your choices are different from each other, we will use your own choice if you choose option (1), otherwise we will use your husband's choice if you choose option (2). For example, if you choose Paan and your husband also chooses Paan, we will always use Paan. If you choose Paan and your husband chooses Supari, we will use Paan if you choose option (1) but will use Supari if you choose option (2).*

*Again, all your decisions will be kept confidential from your husband. We will conduct the lottery in a separate room, so your husband will not know about your decision when he gets the final payment.*

- Enumerators ask subjects to come to their booth to fill in the choice form No. 2.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.

- After payments are calculated, Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

### Version 3

#### Game instructions for Partners B (men)

**(The following instructions are given to the husbands separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, Coordinator conducts the lottery for each couple in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)**

- Enumerators read the following instructions:

*In this game, you and your spouse in the other room are playing as partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you the opportunity to invest **the total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend either on your own decision or your partner's decision.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE ball, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive.*

*We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)



2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)

3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)

4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if she was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute payment envelopes to subjects by matching the IDs on the envelopes and the cards.

## Version 4

### Game instructions for Partners A (men)

*(The following instructions are given to the husbands separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, an Enumerator conducts the lottery for each subject in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)*

- Enumerators read the following instructions:

*In this game, you and your spouse in the other room are playing as partners. We are giving 300 taka to you and 300 taka to your partner. **We are also giving you, but NOT your partner**, the opportunity to invest the **total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. **All your decisions will be kept completely confidential and private from your partner. Since your partner is not in the room with you, she will not know what you receive, what choices you have, or what decision you make.***

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **lose** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them. *Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive. We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators read the following instructions:

*As we said, today we pick you, not your wife, as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on your choice.*

*However, your wife in the other room is also asked about what she would choose between the 2 lotteries. And now we let you choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your wife has made or (2) to change to your wife's lottery choice if your wife's choice is different from your own choice. You have to make this decision without knowing your wife's choice. So later if we find that wife's choice and husband's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether you choose option (1) or (2) in this case. But if we find your choices are different from each other, we will use your own choice if you choose option (1), otherwise we will use your wife's choice if you choose option (2). For example, if you choose Paan and your wife also chooses Paan, we will always use Paan. If you choose Paan and your wife chooses Supari, we will use Paan if you chooses option (1) but will use Supari if you chooses option (2).*

*Again, all your decisions will be kept confidential from your wife. We will conduct the lottery in a separate room, so your wife will not know about your decision when she gets the final payment.*

- Enumerators ask subjects to come to their booth to fill in the choice form No. 2.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.

- After payments are calculated, Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

## Version 4

### Game instructions for Partners B (women)

**(The following instructions are given to the wives separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, an Enumerator conducts the lottery for each subject in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)**

- Enumerators read the following instructions:

*In this game, you and your spouse in the other room are playing as partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you the opportunity to invest **the total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend either on your own decision or your partner's decision.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE ball, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEPS** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive.*

*We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute payment envelopes to subjects by matching the IDs on the envelopes and the cards.

## Version 5

- Before starting the experiment, enumerators assign game partners by randomly matching each man with one woman who is not his own spouse (using their IDs). Enumerators will not let subjects know who they are matched with.

### Game instructions for Partners A (women)

***The following instructions are given to the women separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, Coordinator conducts the lottery for each couple in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)***

- Enumerators read the following instructions:

*In this game, we randomly assign each of you and another subject of the opposite gender (not your own spouse) in the other room to be partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you, but NOT your partner, the opportunity to invest the **total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. All your decisions will be kept completely confidential and private from your partner. Since your partner is not in the room with you, he will not know what you receive, what choices you have, or what decision you make.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest **the total 600 taka** in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **lose** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive. We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. **The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse or your partner) who will not know anything about your identity.***

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators read the following instructions:

*As we said, today we pick you, not your partner, as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on your choice.*

*However, your partner in the other room is also asked about what he would choose between the 2 lotteries. And now we let you choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your partner has made or (2) to change to your partner's lottery choice if your partner's choice is different from your own choice. You have to make this decision without knowing your partner's choice. So later if we find that your choice and your partner's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether you choose option (1) or (2) in this case. But if we find your choices are different from each other, we will use your own choice if you choose option (1), otherwise we will use your partner's choice if you choose option (2). For example, if you choose Paan and your partner also chooses Paan, we will always use Paan. If you choose Paan and your partner chooses Supari, we will use Paan if you choose option (1) but will use Supari if you choose option (2).*

*Again, all your decisions will be kept confidential from your partner. We will conduct the lottery in a separate room, so your partner will not know about your decision when he gets the final payment.*



- Enumerators ask subjects to come to their booth to fill in the choice form No. 2.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

## Version 5

### Game instructions for Partners B (men)

(The following instructions are given to the men separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, Coordinator conducts the lottery for each couple in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)

- Enumerators read the following instructions:

*In this game, we randomly assign each of you and another subject of the opposite gender (not your own spouse) in the other room to be partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you the opportunity to invest **the total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend either on your own decision or your partner's decision.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE ball, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEPS** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive.*

*We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)

2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)

3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)

4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if she was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse or your partner) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute payment envelopes to subjects by matching the IDs on the envelopes and the cards.

## Version 6

- Before starting the experiment, enumerators assign game partners by randomly matching each man with one woman who is not his own spouse (using their IDs). Enumerators will not let subjects know who they are matched with.

### Game instructions for Partners A (men)

*(The following instructions are given to the men separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, an Enumerator conducts the lottery for each subject in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)*

- Enumerators read the following instructions:

*In this game, we randomly assign each of you and another subject of the opposite gender (not your own spouse) in the other room to be partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you, but NOT your partner, the opportunity to invest the total 600 taka to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend on the decisions you are going to make. All your decisions will be kept completely confidential and private from your partner. Since your partner is not in the room with you, she will not know what you receive, what choices you have, or what decision you make.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE balls, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEP** your initial investment (300 taka each). If that is the BLACK ball, you will **lose** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive. We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse or your partner) who will not know anything about your identity.*

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators read the following instructions:

*As we said, today we pick you, not your partner, as the decision maker for each couple's investment, so the final payoff that each of you will receive will depend only on your choice.*

*However, your partner in the other room is also asked about what she would choose between the 2 lotteries. And now we let you choose between the 2 following options: (1) to always use the lottery choice you have just made, no matter what choice your partner has made or (2) to change to your partner's lottery choice if your partner's choice is different from your own choice. You have to make this decision without knowing your partner's choice. So later if we find that your choice and your partner's choice of lottery are the same, we will just use this same choice to decide your final payoff, so it will not matter whether you choose option (1) or (2) in this case. But if we find your choices are different from each other, we will use your own choice if you choose option (1), otherwise we will use your partner's choice if you choose option (2). For example, if you choose Paan and your partner also chooses Paan, we will always use Paan. If you choose Paan and your partner chooses Supari, we will use Paan if you chooses option (1) but will use Supari if you chooses option (2).*

*Again, all your decisions will be kept confidential from your partner. We will conduct the lottery in a separate room, so your partner will not know about your decision when she gets the final payment.*

- Enumerators ask subjects to come to their booth to fill in the choice form No. 2.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute envelopes containing final payments to subjects by matching the IDs on the envelopes and the cards.

## Version 6

### Game instructions for Partners B (women)

**(The following instructions are given to the women separately, once they have gone into the separate room. After subjects in both rooms finish filling in all their choice forms, an Enumerator conducts the lottery for each subject in a separate room where no subject (except a witness from the different game version) can see, records subjects' choices and lottery outcomes, and calculates final payments.)**

- Enumerators read the following instructions:

*In this game, we randomly assign each of you and another subject of the opposite gender (not your own spouse) in the other room to be partners. We are giving 300 taka to you and 300 taka to your partner. We are also giving you the opportunity to invest **the total 600 taka** to make more money. You will be asked to make decisions about what you would like to do with this money. The final payment you and your partner will receive will depend either on your own decision or your partner's decision.*

- Enumerators read the following instructions and demonstrate the lottery by showing what are inside the PAAN pot and the SUPARI pot.

*You have the following two options to invest the 600 taka in:*

*(1) to invest in the PAAN pot lottery; or*

*(2) to invest in the SUPARI pot lottery.*

*As you can see, each pot has 10 balls. In the PAAN pot, there are 1 GREEN ball, 8 WHITE balls, and 1 BLACK ball. In the SUPARI pot, there are 4 GREEN balls, 2 WHITE ball, and 4 BLACK balls. You will have to fill in the choice form with your choice of either the PAAN pot or SUPARI pot now. Later when we conduct the lottery, we will randomly pick 1 ball from your chosen pot. If that is the GREEN ball, your payoff will be **TRIPLE** your initial investment (900 taka each). If that is the WHITE ball, you will **KEEPs** your initial investment (300 taka each). If that is the BLACK ball, you will **LOSE** your initial investment (0 taka each).*

- Enumerators ask subjects to spend 2-3 minutes to practice with their own bags of balls to get better understanding of the lotteries, then randomly pick a few subjects (3-4 in each room) to test their understanding. If they answer incorrectly or seem not to understand, clearly explain to them.

*Now we let you practice to understand the lotteries. You can try playing with the lottery bags for a few times, each time without looking picking 1 ball from 1 bag and see what payoff you may receive.*

*We then ask you a few questions to test your understanding.*

Here are a few questions enumerators can ask:

1. If you choose the PAAN lottery, how much will you be most likely to receive? (Answer: 300 taka each)
2. If you choose the SUPARI lottery, how much will you be most likely to receive (Answer: either 900 taka each or 0 taka each, with an equal chance)
3. In which lottery is there more chance for you to lose money? (Answer: SUPARI)
4. In which lottery is there more chance for you to triple your initial investment? (Answer: SUPARI)

*Now please fill in the form with your choice and what you think your partner would choose if he was given the opportunity. At the end of the game, if your guess on your partner's choice is correct, you will win another 50 taka. **The actual lottery will be carried out in a different room with the witness of a subject from a different group (and not your spouse or your partner) who will not know anything about your identity.***

- Enumerators ask each subject to take turn to come to the booth to fill in the choice form No. 1.
- Enumerators collect all choice forms, leaving the ID cards for subjects to keep.
- Enumerators carry out the questionnaire.
- After payments are calculated, Enumerators distribute payment envelopes to subjects by matching the IDs on the envelopes and the cards.



## Choice form No.1

Subject ID: \_\_\_\_\_

Partner ID: \_\_\_\_\_

Date: \_\_\_\_\_

We are giving 300 taka to you and 300 taka to your partner. If you can invest this 600 taka in either one of the two lotteries, which pack of lottery do you choose?

PAAN



SUPARI



Which pack of lottery do you think your partner will choose if he/she is given the choice to invest?

PAAN



SUPARI



Choice form No.2 (only given to Partner A)

Subject ID: \_\_\_\_\_

Partner ID: \_\_\_\_\_

Date: \_\_\_\_\_

Please choose between the 2 following options:

(1) to always use the lottery choice you have just made, no matter what choice your partner has made



(2) to change to your partner's lottery choice if your partner's choice is different from your own choice



## Appendix-II

### Study on household financial activities: Survey I

*Instruction for enumerators:* The survey is conducted when enumerators make home visits to invite married couples who must be between **18-55 years old** to the experiment. After **both spouses agree** to take part in the experiment, enumerators obtain the following information from **one** of the spouses, but not from any other household member.

Thank you for agreeing to take part in our study. As part of the study you are required to complete a short survey of basic household information. All your information will be kept confidential.

A. Respondent's identity			
A1	Household ID		
A2	Respondent name		
A3	Respondent's father/husband name		
A4	Which spouse responds?	Wife (1)	Husband(2)
A5	Village		
A6	Union		
A7	Sub-district (Upazila)		
A8	District		
A9	Contact No (if any)		
B. Household information			
B1	Religion	Islam (1)	Hindu (2)      Other (3)
B2	Number of household members		
B3	Household type	Single family (1)	Joint family (2)
B4	Number of sons (only when applicable, if not record as N/A)		
B5	Age of sons	1 <sup>st</sup> :	2 <sup>nd</sup> :      3 <sup>rd</sup> :      4 <sup>th</sup> :
B6	Number of daughters (only when applicable, if not record as N/A)		
B7	Age of daughters	1 <sup>st</sup> :	2 <sup>nd</sup> :      3 <sup>rd</sup> :      4 <sup>th</sup> :
B8	Do any of the following people live in the same household with you?		
B8.1	wife's father	Yes (1)	No (2)
B8.2	wife's mother	Yes (1)	No (2)
B8.3	wife's sibling(s)	Yes (1)	No (2)

B8.4	husband's father	Yes (1)	No (2)
B8.5	husband's mother	Yes (1)	No (2)
B8.6	husband's sibling(s)	Yes (1)	No (2)
B9	Number of years of marriage		
<b>B10</b>	Total household annual earnings (taka)		

**C. Wife and husband's basic information**

		Wife			Husband		
C1	Age						
C2	Literacy level	illiterate (1)	can read only (2)	can read and write (3)	illiterate (1)	can read only (2)	can read and write (3)
C3	Highest class completed						
C4	Father's highest class completed						
C5	Number of brothers						
C6	Number of sisters						

## Study on household financial activities: Survey II

*Instructions for enumerators: The survey is conducted on the experiment day, after the game finishes. Enumerators obtain the following **information privately and separately for each spouse of each couple**. So for each household there will be two surveys with the same content: one for the wife and the other for the husband.*

Thank you for taking part in the game. Now before you receive your payment, you are required to complete a short survey. All your information will be kept confidential and will not be disclosed to your spouse.

A. Respondent's identity				
A1	Personal ID			
A2	Village			
A3	Union			
A4	Sub-district (Upazila)			
A5	District			
B. Awareness & Mobility				
B1	How often do you read a newspaper?	At least once a week (1)	Less than once a week (2)	Never (3)
B2	How often do you listen to the radio or watch TV?	At least once a week (1)	Less than once a week (2)	Never (3)
B3	How often do you participate in any club/ committee/ meeting group?	At least once a month (1)	Less than once a month (2)	Never (3)
<b>B4</b>	How often do you go on your own to:			
<b>B4.1</b>	your parents' house (only when applicable, if not record as N/A)	At least once a month (1)	Less than once a month (2)	Never(3)
<b>B4.2</b>	public places in your village (eg. market/ school/health centre...)	At least once a month (1)	Less than once a month (2)	Never(3)
<b>B4.3</b>	places outside your village	At least once a month (1)	Less than once a month (2)	Never(3)
B5	If you ever go on your own to these places, do you need to seek permission of anyone?			
B5.1	your parent's house	Yes, spouse's permission (1)	Yes, someone else's permission(2)	No (3)
B5.2	public places in your village (eg. market/ school/health centre...)	Yes, spouse's permission (1)	Yes, someone else's permission(2)	No (3)

B5.3	places outside your village	Yes, spouse's permission (1)	Yes, someone else's permission(2)	No (3)	
<b>C. Occupation, Earnings &amp; Assets</b>					
C1	Did you do any income-earning work outside home in the last one year?	Yes (1)	No (2)		
C2	Did you do any income-earning work on your own at home in the last one year? (eg. tailoring, farming, poultry rearing, cottage industry, fishery & hatchery...)	Yes (1)	No (2)		
C3	Did you do any income-earning work jointly with other(s) at home in the last one year? (eg. tailoring, farming, poultry rearing, cottage industry, fishery & hatchery...)	Yes (1)	No (2)		
C4	Does your work require you to stay overnight outside home?	Yes, most of the time (1)	Yes, sometimes (2)	No, not at all (3)	
C5	How much is your annual earnings in the last one year? (taka)				
C6	Do you own any land on your own?	Yes (1)	No (2)		
C7	Do you own any other asset on your own (eg. jewellery, livestock, equipment...)?	Yes (1)	No (2)		
<b>D. Intra-household decision making</b>					
D1	Who is the main decision maker on each of the following? (only when applicable, if not record as N/A)				
D1.1	how your earnings will be used	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.2	how your spouse's earnings will be used	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.3	major household purchases (eg. TV, bikes, fridges...)	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.4	household savings	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.5	expenditures on food	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.6	expenditures on clothing for yourself	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.7	expenditures on education (eg. tutoring) for	You (1)	Spouse	You and spouse, equally	Other

	children		(2)	(3)	(4)
D1.8	expenditures on crop	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.9	expenditures on cattle	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.10	expenditures on poultry	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.11	expenditures on fishery	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
D1.12	children's marriage (eg. marriage arrangements, marriage expenditures)	You (1)	Spouse (2)	You and spouse, equally (3)	Other (4)
<b>D2</b>	Do you keep any money (eg. cash, bank deposit...) by yourself?	Yes (1)	No (2)		
D3	If yes to D2, can you decide how to use that money by yourself? (only when applicable, if not record as N/A)	Yes (1)	No (2)		

### **E. Financial activities**

E1	Do you have a bank account or an account in any other savings institution in your own name?	Yes (1)	No (2)		
E2	Do you have a bank account or an account in any other savings institution jointly with your spouse?	Yes (1)	No (2)		
E3	Have you yourself ever taken any loan from MFIs?	Yes (1)	No (2)		
E4	How many years have you been with the MFI?				
E5	Are you a member of any other NGO?	Yes (1)	No (2)		
E6	How many years have you been with the NGO?				
E7	Do you plan to take loans from MFIs in future?	Yes (1)	No (2)		
E8	Have you yourself ever taken any loan from other sources?	Yes (1)	No (2)		

### **F. Consumption**

F1	Do you like to spend for yourself on:				
F1.1	clothes and accessories	Yes (1)	No (2)		

F1.2	indulgence food (eg. snacks, candies, biscuits...)	Yes (1)	No (2)		
F1.3	Tobacco/ betel leaf	Yes (1)	No (2)		
F1.4	lottery	Yes (1)	No (2)		
F1.5	jewellery	Yes (1)	No (2)		
F2	Does your spouse like to spend for his/herself on:				
F2.1	clothes and accessories	Yes (1)	No (2)		
F2.2	indulgence food (eg. snacks, candies, biscuits...)	Yes (1)	No (2)		
F2.3	Tobacco/ betel leaf	Yes (1)	No (2)		
F2.4	lottery	Yes (1)	No (2)		
F2.5	jewellery	Yes (1)	No (2)		
F3	What do you plan to do with the money you earn today?	Keep for yourself for later use (1)	Give to your spouse (2)	Buy something for yourself (3)	
		Buy something for spouse (4)	Buy something for children or common use (5)	Other (6)	
F4	<i>(This question will not be asked during the session, but when the enumerator comes back for interview 2 weeks later)</i>  What did you do with the money you earned from the game?	Still keep for yourself for later use (1)	Already gave to your spouse (2)	Bought something for yourself (3) (pls state)	
		Bought something for spouse (4) (pls state)	Bought something for children or common use (5) (pls state)	Other (6) (pls state)	
<b>G. Understanding of risk</b>					
G1	There is a lottery where the chance of winning a 1,000 taka prize is 1 in 100. If 1000 people buy the lottery tickets and each buys only 1 ticket, how many people will win the 1,000 taka prize?				
G2	Suppose you are offered either 1 of 2 lottery bags: The Paan bag has 2 balls with 500 taka value each and 2 balls with 100 taka value each. The Supari bag has 2 balls with 400 taka value each and 2 balls with 100 taka value	Paan (1)	Supari (2)	Either Paan or Supari (they are the same to me) (3)	Don't know (4)



	each. You will pick randomly 1 ball from the bag you choose and that will be your prize. Which bag would you choose?				
G3	Suppose you are offered either 1 of 2 lottery bags: The Paan bag has 2 balls with 500 taka value each and 2 balls with 100 taka value each. The Supari bag has 3 balls with 500 taka value each and 2 balls with 100 taka value each. You will pick randomly 1 ball from the bag you choose and that will be your prize. Which bag would you choose?	Paan (1)	Supari (2)	Either Paan or Supari (they are the same to me) (3)	Don't know (4)
G4	Suppose you are offered either 1 of 2 lottery bags: The Paan bag has 2 balls with 500 taka value each and 2 balls with 100 taka value each. The Supari bag has 5 balls with 500 taka value each and 5 balls with 100 taka value each. You will pick randomly 1 ball from the bag you choose and that will be your prize. Which bag would you choose?	Paan (1)	Supari (2)	Either Paan or Supari (they are the same to me) (3)	Don't know (4)

**H. Personal opinions:** Please tell me whether you agree or disagree with the statements H1-H5 and answer questions H6-H7

H1	The important decisions in the family should be made only by the men of the family.	Agree (1)		Disagree (2)	Don't know (3)
H2	A married woman should be allowed to work outside the home if she wants to.	Agree (1)		Disagree (2)	Don't know (3)
H3	The wife has a right to express her opinion even when she disagrees with what her husband is saying.	Agree (1)		Disagree (2)	Don't know (3)
H4	In general a woman should expect to have rights to do everything that a man can do.	Agree (1)		Disagree (2)	Don't know (3)
H5	In general the important decisions in the society should be made only by men.	Agree (1)		Disagree (2)	Don't know (3)
H6	In general are men or women better in working with numbers and making financial decisions?	Men (1)	Women (2)	They are the same (3)	Don't know (4)
H7	Are you or your wife/husband better in working with numbers and making financial decisions?	You (1)	Your wife/husband (2)	We are the same (3)	Don't know (4)
H8	Do you think you or your wife/husband understands the lottery in the game better?	You (1)	Your wife/husband (2)	We are the same (3)	Don't know (4)

**I. Opinions about the game (ask Partners A only)**

<p><b>I1</b></p>	<p>In the game, why did you choose to use your spouse's option if your choices are different from your spouse? (only if applicable)</p>	<p>My spouse can make better decision (1)</p> <p>I always make major decisions at home, so I want to give my spouse this opportunity (4)</p>	<p>My spouse always makes major decisions at home (2)</p> <p>Other (5) (pls state)</p>	<p>I am afraid my spouse will blame me (3)</p> <p>N/A (6)</p>
<p><b>I2</b></p>	<p>In the game, why did you choose to use your own option even if your choices are different from your spouse? (only if applicable)</p>	<p>I can make better decision (1)</p> <p>My spouse always makes major decisions at home, so I want to take this opportunity (4)</p>	<p>I always make major decisions at home (2)</p> <p>Other (5) (pls state)</p>	<p>The investment opportunity was given to me, so I just made my own decision (3)</p> <p>N/A (6)</p>