

Intrahousehold Consumption Allocation and Demand for Agency: A Triple Experimental Investigation*

Uzma Afzal[†] Giovanna d’Adda[‡] Marcel Fafchamps[§] Farah Said[¶]

February 2020

Abstract

We conduct lab experiments to investigate demand for consumption agency in married couples. We find subjects are often no better at guessing their spouse’s preferences than those of a stranger, and many subjects disregard what they believe or know about others’ preferences when assigning them a consumption bundle. This confers instrumental value to individual executive agency within the household. We indeed find significant evidence of demand for agency in all three experiments, and this demand varies with the cost and anticipated instrumental benefit of agency. But subjects often make choices incompatible with pure instrumental motives – e.g., paying for agency even when they know their partner assigned them their preferred choice. We also find female subjects to be quite willing to exert agency even though, based on survey responses, they have little executive agency within their household. We interpret this as suggestive of pent-up demand for agency. Indeed, data from a field experiment shows female demand for agency to fall as a result of an empowerment intervention.

JEL Codes: D13, D91, D61, J16

Keywords: empowerment, gender equality, procedural equality, allocative efficiency, pent-up demand, utility theory

*We thank Doug Bernheim, Muriel Niederle, Glenn Harrison, John Quiggin, Emily Breza, Giacomo De Giorgi, Pedro Vicente, Catia Batista, James Berry, Silvia Prina, Keki Sheth, and Erlend Berg for their useful comments. We also benefited from comments from participants to the Third European Workshop on Household Finance (London, May 2018), and to the SEEDEC 2018 Conference (Wageningen, April 2018), the CSAE Conference 2017 (Oxford, March 2017), as well as the CIRPEE Workshop on Social Identity and Social Interactions in Economics (Quebec City, April 2016), and to the WZB "Field Days" Conference (Berlin, June 2016), as well as from seminar participants at Stanford University, Georgia State University, the University of Oregon, University of California Merced, and Nova University in Lisbon. Funding for this study was provided by the International Growth Centre (IGC) and by the Economic and Social Research Council (ESRC).

[†]University of Nottingham

[‡]University of Milan

[§]Stanford University

[¶]Lahore School of Economics

1 Introduction

Much of the economic literature on intrahousehold consumption takes allocative efficiency between spouses as starting point. The collective model of the household (Chiappori, 1997a,b; Browning and Chiappori, 1998) relies on the idea that efficiency can be achieved by giving each spouse an individual budget they can spend as they like (Browning, Bourguignon, Chiappori, and Lechene, 1994; Browning, Chiappori, and Lechene, 2010; Browning, Chiappori, and Lewbel, 2013; Browning, Chiappori, and Weiss, 2014). Bargaining models of the household (McElroy, 1990; Lundberg and Pollak, 1996) consider extraneous factors that can determine the allocation of consumption¹, but ultimately require spouses to be fully informed about each other's preferences, and agreements costlessly enforced.

In practice, coordination issues are commonplace within the household. Household members typically take consumption decisions in a sequential and decentralized manner, often not knowing other members' preferences. This may arise because the consumption good offered is unfamiliar, the decision maker does not recall the preferences of others, or these preferences have changed. In other cases, the decision maker may know the preferences of others but deliberately choose to ignore them, either due to a paternalistic motive, out of disregards for others, or because they wish to impose their will on them. When other members of the household cannot be relied on to make decisions that maximize collective welfare, individual members may seek to gain agency over household consumption choices (Glennester, Walsh, and Diaz-Martina, 2018). They may secure control over individual sources of income and saving, demanding that they be consulted on decisions made by others, or take executive decisions even if doing so is inefficient and involves dissimulation (Anderson and Baland, 2002; Jakiela and Ozier, 2015; Verschoor, Kebede, Munro, and Tarazona, 2019; Mani, 2011).

While some studies have looked at the impact of asymmetric information on outcomes (Ashraf, 2009; Woolley, 2000), there is little or no literature investigating whether household members know each other's preferences and whether they respect these preferences when choosing consumption for them. There is also little evidence regarding the demand for executive agency over own consumption within and outside the household, and no evidence on individual valuation of agency for its own sake, independently from instrumental motivations.

¹ E.g., distribution of assets upon divorce, control over household assets and finances, income earning opportunities.

This paper offers new experimental evidence on these issues. We test three main hypotheses: (1) household members know each other's preferences over individual consumption goods; (2) household members respect the preferences of others when they are informed about them; and (3) individuals have a demand for agency, that is: they are willing to pay for the certainty of getting the consumption bundle of their choice. We also test whether demand for agency increases with the risk of not getting one's choice, and with the level of empowerment the subject has in the household.

We design an original experiment to test these hypotheses and we implement it in three different ways with married couples from Punjab, Pakistan. In the experiments, we ask participants to select between distinct consumption bundles that they either have to consume on the spot, such as drinks or food, or personally use, such as leather items with their initials. We also ask them to guess what their partners would prefer to consume out of the available options, and to select a bundle for the partner to consume. Experimental treatments vary whether individuals are informed of the partner's preferences before making a choice for them; and whether the partner within the experiment is a spouse or stranger.

There are several reasons why the primary focus of our experimental design is the consumption of food and drink. There is a large and well-established economic literature using differences in food consumption within the household as basis for intra-household welfare comparisons (see also [Pitt, Rosenzweig, and Hassan \(1990\)](#); [Behrman \(1993\)](#); [Deaton and Paxson \(1998\)](#); [Strauss and Thomas \(1998\)](#); [Thomas \(1994\)](#); [Hoddinott and Haddad \(1995\)](#); [Haddad, Hoddinott, and Alderman \(1997\)](#)). Several studies have documented differences in food consumption and nutritional level between husband and wife (e.g., [Ferro-Luzzi, Scaccini, Taffese, Aberra, and Demeke \(1990\)](#); [Dercon and Krishnan \(2000\)](#); [Fafchamps, Kebede, and Quisumbing \(2009\)](#)), including a recent study by [Brown, Calvi, and Penglase \(2020\)](#) in Bangladesh. What is striking is that these findings arise in settings where women do most of the cooking – and could, in principle, consume more food on the sly if they wanted. For women to consume less food than men, food consumption while cooking must be repressed in one way or another – including, possibly, domestic violence ([Alderman, Chiappori, Haddad, Hoddinott, and Kanbur, 1995](#)). In our setting, this is potentially aggravated by the fact that many men regard grocery shopping as decision domain in which they need not consult their wife, while many women report having to consult their husband before grocery shopping (see Appendix A). There is therefore a suspicion that food consumption by women is repressed in some way, making food consumption an excellent vantage point from which to assess agency and welfare allocation between husband

and wife.

There is a well-established tradition of seeking to influence household food consumption through transfers in kind. Many policy interventions towards children take this approach, e.g., through school lunches, milk distribution, and food supplements (e.g., [Maluccio, Hoddinott, Behrman, Martorell, Quisumbing, and Stein \(2009\)](#); [Hoddinott, Sandström, and Upton \(2018\)](#)). Food items have also long been used in laboratory experiments, either to test self-control ([Mischel, Ebbesen, and Antonette, 1972](#)) or commitment to healthy foods (e.g., [Möetteli, Keller, Siegrist, Barbey, and Bucher \(2016\)](#); [Kroese, Marchiori, and deRidder \(2015\)](#)). Our experiment builds on this literature but broadens the focus to preferences over food and drink in general, not just over a specific attribute such as health. There is indeed ample evidence that people vary greatly in terms of preferences over food and drink. Some of this variation takes place across societies and is influenced by culture, religion, and social class (e.g., [Levi-Strauss \(1962, 1964-1971\)](#); [Messer \(1984\)](#); [Sathyamala \(2019\)](#)). There is also plenty of variation at the individual level, and many people get offended or hurt if forced to eat something they dislike – a fact well reflected in the ancient adage ‘De gustibus non est disputandum’, i.e., ‘Don’t fight over food preferences’. This means that being forced to eat something against one’s choice may trigger a strong resistance even if the amount of food ingested is, in the grand scheme of things, quite negligible.

Using food as payoff has an additional advantage. Other lab experiments played between married couples have typically used monetary payoffs (e.g., [Jakiela and Ozier \(2015\)](#); [Verschoor, Kebede, Munro, and Tarazona \(2019\)](#)). Yet, money is transferable: whatever happens in the lab can easily be undone outside the lab. The same observation holds to some extent for food items handed out in the lab but consumed at home (e.g., [Bakhtiar \(2019\)](#)): these items can easily be transferred to others, notably to children. In both cases, the experimenter does not directly observe the effect of the treatment on consumption itself. To avoid these shortcomings, we ask subjects to consume the food and drink directly in the lab; they are not allowed to take it away. We also run an experiment with higher value stakes in which subjects select one of three possible leather goods, a man’s wallet, a woman’s purse, and a child pencil case. To limit the scope for transferring the good to someone else, each leather good is inscribed with the name of the recipient, as illustrated in Online Appendix C.

In addition, we check the robustness of our findings by allowing the reader to observe the extent to which they replicate. There is a growing concern in economics and other experimental sciences that some experiments do not replicate, and that the literature suffers

from publication bias (e.g., [Camerer, Dreber, Forsell, Ho, Huber, Johannesson, Kirchler, Almenberg, Altmejd, and Chan \(2016\)](#); [Christensen and Miguel \(2016\)](#); [Andrews and Kasy \(2019\)](#)). To address this concern we replicate some of the main aspects of our design over three distinct experiments, while keeping the target subject population unchanged. All these features – focus on agency and power, in-kind payoffs consumed in person, and replication of the experiment with the same population – set our experiment apart in the sense that they have never been combined to provide an all-encompassing examination of agency and power over consumption in married couples.

Many of our findings diverge from assumptions typically made in intrahousehold models. We first find household members often do not know the preferences of their spouse or other household members. Even when they are informed about these preferences, they often choose to ignore them. The fact that informed subjects often make inefficient consumption choices for others signals a demand for power, that is, a desire to make choices for others. We also find evidence of willingness to pay for agency, and a noticeable proportion of participants are willing to pay for agency even after they are informed that their partner selected their preferred item. This suggests that demand for agency is not solely instrumental: some subjects value agency for its own sake. These are the most important results of our paper, and they apply to both men and women.

Our results further show that women are more likely to demand agency than men. They are also more likely to exercise power: information on the partner’s preferences leads men, but not women, to revise their pick if it is revealed to be different from the partner’s preferred item. Furthermore, women who discover to have guessed their partner’s preference correctly are, in fact, less likely to select their partner’s pick. We interpret these behaviors as stemming from pent-up demand for agency among women, a result of lack of empowerment. We thus expect that increasing empowerment should reduce demand for pure agency. We confirm this insight using data from the field experiment, where randomly selected women in our sample had access to a microfinance product (similar to [Afzal, d’Adda, Fafchamps, Quinn, and Said \(2018\)](#)). Women offered the microfinance product are less likely to demand agency in the experiment, possibly because they have more agency at home. This is confirmed by the observation that husbands are more likely to delegate the choice of leather good to their wife.

This paper is related to the existing literature in multiple ways. In addition to the literature already mentioned, a number of papers have experimentally examined ‘instrumental’ willingness to pay for agency in games between spouses ([Iversen, Jackson, Kebede, Munro,](#)

and Verschoor, 2011; Mani, 2011; Jakiela and Ozier, 2015). A related literature looks at preference for agency in decision-making processes outside of the household and suggests that individuals may value their decision power beyond its instrumental value (Güth and Weck-Hannemann, 1997; Fehr, Herz, and Wilkening, 2013; Bartling, Fehr, and Herz, 2014; Owens, Grossman, and Fackler, 2014). Individuals have also been shown to prefer fair decision processes, over and above the fairness of the allocation (Bolton, Brandts, and Ockenfels, 2005).² Our study is the first, to the best of our knowledge, to experimentally look at preference for agency within and across households.

A large related literature looks at the efficiency of household decisions. Many papers, relying on natural, field, and laboratory experiments, show that income pooling fails, a situation that implies inefficient consumption choices (Duflo and Udry, 2004; Castilla, 2015; Chen, 2013; Iversen, Jackson, Kebede, Munro, and Verschoor, 2006; Kebede, Tarazona, Munro, and Verschoor, 2014).³ In the same vein, several experiments have varied the amount of information available to household members and found evidence of opportunism (Ambler, 2015; Castilla and Walker, 2013; Castilla, 2014; de Laat, 2014; Hoel, 2015).⁴ A number of authors have documented the negative efficiency consequences of mismatched preferences between spouses (Ashraf, Field, and Lee, 2014; Carlsson, Martinsson, Qin, and Sutter, 2009; Fiala, 2017; Schaner, 2012). Our contribution to this literature is to identify another possible source of inefficiency, namely demand for pure agency and willingness to disregard others' preferences within and across households.

A number of studies find that inefficiency in household decisions is lower when control over resources is more egalitarian between men and women (Deer and Twyman, 2012; Ashraf, 2009; Fiala, 2017). In an experiment over risky decisions by spouses, de Palma, Picard, and Ziegelmeyer (2009) show that the balance of power within the household is malleable. On these themes, our contribution is twofold. First, we clarify that procedural equality is not just about bargaining weights per se; it is also related to the way agency is allocated within the household. Second, we offer a novel experimental design to investigate whether people

² More generally, a large literature on incentives and sanctions demonstrate the presence of control aversion among some individuals (for an example, see Falk and Kosfeld (2006)).

³ Other income pooling tests are provided by Munro, Bateman, and McNally (2008); Bobonis (2009); de Brauw, Gilligan, Hoddinott, and Roy (2014); Robinson (2012), among others.

⁴ More generally, social preferences are shown to differ by gender. Eckel and Grossman (1998) provide experimental evidence that women are more selfless than men; that they exhibit solidarity and are even more generous when dealing with women than with men (Eckel and Grossman, 2001). Dasgupta and Mani (2015) find that while men feel entitled to use endowments they have earned for private consumption, women do not.

value agency and why. The approach is designed to distinguish different motives behind willingness to pay for agency. One such motive is others' imperfect knowledge of one's own preferences. We deal with this motive by varying the amount of information given to participants about their partner's preferences. Another motive is the partner's willingness to respect one own preferences, which lowers the need to pay for agency when the partner is informed. We tackle this issue by measuring these choices directly. We find that pent up demand for power and agency seems to be a manifestation of a lack of empowerment. The patterns we document are reminiscent of a recent study by [Verschoor, Kebede, Munro, and Tarazona \(2019\)](#) who find that decisions between spouses became more private and less cooperative when, contrary to the norm outside the experiment, wives are given more control over resource allocation in an experiment.

The paper is organized as follows. We start in Section 2 by discussing the relevance of our study in the context of Pakistan. Section 3 introduces our conceptual framework. To provide a stronger motivation for our research, we then offer evidence of the unequal distribution of executive and consultative agency within the households we study in Section 4. The details of our experimental design are presented in Section 5. Section 6 discusses empirical evidence from two sets of experimental sessions, additional evidence from a field experiment is presented in Section 6, while Section 7 concludes. A detailed description of the experimental protocols is given in the Online Appendix A.

2 Context

We begin by motivating the focus of our study through the provision of information about the broad issue of gender inequality; about the specific context in which our study takes place; and about our main outcome variable, decisions related to food consumption.

Women around the world lag behind men across a wide range of domains, from education and health to labor market and economic opportunities, and political empowerment.⁵ The Global Gender Gap Index captures all these dimensions of inequality and indicates that, overall, the gap that needs to be filled remains large: 31.4% globally ([Forum, 2020](#)). This average masks wide heterogeneity across countries and across domains. While large improvements have been made in guaranteeing equal access to schooling and health care for girls, women remain disadvantaged in terms of economic opportunities and political

⁵ For a review, see [Duflo \(2012\)](#).

participation: they occupy a small share of leadership positions both within institutions and in the private sector; their participation in the labor market is low and not improving over time; they earn on average 50% less than men in similar positions; and they have lower access to credit, land and financial products, which keeps them from reaping opportunities to improve their economic status.

South Asia, and Pakistan in particular, rank low across all dimensions of the Gender Gap index, with Pakistan ranking 151 out of 153 listed countries. Pakistan's ranking is lowest in terms of economic opportunities – which include labor force participation, the earnings gap, and the presence of women in managerial positions – and in terms of health outcomes – proxied by life expectancy and the sex-ratio at birth. Labor force participation among women is 25% compared to 85% among men ([Forum, 2020](#)). This is partly due to the widespread practice of *purdah* and restriction on female mobility: an estimated 65% of the women who do not work say they will not work if they have to go outside the home for it ([Field and Vyborny, 2016](#)). About 85% of women report having experienced physical or sexual violence (OECD data 2017, as reported in [Forum \(2020\)](#)) and indices of female rights to mobility or access to justice are among the lowest in the region. Average literacy in Pakistan stands at 62.3% in 2017-18, but there is considerable variation by gender with literacy rates of 72.5% for males aged 10 years and 51.8% among females ([Pakistan Ministry of Finance, 2018](#)). The gender gap in literacy is even wider in rural areas where only 40.5% women are literate compared to 66.3% men. These features make Pakistan a relevant setting in which to study demand for agency by women.

The above statistics mask large improvements in the past few decades, particularly in literacy rates. In 1981, the average literacy rates were 26.2% for people 10 years and above, with 16% women and 35% literate men ([Pakistan Ministry of Finance, 2018](#)). Large efforts have been made, by the government as well as donors and NGOs, to improve the status of women. Of particular relevance is the use of microfinance to direct loans towards women. It is widely believed that access to financial resources helps empower women. For this reason, we focus our attention on women who participate or have participated in microfinance programmes directed at women.

Our experiment focuses on food consumption choices. Dietary diversity in Pakistan is relatively limited. Nearly 70% of food expenditures are on cereals, dairy, sweeteners, and fats ([Malik, Nazli, and Whitney, 2015](#)). The staple Pakistani diet consists of wheat, rice, pulses, sugar and vegetables, with wheat providing nearly half of the daily caloric intake ([Malik, Nazli, and Whitney, 2015](#)). Milk and meat products are considered to be luxuries ([Hayat,](#)

Hussain, and Yousaf, 2016) and their consumption increases with per capita household income (Hayat, Hussain, and Yousaf, 2016) – but also when women have a greater say in household food expenditure (Hou, 2011). A study on dietary patterns in Pakistan found women to be high consumers of fat and sweet food compared to men (Safdar, Bertone-Johnson, Cordeiro, Jafar, and Cohen, 2014). These patterns, along with cultural norms restricting mobility and forcing women into a sedentary lifestyle, contribute to women in Pakistan being more susceptible than men to obesity, diabetes, and cardiovascular diseases (Mellin-Olsen and Wandel, 2014; Jafar, 2006). Medical studies show that dietary preferences in South Asia are very difficult to modify in spite of concerns about long term health (Lawton, Ahmad, Hanna, Douglas, Bains, and Hallowell, 2008; Wilson, 2010). These features make the consumption of food and drink a suitable vantage point from which to observe intra-household allocation decisions in our study country.

3 Conceptual framework

The economic literature on gender empowerment within the household has often focused on material welfare issues such as: are women better nourished, better clothed, and in better health (e.g., Dercon and Krishnan (2000); Fafchamps, Kebede, and Quisumbing (2009)); and do policy interventions cause women to get a larger share of household consumption (e.g., Lundberg, Pollak, and Wales (1997)). Underpinning this approach is an extensive theoretical literature on intrahousehold allocation, pioneered by Becker (1981) and refined by Browning and Chiappori (1998) and others (e.g., Browning, Chiappori, and Weiss (2014)). This literature depicts the household as a small economy with two (or more) agents. In this economy, any efficient allocation of consumption between agents can be represented as the solution to a social welfare maximization problem of the form:

$$\max_{\{c_h, c_w\}} \omega U_h(c_h) + (1 - \omega) U_w(c_w) \text{ subject to } p(c_h + c_w) = y \quad (1)$$

where ω is a welfare weight, c_i is the consumption vector of individual i , p is a price vector, y is total consumption expenditure, and the subscripts h and w stand for husband and

wife, respectively.⁶ All possible Pareto efficient allocations can be traced simply by varying ω . Larger values of ω correspond to higher utility for h and lower utility for w .⁷ Policy interventions are thought of as impacting the intrahousehold allocation of consumption by affecting welfare weights.

Less attention is placed on the *process* by which consumption choices are made within the household.⁸ What little attention is devoted to the internal decision process of the household focuses on its instrumental value, i.e., how it affects the division of material welfare between spouses. For instance, financial autonomy is seen as improving the material welfare of married women by increasing their ability to affect how household consumption is divided and labor market participation decided (e.g., [Field, Rigol, Schaner, and Moore \(2016\)](#)). Women's ability to conceal or ring-fence assets and income is similarly seen as enabling women to distort resource allocation in their favor (e.g., [Ashraf, Field, and Lee \(2014\)](#); [Jakiela and Ozier \(2015\)](#)).

Agency itself is not seen as having any intrinsic value – which is like saying that citizens judge forms of government solely by the laws and policies they generate and do not care whether they are ruled by a benevolent despot or a democratically elected government. In contrast, many non-economists view empowerment as letting people decide what to consume and how to lead their life – not just altering their material welfare. While the instrumental value of agency is rightfully acknowledged – agency is a means to an end – agency is also imbued of an intrinsic value: people want to be consulted, separately from the material outcome itself. This idea is central in Sen's conceptualization of welfare as capabilities, that is, all the choices available to individuals (e.g., [Sen \(1999\)](#)). In Sen's view, income is a capability because higher income means more consumption choice among privately provided goods. Similarly, amenities (e.g., public health facility, national park)

⁶ Applying the second welfare theorem to this setup yields the prediction that any efficient consumption allocation can be supported by splitting the total household endowment y into a share μy spent individually by the husband and a share $(1 - \mu)y$ spent by the wife. This result does not require that income be actually split between agents. But it predicts that any efficient allocation mimics a market equilibrium in which spouses each have a separate budget that they spend independently as they see fit.

⁷ Model (1) abstracts from household public goods but as long as U_h and U_w satisfy a property called transferable utility, public good consumption does not in general depend on ω (e.g., [Bergstrom \(1997\)](#)). In that case, model (1) can simply be rewritten in terms of spending out of income y net of expenditures on household public goods. The transferable utility property allows husband and wife to have different preferences w.r.t. household public goods (e.g., children expenditures). But it requires that rich women do not care more (or less) about household public goods (e.g., children) than poor women.

⁸ One important exception is the economic literature on domestic violence, which is seen as a way of manipulating the household decision process while directly affecting the subjective welfare of the victims (e.g., [Rao \(1997\)](#); [Bloch and Rao \(2002\)](#); [Pollak \(2004\)](#)).

increase welfare because they broaden the range of choices people have.

If people value agency for its own sake, why not give it to them? Possibly because people also like power, that is, the ability to decide for others.⁹ Imagine a contrario that spouses value agency but not power. Then decentralization of consumption decisions at the individual level is welfare-enhancing. Hence the most efficient organization of the household is to follow Chiappori's sharing rule, i.e., to allocate to each spouse a budget they spend as they like and let welfare weight parameter ω dictate the budget share parameter μ . As we will document in the next Section, this is not how many households are organized, suggesting that people may also value power for its own sake – not just for its instrumental value over μ .

To investigate these issues, we construct an experimental environment in which there is no conflict over resources themselves. People can only decide what they consume and what others consume. They cannot appropriate or destroy others' consumption, nor they can undo their decision at a later time. Efficiency requires that people consume the bundle that they prefer. If people do not value power, there is no reason to deviate from what others like and their preferences should be respected. If subjects value agency, they should be willing to pay to get what they want, either because agency has an instrumental or an intrinsic value. These two observations form the basis of our design.

If others are informed of my preferences and are known to respect my preferences, I should expect others to give me what I prefer – in which case agency has no instrumental value. I may nonetheless pay for agency if choosing myself has intrinsic value. This is best illustrated with an example familiar to all parents. Imagine a four year old in front of an ice-cream truck. The parent orders a chocolate ice-cream because she knows what the child likes. This invites recriminations from the child who insists on choosing himself. The parent having allowed this, the child chooses a chocolate ice-cream. In this example, the child sees *intrinsic* value in agency: he wants to make the choice and is willing to pay a 'cost' for it – in this case, to challenge the authority of the parent.

While the direct purpose of our experiment is to test the assumptions implicit in model (1), we also wish to contribute to the intrahousehold literature on female empowerment. The

⁹ People may impose their choices on others for different reasons. One is intrinsic demand for power: the person derives utility from controlling what others consume. Another is paternalism: imposing one's choices on others is seen as justified by for moral considerations or to improve the person's health or behavior (i.e., 'You will thank me later'). Our experiment is not designed to differentiate between these different motivations, so we do not discuss them further here.

policy objective is to achieve a more equitable distribution of resources and opportunities between men and women. Giving more agency to women is seen as a way of eliminating the power that men have over them. This agenda implicitly assumes that women have a repressed or ‘pent-up’ demand for agency that will express itself once women are freed from the oppression of their husbands. To investigate this idea, we design the experiment in such a way that women can exert agency without fear of being observed by men. This reduces the possibility that men may retaliate against women for choosing what they want to consume. Given this, we expect women to demand agency more than men in our experiment, either for instrumental reasons – they are accustomed to seeing their preferences denied by men – or because agency has intrinsic value. The experiment is designed to be able to distinguish between these two possible motivations.

By an inverse reasoning, individuals who have plenty of executive agency – e.g., male household heads in our study area – may insist on exerting power over others’ consumption choices, even menial ones. This would lead them *not* to accommodate the preferences of their wife or female dependents, and of women more generally. To investigate this possibility, we compare the failure to accommodate others’ preferences between men and women, within and across households.

It is also conceivable that women have internalized social norms that require them to defer choices to a man – or to their husband (e.g., [Dean and Jayachandran \(2019\)](#); [Banerjee, La Ferrara, and Orozco \(2018\)](#)). The same applies if women are ‘alienated’ in the sense that they do not see themselves as free agents capable of choice, a phenomenon that leads to a failure of aspiration (e.g., [Krishnan and Krutikova \(2013\)](#); [Alan, Ertac, and Mumcu \(2018\)](#); [Bernard, Dercon, Orkin, and Taffesse \(2016\)](#)). In both these cases, simply giving women a choice does not create demand for agency: women must first be convinced to shed their internalized norms and become free agents, something that we cannot hope to accomplish within the time frame of our experiment. Reciprocation is another possible motive for not exerting agency: if a woman’s material welfare goes up, she may relinquish more control to her husband to express thankfulness.

The empowerment literature makes another, somewhat hidden assumption, namely: men want power in the household but women do not. This assumption implies that giving more agency to women can only increase aggregate welfare: while men are assumed to abuse their power by not respecting women’s choices, women are expected to be more pro-social and refrain from taking advantage of newly found power to oppress men. Hence empowering women should not only increase equity, it should also improve intra-household

allocative efficiency. Our experiment tests this assumption as well.

4 Study setting

To motivate our experimental design, we begin by documenting how individual agency is distributed between married men and women in our study population. Our subjects are broadly representative of a bulk of the population in developing countries, i.e., living in large households with multiple income generating activities but a relatively low level of consumption and income (Fafchamps and Quisumbing, 2008). In such populations, decisions over everyday consumption are likely to impact welfare more than in prosperous societies where individual welfare depends more on durables and other large expenditures. To further strengthen the relevance of our findings, we focus on a Muslim country – Pakistan – where women are traditionally destined to remain under the control of an adult male, typically their father or husband (see also Bursztyn, Gonzalez, and Yanagizawa-Drott (2018)). If we are going to find pent-up demand for agency by women anywhere, this is as good a candidate as any.

All our female subjects are adult women in the Pakistan Punjab. Most of them are married and have children. Descriptive statistics on the samples of the two laboratory experiments – denoted as LAB1 and LAB2– and of the field experiment are presented in Table 1.¹⁰ The average female subject is 39 years old and about half are literate. Subjects belong to a household with an average monthly expenditure of little less than Rs. 19000 (\$190). Except for the LAB1 sample, which consists of micro-enterprise loan borrowers, more than three-quarters of the LAB2 and field experiment samples are housewives. A little under 75% of all three samples consist of women who are married to the household head.

< Table 1 here. >

We have data from questions administered to individuals from our three experiments by an

¹⁰ Consistent with recent literature, we consider replicating similar experiments in different variations and across different contexts as valuable for providing a breadth of contexts (Dupas, Karlan, Robinson, and Ubfal, 2018) and for assessing the generalizability of results, not only with respect to sample and context characteristics, but also to specific aspects of design (see, for example, Banerjee, Karlan, and Zinman (2015)).

independent enumerator firm.¹¹ Due to the private and subjective nature of the questions, interviews of female respondents were conducted face-to-face by female enumerators only. Care was taken to ensure that the respondents knew their responses would remain confidential. The protocol used to recruit experimental subject is described in more details in Section 3.2.

We document two different aspects of agency between men and women: the ability to make decisions autonomously, which we call executive agency; and being consulted in household decisions, which we call consultative agency.¹² Executive agency is measured by asking whether the respondent has to ask for permission when making decisions ranging from small consumption choices – e.g., buying ice cream for children – to major financial decisions – e.g., purchasing a durable good. Consultative agency is measured by asking respondents the extent to which their preferences and opinions are taken into account when the household makes decisions, ranging from children’s education and social visits, to the purchase of household goods and investment decisions. Consultation allows individuals to communicate their preferences to the decision maker. For presentation purposes, decisions are grouped into categories based on similarity of the decision.

Figure A1 in Appendix A presents summary statistics on the need to ask for permission for each of our two laboratory experiments. Averages are given for women in Panels A and B and for men in Panels C and D. Each bar represents the share of respondents answering that they need to ask for permission before making the specified decision. For presentation purposes, we sort decisions by economic importance. Two main findings emerge from the Figures. First, there is a large difference between men and women in the need to ask for permission: 62% to 73% of women in the LAB1&2 samples have to ask for permission, compared to 6% and 45% of their male partners ($p = .000$). Second, the need to ask for permission is increasing in the importance of the decision: the proportion of affirmative answers among women increases by 67 percentage points between the smallest and the largest consumption expenditure in our list. By comparison, the increase is only 13 percentage points for men. We see similar patterns among the women who participated in the field experiment – the need to ask permission increases by more than 50 percentage

¹¹ For the purpose of another research project, we asked identical questions to non-experimental subjects from the same study population. Their answers, not reported here to save space, are very similar, suggesting that the details of the experimental recruitment process can be ignored for the sake of the descriptive statistics reported here.

¹² The full list of agency questions is presented in Online Appendix B. The table also specifies from which samples we collect each measure.

points. These patterns support the idea that women have less executive agency than men, particularly for important decisions.¹³

Questions on consultative agency include the following decision categories: personal consumption or finance; children’s education and health care; household investment; and family planning. Figure A2 in Appendix A displays average answers to these questions broken down by category. The data show that women have some consultative agency, but their opinion and preferences are less taken into account for more important decisions. Similar findings arise using regression analysis with individual fixed effects. Taken as a whole, this evidence suggests that, in our study population, women have less agency than men on consumption decisions. In contrast, men have significant power to impose their consumption choices on female members of their household.

5 Experimental design

Having outlined the general principles behind our experimental design and introduced our study population, we now discuss the details of each of the three specific implementations presented in this paper. The first two are laboratory experiments; the third is part of a randomized controlled trial. All three experiments share common features. We first discuss the lab experiments. The field experiment is discussed later.

In the two lab experiments, each subject i is invited to select among several consumption bundles. Another person j is also invited to select a consumption bundle for i . Subject i is then offered a chance to pay something to ensure that they receive their selection. We expect i ’s willingness to pay for agency to be higher when the instrumental value of agency is larger – e.g., when j has little information about i ’s preferences and is less likely to respect those preferences.

To generate variation in the instrumental value of agency, we first vary j ’s relationship with i . In some treatments, j is a spouse or close household member; in others j is a stranger. We expect a stranger to be less informed about i ’s preferences, and less concerned about choosing the wrong bundle for i . Second, we vary the information that individual j is given about i ’s preferences. We expect an informed j to be more likely to accommodate i ’s preference when j cares about i – e.g., is a close relative or is otherwise altruistic. Hence

¹³ Regression analysis with individual fixed effects confirms that women are more likely to report having to ask for permission when decisions are more important.

the effect of information on accommodating i 's stated preferences should be larger between close relatives than among strangers. The experiment is designed to test these predictions directly.

To allow the expression of pent-up demand for agency, we design the experiment in such a way that j does not know whether or not i chooses to exert agency. To achieve this, we place male and female subjects in two different rooms with no communication between them during the whole duration of the experiment. Given that Pakistani society generally favors gender segregation, this turns out to be logistically unproblematic. It also makes it possible for subjects to hide, if they so wish, the nature of what they consumed – and thus whether or not they decided to overrule what j had chosen for them. Given these features, we expect demand for agency to be higher among subjects with pent-up demand for agency, such as women in our study population.

Our main design challenge is to make the choice of consumption bundle final. This rules out using cash or items that can be transferred to others after the experiment. To eliminate this possibility, consumption decisions are made on food items to be consumed on the spot. Although serving food and drinks in each experimental session represents a logistical challenge, it presents a number of advantages. First, the consumption of food and drink is perfectly rival and hence fits well with model (1). Second, in the typical household that participates to our study, both men and women have opportunities to influence what food and drinks others consume – men because they do most of the household purchases, and women because they do all the food preparation. Hence food and drink are a domain of choice over which both spouses have some experience of power and agency – and their consequences on intrahousehold welfare. Third, it is common for people to receive food and drink when visiting someone, but they do not always have a say on what they receive. This makes the choices made in the experiment feel natural to the subjects, a feature that should increase the external validity of our findings. Fourth, using food and drink consumed on the spot makes it possible for subjects to hide, if they so wish, the nature of what they consumed – and thus whether or not they overrule what their partner has chosen for them.

5.1 The first laboratory experiment

The first experiment (LAB1) was conducted in April 2015 in the city of Chakwal, Pakistan. There were 15 sessions with a total of 336 subjects. We invite female participants in a mi-

crofinance RCT and some of their randomly selected neighbors to come to a makeshift lab with their spouses. Those who cannot bring their husband are told to come accompanied by the adult male with the greatest power over her household's finances.¹⁴

Upon arrival, men and women are seated in separate rooms. Each male and female subject is then matched with a partner in the other room. Half of the women are matched with the male household member they came with – Family Match treatment; the other half are matched at random with a male participants from another household – Stranger Match treatment. Subjects in the Stranger Match treatment are never told the identity of the person they are matched with.

Each subject is then invited to taste each of three possible fruit juices, upon which they rank them by order of preference and select a flavor to be their preferred choice. Next, subjects are asked to guess their partner's ranking of the three flavors. Half of the subjects are then informed of the actual ranking of flavors by their partner, and asked to pick a juice for the partner, with that knowledge. However, they are not told whether their partner is also informed of their rankings. The rest of the subjects are not told their partner's rankings and asked to pick a flavor without having that information. Subjects are then told that a coin flip would determine whether they receive the juice they picked, or the juice picked by their partner for them. Before tossing the coin, however, subjects are offered the opportunity to instead consume half a glass of the juice of their own choice and forgo the coin toss. We also conduct three redistributive games to measure altruism: a dictator game; an ultimatum game; and a reverse dictator game. Answers to the three games are combined to obtain an index of altruism towards the partner. A detailed description of the experimental protocol is given in Online Appendix A1.

This design allows us to test the following hypotheses:

- H1 Do subjects know the preferences of their partner? This is achieved by comparing actual juice rankings with those guessed by the partner.
- H2 Do subjects respect the preferences of their partner? If they do not, this indicates a desire to override the partner's choice – i.e., a demand for power over the consumption of others. We investigate this in two ways: (1) we test whether uninformed subjects pick for their partner what they *guess* is their partner's preferred juice; and (2) we test whether informed subjects pick for their partner what they have been *told* is their

¹⁴ About 74.4% of the participants came with their spouse; 14.88% with their son and 10.72% with another male household members (for instance, brother, brother-in-law).

partner's preferred juice. We also break down the marginal effect of information depending on whether the subject initially guessed correctly or not. If women's demand for power is repressed within the household, their pent-up demand for power will translate into less respect for the preferences of their male partner in the Family matching treatment.

We also test a series of hypotheses regarding demand for agency:

- H3a Do subjects have a demand for agency? We investigate this by observing what proportion of subjects elect to receive half a glass of their juice pick.
- H3b Is there pent-up demand for agency among women? This is tested by comparing demand for agency between men and women, within and across households. If female demand for agency is repressed by the husband or male head of household and women have pent-up demand for agency, we should observe more willingness to pay for agency in the Family Match treatment since the physical separation of men and women in the experiment makes retribution unlikely.
- H3c Does the demand for agency increase with the instrumental value of agency, that is, the risk of not getting one's choice? To test this hypothesis, we first predict the probability that the subject's ranking is respected by their partner (i.e., H2a). Predictors include the various treatments –e.g., Stranger Match, Informed treatment. We then test whether there is more demand for agency when the predicted probability of getting the preferred pick is low.

5.2 The second laboratory experiment

The second lab experiment (LAB2) was conducted in April 2017 in 15 different villages of the Faisalabad district. A total of 30 lab sessions were conducted with 358 married couples. The design and general testing strategy remains the same as LAB1, but a number of modifications are introduced to verify the robustness of our initial findings and to introduce other sources of exogenous variation for identification purposes. The details of the experimental protocol are given in Online Appendix A2. The main modifications are the following:

1. The consumption bundle is expanded to include three food items and three beverages. The purpose of expanding the number of choices is to increase statistical power. Furthermore, the range of foods and beverages on offer is more varied than in the

first experiment, so as to increase the utility cost of not getting one's choice.¹⁵

2. All subjects play two rounds of the consumption game: one with their family partner, and one with one of the three stranger categories: Opposite Sex Stranger (OSS); Same Sex Stranger (SSS); or Computer Match (CM). The order of Family Match versus Stranger Match is randomized at the session level.¹⁶
3. Subjects are asked to guess the food and drink rankings of their spouse and their randomly assigned partner, but unlike in LAB1, guessing correctly is now incentivized: those who guess the preferred food *and* drink of the spouse or partner receive PKR 100; those who guess only one of them receive PKR 50. Others receive 0. Subject are then asked to select a consumption bundle for their partner – except in the Computer Match treatment for which this decision is too artificial. The computer, however, selects a bundle at random for each of its assigned partners.
4. As in the first experiment, some subjects are informed of the preference rankings of their partner before choosing a bundle for them. The subjects are informed of these rankings in both games, but they are not told whether their partner receives the same information about their own rankings. This aspect of the experiment does not apply to the Computer Match treatment.
5. The choice between a coin toss and half a glass is replaced by the following: Subjects are first told that they will receive the bundle selected for them by their partner, but they can forfeit a fraction of their show-up fee to get their own choice. Subjects are asked to make this decision for one of three possible forfeited amounts – 5PKR, 20PKR and 50PKR – equally randomized across subjects. Once a subject has made this choice, he/she is told what their partner has selected for them, and they are asked again if they want to pay (e.g., 5 PKR, 20 PKR or 50 PKR) to get what they have selected for themselves.¹⁷
6. We use a dictator game to measure altruism towards each of the two partners – the

¹⁵ Unlike in the first experiment, we no longer asked subjects to rank the available options and separately pick a consumption bundle – the top ranked item was taken as the subject's choice. The purpose of this modification was to simplify this part of the experimental design so as to make time for other features.

¹⁶ In half of the sessions, subjects start with the Family Match; the other half start with the Stranger Match. One third of the subjects are assigned to OSS, one third to SSS, and one third to CM.

¹⁷ At the end of the session, we used a coin toss to randomly select one of the two games each subject plays to determine what the subject consumes. A second coin toss determined whether the first agency or the second agency question determines their consumption bundle. This ensured that both agency decisions in both games are fully incentivized.

Family Match and the Stranger Match. Participants matched with the computer only play the dictator game with respect to their Family Match.

With incentivization we have a stronger test of hypothesis H1: we can now investigate whether guesses improve when subjects are compensated for making a correct guess. By incentivizing subjects to guess correctly we aim to eliminate the incentive to purposely misreport what they believe to be their partner's preferences. Hence this yields a more accurate test of demand for power in the uninformed case.

Regarding demand for agency, the presence of a wider range of partners not only introduces more variation in the instrumental value of agency (H3c), it also allows investigating whether the gender of the partner affects pent-up demand for agency. Including the computer as possible match reduces emotional considerations: presumably, subjects do not fear offending the computer's feelings or triggering a negative emotional response. This should yield an upper bound on the willingness to exert agency. More importantly, the new design also makes it possible to test demand for pure agency directly:

H3d Do subjects have a demand for pure agency and, if so, does this demand varies systematically with the subject's gender and that of their partner? This test is implemented by investigating what proportion of subjects are willing to pay to receive their selected bundle even when the food or drink that their partner selected for them is identical to what they selected for themselves. Demand for pure agency is a preference over the *process* by which a consumption bundle is selected, independently of the instrumental value of agency. Someone with a pent-up demand for agency may, under the protection of the experiment, pay to personally decide what they consume, without any interference from anyone.

To reiterate, we are testing two broad hypotheses. Through hypotheses H1 and H2, we aim to study how well household members know each other's preferences over individual consumption goods, and whether they respect those preferences if they know about them. By testing Hypotheses H3a, H3c and H3d, we test if individuals have demand for agency, that is, are they willing to pay for the certainty of getting a consumption bundle of their choice? We investigate this demand for agency by isolating the instrumental motive from the pure agency demand by testing if subjects are willing to *pay* to get their own choice even if they may already be getting their preferred consumption bundle. Hypothesis H3b furthers the scope of this study by allowing us to examine the differences in demand for agency between men and women within and across households.

In Appendix D we report sample sizes in each treatment cells for the two lab experiments (Tables D1 and D2). Sample size is smaller in LAB1 but the number of treatment cells is also smaller. Sample size is larger in LAB2, but it also has more treatment cells. We also present power calculations in Appendix D (Tables D3 and D4). These calculations all assume a dichotomous dependent variable since our variables of interest all have that form. Given the context and the attention that gender empowerment has received in policy circles, we expect gender differences to be large and treatment effects to be consequential. We see from the Tables that in the worst of cases, we still have enough power to detect a change of 26% percentage points.¹⁸ In most cell-to-cell comparisons, however, power is much higher, with a minimum detectable effect size of 8 to 18 percentage points for two-way splits and 12 to 26 percentage points for three-way splits, depending on the split. Power is in general higher in LAB2 than LAB1, due to the larger sample size. For direct gender comparisons, we can detect differences of 12.5% in LAB1 and 6-9% in LAB2. We feel that these values are well within the range of meaningful magnitudes that the literature and policy interest lead us to expect. We are not interested in detecting minute differences in pent-up demand for agency.

6 Empirical results from the lab experiments

We now report on our analysis of LAB1 and LAB2. The field experiment is discussed in the next section. Empirical results are presented in the order in which the various hypotheses were introduced in the previous section.

6.1 Knowledge of others' preferences

We first examine hypothesis H1, that is, whether subjects can accurately guess the rankings of other subjects. We compare these guesses to three benchmarks: perfect foresight; random guesses; and optimal guesses. Perfect foresight is when the respondent can perfectly predict the preferences of their partner. Random guesses ascribe a probability for each ranking equal to the frequency of that ranking among subjects. Formally, the choice frequencies are $\{p_1, p_2, p_3\}$ with $\sum p_k = 1$, a random guess picks choice k with probability p_k . It represents a lower bound on guessing accuracy – subjects should be able to do better than that. When

¹⁸ Using a cutoff significance level of 10% and a probability of detection (i.e., power) of 80%.

subjects are uninformed about the specific preferences of their assigned partner, the optimal guess is to pick the single most common rankings in the study population, perhaps differentiated by gender (Eckel, 2016). For instance, since 75% of subjects prefer soft drinks to other beverages, guessing ‘soft drink’ will be right 75% of the time when matched with an unknown subject. This assumes that subjects know what items are popular among other participants – but it does not require knowledge of all probabilities, only of the mode of each distribution. Subjects may approach this benchmark when they guess the rankings of a stranger. Finally, for those subjects matched with a computer in LAB2, we expect them to do no better than random guess.

In LAB1, subjects rank three items. Since guessing the top and bottom-ranked items automatically implies a guess about the third, guessing accuracy only takes three values: 0, 1, or 2 correct guesses. In LAB2, subjects rank three food items and three drinks, the maximum number of correct guesses is 4.¹⁹

Figures 1 and 2 displays the cumulative distribution of guessing accuracy in LAB1 and LAB2, respectively. Each Figure shows the number of correct guesses on the x axis and the cumulative proportion of observations on the y axis. If a cumulative distribution line lies below another, it means that guesses are more accurate. For comparison purposes, the Figures also include the cumulative distribution of random guesses and that of optimal guesses. In Figure 1, we see that LAB1 subjects do better than random guesses, but not by much. This may be because the consumption items used in this experiment are not strongly differentiated – which agrees with the observation that reported preferences are less differentiated than in the LAB2 experiment. We also note that when guessing the preferences of a stranger, subjects do less well than the optimal benchmark – possibly because subjects are unsure about the modal preference. Some subjects do better than optimal guessing when matched with a spouse of family member, suggesting that they have some information about their specific preferences. But we are far from perfect foresight: more than 40% of LAB1 subjects are unable to guess the top or bottom ranked item of their family member.

< Figure 1 here. >

< Figure 2 here. >

¹⁹ Except for in the Computer Match where subjects only guess the computer’s top ranked items. This mechanically limits the number of correct responses subjects can give to 2 instead of 4.

In contrast, LAB2 guesses are much better than random (Figure 2). This is probably because guessing is incentivized and preferences are more contrasted than in LAB1: indeed, 74% of subjects prefer the same dish and 75% prefer the same beverage. Subjects do not outperform optimal guessing, however: only 14 to 17% of subjects manage to guess their partner's rankings correctly, compared to 20% with optimal guessing.

To test whether differences between partner matching are statistically significant in terms of guessing performance, we regress guess quality on matching type. Since LAB1 subjects only play once while LAB2 subjects play twice, we have more observations for LAB2 subjects. To facilitate hypothesis testing, we include fictitious observations for random guesses and optimal guesses, and we use random guesses as the omitted treatment category. In this manner, coefficients on matching dummies can be interpreted as the percentage improvement over random guessing.

< Table 2 here. >

Results are presented in Table 2. Estimates for LAB1, presented in column 1, confirm that subjects in both matching treatments do significantly better than random guessing: the coefficients are both statistically significant. Optimal matching does best on average, but its coefficient is not statistically different from that of either family or stranger matching. We also note that women are better able to predict the preferences of their partner.

Results for LAB2 are qualitatively similar: subjects do better than random matching when paired with a human subject.²⁰ Subjects fail to beat the optimal guessing benchmark on average, and the shortfall is statistically significant whenever subjects are matched with a partner of the opposite sex, whether family member or stranger. Only when matched with a same sex partner is guessing accuracy not statistically different from optimal guessing. In LAB2 female subjects are not better at predicting their partner's rankings.

Taken together, these results indicate that individuals in our sample population know relatively little about the specific preferences of their family members: they are about equally bad at guessing the preference rankings of a family member as they are at guessing that of a stranger. This implies that agency over own consumption may have instrumental value, particularly for individuals who do not have the modal preference.

²⁰ See earlier footnote regarding computer matching.

6.2 Respect for others' preferences

We now turn to hypothesis H2. To recall, the sequencing of the experiment is as follows: subjects are asked to guess the preference rankings of their partner; half of the subjects are then informed of the preference rankings reported by their partner; and finally subjects select a consumption bundle for their partner. From the choices made by uninformed subjects, we can investigate whether participants pick for their partner what they guess is their partner's preferred bundle. From the choices made by informed subjects, we can investigate whether participants pick for their partner what they have been told is their partner's preferred bundle. In both cases, we are testing whether participants choose for their partner a consumption bundle that they believe – or know – to be their partner's preferred bundle.

We take *not* respecting the partner's preferences as a sign of demand for power. What this demand for power means has to be understood within the context of the experiment. A dominant individual accustomed to imposing his or her will on others may seek to do the same within the experiment – for them it is 'business as usual'. It is also conceivable that individuals who normally have little ability to impose their will on others, take advantage of the experiment to do so – thereby revealing a 'pent-up' demand for power.

Results are given in Table 3 and presented graphically in Figures 3 and 4 for LAB1 and LAB2, respectively.²¹ In all the Figures, males matched with a family member are the default category, which means that all the 5% and 10% confidence intervals reported the Figures can be compared directly with that category.

< Table 3 here. >

< Figure 3 here. >

< Figure 4 here. >

²¹ The regressions include as controls the amount given by the subject to his/her partner in the dictator game, and the amount received by the subject from his/her partner in the same game. We regard the amount given as proxying for altruism towards the partner. We include the amount received from the partner as possible proxy for the altruism that the subject expects from the partner – since subjects only discover what they receive from their partner at the end of the experiment, our measure is likely to contain measurement error. Omitting these variables does not change the results.

In column 1 of Table 3 we show estimates for uninformed participants in LAB1 and LAB2, respectively. The dependent variable is a dummy equal to 1 if the subject picks for the partner what they guessed the partner prefers. For LAB1, we see in Figure 3 that 71% of male subjects matched with a family member pick what they guess their partner prefers. This proportion falls by 12 percentage points for males matched with a female stranger, but the difference is not statistically significant. In contrast, women are on average 17 percentage points *less* likely than men to select what they guess is their partner's preferred juice, and this difference is statistically significant at the 5% level. A similar – though less precisely estimated – coefficient is found for female subjects matched to a stranger. Taken together this evidence suggests that most male participants respect what they believe to be their spouse's preferences. But some female participants, who normally have less executive agency than their husband, take advantage of the experiment to impose their choice on a male partner – a finding consistent with pent-up demand for power. We cannot, however, rule out the possibility that women are accustomed to decide what people eat at home and thus regard selecting food for others as their privilege. Either way, the evidence suggests significantly more demand for power among female than male participants.

In the second panel of Table 3 we report corresponding estimates for LAB2 subjects, combining choices of food and drink. As shown in Figure 4, among LAB2 uninformed male subjects, 82% pick the item that they guess their female family member prefers. This proportion falls by 10% when the wife is the decision maker – a difference that is statistically significant at the 1% level. This finding is similar to what was found for LAB1. Women are also less likely to pick their best guess when matched with a stranger male, but this difference is not statistically significant with respect to the male–Family match reference group. This confirms that demand for power by women is directed towards males, particularly if they are household members, a finding that is in line with pent-up demand for power over men, and especially over those who are better positioned to limit women's agency. Other coefficients are not significant.

In column 2 of Table 3 we report coefficient estimates for informed participants. Coefficient estimates are presented visually in Figures 5 and 6. Here the dependent variable equals 1 if the subject picks for the partner what the partner ranked highest. For LAB1 subjects, we find that 61% of male subjects accommodate the preference of a female family member, but only 35% of them accommodate the preference of a female stranger – a difference of 26 percentage points, significant at the 5% level (see Figure 5). The corresponding frequency

6. EMPIRICAL RESULTS FROM THE LAB EXPERIMENTS

for female subjects matched with a family member is a lower 55%, again suggesting that they are less likely to respect the preferences of their male partner. But women are more likely respect the preferences of a male stranger. The differences between male and female subjects are not statistically significant, however. A similar pattern is observed for LAB2 subjects (Figure 6): 77% of informed men pick their spouse's preferred food compared to 65% of women – a difference that is statistically significant at the 1% level. We also find that male subjects pay less respect to the preferences of strangers – significantly so for strangers of the opposite sex. These results suggest that both male and, to a greater extent, female subjects demand power over others.²²

< Figure 5 here. >

< Figure 6 here. >

Next we examine the effect of information depending on whether the subject initially guessed the preferred item of the partner or not. We have seen that many uninformed participants pick for their partner a bundle *different* from what they believe their partner wants. From the previous subsection, we also know that many subjects guess wrong. Given this, it is conceivable that subjects pick for their partner a good that they *erroneously* believe to be different from what the partner likes. Informing these subjects of their partner's true preferences could induce them to revise their selection *away* from what the partner likes, i.e., when informed they would be *less* likely to pick what their partner wants. For those subjects with pent-up demand for power, information could help reduce the frequency with which they respect their partner's preferences. We do not anticipate a similar effect

²² The experiment is not designed to distinguish whether subjects want power for its own sake or to pursue a paternalistic motive. We can nonetheless perform a simple check on the possible presence of a paternalistic motive. In South Asia, the risk of type II diabetes is high, leading many people to perceive sugary drinks as unhealthy. This newly emerging norm is further reinforced by the fact that Saudi Arabia, where many Pakistani migrate for work, has recently introduced a hefty 'sin tax' on sugary drinks. It is therefore conceivable that our experimental subjects override the preferences of others to stop them from consuming sugary drinks. To investigate this possibility, we re-estimate the LAB2 portion of Table 3 for drinks only to see whether this process can explain our results. We find no evidence in this direction. Soft drinks are the most popular drink – chosen by 75% of subjects – and rooh-afza, the second choice, is a local sugary drink chosen by 11.5% of subjects. The only non-sugary drink is water, which is selected by 13.5%. We find no evidence that subjects behave differently when their partner selects water instead of a soft drink. But the concentration on the soft drink choice suggests that avoiding sugary drinks has not yet become a social norms in our study area, hence our lack of power to identify a paternalistic motive.

among subjects who correctly guessed their partner's preferences, except perhaps for a positive confirmation effect: providing information confirms what the partner selected and comforts the subject in their choice.

To investigate these possibilities, we estimate the effect of the information treatment on the probability that the subject picks their partner's preferred bundle, *conditional* on whether the subject guesses the partner's top choice or not. Results are presented in Table 4. Observations are divided into two piles: those who guessed wrong and those who guess right. For both sets of observations we show how choices respond to information about true preferences of the partner. We find that, among LAB1 subjects who guess wrong, information increases the probability of picking the partner's choice. But the increase is only significant among male subjects matched with a family member. Among female subjects, the effect of information on picking the correct bundle is never significant, suggesting that women who guess wrong do not adjust their choice once informed of their mistake.

< Table 4 here. >

Among subjects who guess right, information has a more contrasted effect. We again find that male subjects matched with a family member are significantly more likely to pick the correct bundle. But male subjects matched with a stranger and female subjects matched with a family member are, if anything, less likely to pick the right juice if they see their initial guess confirmed in the information treatment. The effect is large in magnitude although not statistically significant. The contrast between the response to information between male and female subjects in the family matching is again consistent with pent-up demand for power directed towards male family members.

Some of these findings are replicated in the LAB2 experiment. We see that, on average, information significantly improves selection quality. We again find that men who guessed wrong revise their choice to accommodate a female family member's top choice. The magnitude of the difference is large – 27.4% – and it is statistically significant. In contrast, women who guess wrong are no more likely to pick their male family member's preferred item when informed than when uninformed. This does not mean that female subjects never respond to information: when matched with a male stranger, they revise their choice relative to their initial guess. But it means that they disregard the information they have been given when matched with a male relative.

For subjects who correctly guess the preference of their partner, providing information

should in principle have no effect on choice – except perhaps a positive confirmation effect. This is indeed what we find to male subjects in LAB2: information does not affect the likelihood of correct choices. In contrast, female subjects who guessed right are *less* likely to pick the correct juice when informed, suggesting that they revise their choice negatively. This pattern is not statistically significant, however.

Taken together, these results indicate that male and female participants to the experiment behave in different ways: female participants are less likely to respect the top choice of a male partner, suggesting a demand for power. We do not observe a similar behavior among men, at least within the confines of our food-and-drink experiment. It remains to be seen whether this pattern would repeat for larger decisions outside the traditional domain of women. We also find that subjects who guess wrong are more likely to revise their choice when informed of their partner’s preferences. But subjects who guess right are equally likely to pick wrong when informed. This suggests that picking the wrong choice is not due to uncertainty about preferences, it is a deliberate decision to override the partner’s choice.

6.3 Demand for agency

We now turn to the part of the experiment that investigates willingness to pay for agency. We start with hypotheses H3a and H3b. Demand for agency by gender and matching type is shown in Table 5 for the LAB1 and LAB2 experiments, pooling the informed and uninformed treatments. In LAB1, demand for agency equals 1 if the subject refuses the coin toss and prefers to receive half a glass of his/her preferred juice – and 0 otherwise. In LAB2, demand for agency equals 1 if the subject prefers to incur a monetary reduction of the show-up fee than receiving the food and drink that the partner has selected for them – and 0 otherwise.

We first note that a sizeable proportion of subjects in both experiments are willing to pay for agency: 23% in LAB1 and 26% in LAB2. The answer to hypothesis H3a is thus yes. There are, however, differences in pattern by gender and matching type across the two experiments. As illustrated in Figure 7, women in LAB1 are slightly less likely than men to demand agency when matched with a family member, but much less likely to do so when matched with a stranger. The latter difference is statistically significant. Other pairwise differences are not. It is unlikely that the fear of reprisal explains why women are less will-

ing to exert agency when matched with an anonymous stranger. Indeed, by experimental design, the identity of the stranger – who sits in another room – is never revealed and the risk of retribution is thus negligible. It is more likely that women have more demand for agency when matched with their husband or male guardian. We check the robustness of this finding below.

< Table 5 here. >

< Figure 7 here. >

In contrast (see Figure 8) LAB2 subjects all demand agency more often when matched with a stranger, whom subjects may expect to be less familiar with their specific preferences. For men, the magnitude of the difference is fairly small, but it is statistically significant relative to family matching. The difference is larger for women, 40% of whom prefer to forfeit part of their show-up fee to receive the food and drink of their choice rather than something selected by a stranger or a computer. We also note a large significant difference in willingness to pay for agency between male and female LAB2 subjects, across all matching types: female subjects are on average 56% more likely to pay for agency than men. Finally, subjects of both genders are less likely to pay for agency when matched with a stranger of the same sex instead of the opposite sex, but the difference remains largest for women.

< Figure 8 here. >

LAB2 subjects are given the opportunity to reject the random choice made by a computer. The reason for including this treatment is the concern that subjects may be reluctant to challenge the choice made by another subject, e.g., out of courtesy or for fear of offending them. If this is an issue, we expect more rejection of computer choices since they do not involve human intervention and the computer cannot possibly be ‘offended’ by rejection. We find no evidence of such concerns: the subjects’ propensity to reject the choice of the computer is not larger than that of a stranger of the opposite sex. This offers reassurance that observed willingness to pay for agency is not self-censored.

To throw more light on the LAB1 results on demand for agency among women, we take

advantage of a feature specific to the LAB1 experiment, namely, that all subjects play an ultimatum game against their assigned partner. Since the game is played using a strategy method, we know each subject's response to all possible offers – and we do not have to worry about endogeneity of rejection with respect to the amount offered. Rejection in the ultimatum game results in a monetary loss equal to the offer made. We can thus use the propensity to reject a partner's offer as an alternative measure of costly demand for agency.

We report the results obtained using as dependent variable a dummy equal to 1 if the subject rejects any of the offers made. Results are shown in Table C1 and illustrated in Figure 9. To err on the side of caution, we only use the 318 subjects who demonstrate a clear understanding of the ultimatum game, but similar results are obtained if we use all subjects.²³ We see that, as in Table 5, LAB1 subjects are less likely to challenge an offer made by a stranger. But we also find that female subjects are more likely to reject at least one of the offers made, irrespective of matching type: while only 36% of men reject at least one hypothetical offer made by an accompanying family member, 86% of women do so. Similarly, 29% of men reject at least one offer made by a stranger while the corresponding frequency among women is 78%. These findings mirror what we find for LAB2 subjects in Table 5 and Figure 8.

Similar qualitative results obtain if we use the total proportion of rejected offers as dependent variable, although the difference between men and women is smaller in magnitude. Indeed both male and female subjects in general accept the offers made, indicating that they collectively see rejection as a costly action they can ill afford. Yet women are much more likely than men to reject at least one offer, an action that is consistent with a quasi-symbolic desire to assert agency over the outcome of the game without risking losing too much.

< Figure 9 here. >

To recap, we find that female subjects often – though not always – display a higher willingness to pay for agency than men, providing some support for hypothesis H3b. Whether this captures pent-up demand is unclear: we cannot rule out the possibility that women in the study population feel entitled to reject any food selection imposed by men, perhaps

²³ Participants are asked to answer three hypothetical questions in which player 1 allocates a hypothetical amount to player 2, who then is asked to accept or reject this allocation. To assess understanding of the game, participants are given a score of 1 if they correctly identify the amount that Player 1 and Player 2 receive in each of the three test questions, and 0 otherwise. The great majority of subjects answer all questions correctly.

because they are used to exert agency on food preparation at home. The evidence from the ultimatum game nonetheless suggest that female demand for agency goes beyond protecting a small reserved domain of autonomy from husband interference. The evidence for pent-up demand for agency is even more compelling when combined with our earlier results on higher demand for power among female subjects.

6.4 Instrumental value of agency

Next we investigate hypothesis H3c, that is, whether demand for agency varies with its instrumental value. To this effect, we test whether subjects are more willing to pay for agency when the expected gain is larger. As we have seen, subjects are often unaware of their partner's preference rankings – and even when they are aware, they often choose to ignore them. Having executive agency over own consumption can thus increase the likelihood of receiving one's preferred bundle. The question is whether subjects are more willing to pay when the chance of getting their preferred bundle is lower.

To test this hypothesis, we construct a variable proxying for the expected instrumental value of ex ante agency A_i^b . How this proxy is constructed is described in detail in Appendix B, but the logic is simple: we start by using the choices made by partners in the experiment to predict what a rational expectation subject would expect to receive. The difference between this expectation and what the subject would choose for himself or herself is our proxy for the ex ante instrumental value of agency. We then regress ex ante demand for agency on this proxy variable. Estimation results are presented in Table 6. We see that in LAB2 subjects are significantly more likely to pay for ex ante agency when its instrumental value is high for the choice of food. In both LAB1 and LAB2 the instrumental value of the choice of drink is not statistically significant. The cost of agency, which is varied randomly across subjects in the LAB2 experiment, has the expected sign and is borderline significant. These findings are consistent with the idea that demand for agency is at least partly driven by instrumental considerations.

< Table 6 here. >

We nonetheless find that gender and matching dummies remain strong predictors of A_i^b , suggesting the presence of systematic variation in demand for agency that is not driven by its instrumental value. In particular, focusing on LAB2, we observe that men matched with

strangers are more likely to exert agency than men matched with their spouse or family member. The results also confirm our earlier finding from Table 5 on LAB2, namely, that women are more likely to exert agency than men in all stranger matching types.²⁴

To investigate the fundamental nature of demand for agency, we investigate hypothesis H3d using data collected in LAB2 only. In that experiment, we first ask subjects whether they wish to pay to receive the food and drink they have selected rather than what their partner has selected for them. Answers from this question were used to produce Tables 5 and 6. We then tell subjects what their partner has actually selected for them and we ask them again if they wish to pay to have what they themselves selected. We refer to answers to the first and second question as *ex ante* and *ex post* demand for agency, respectively. If demand for agency is driven solely by instrumental considerations, we should observe no demand for agency when the partner's choice matches the subject's. On the other hand, when the partner's choice is revealed to be different, we should observe an increase in *ex post* demand for agency relative to Table 5. In contrast, if subjects demand agency for its own sake, they may be willing to pay to get what they selected, even if it is the same as what their partner selected for them.

The top panel of Table 7 reports the proportion of subjects who demand *ex post* agency, broken down by male and female subjects and matching treatment. Results are also presented graphically in Figure C1. What we observe does not suggest that demand for *ex post* agency is solely driven by instrumental considerations. Among subjects whose partner selected the correct food and drink, 11% nonetheless elicit to pay for agency. At the same time, 83% of subjects (100% - 17% – see column 1 row 1) refrain from exercising agency even though they *know* that the partner has not selected what they prefer. In fact, only 53% of subjects who demanded agency *ex ante* still demand it *ex post* after discovering that their partner has *not* selected their preferred food and drink. This suggests reluctance in going against a specific decision made by someone else after having been informed of that

²⁴ We also examine whether demand for agency is stronger among younger women or among women married to a man more than ten years older than them. It is indeed widely believed that young women or women married to older men have less agency. To investigate this possibility, we reestimate Table 6 with interaction terms between the matching x gender dummy, and a dummy equal to one if the female subject is less than 30 years of age. In our sample population, the median female age is 32 and the 75 percentile in age gap is 10 years, so we have enough observations to identify a difference. We find no evidence that demand for agency differs between the two samples, either for men or women. We repeat the exercise for couples in which the age difference is ten years or more. We find the same pattern: the coefficients of interaction terms are small in magnitude and, except in one case out of 24, are not statistically significant. This suggests that demand for agency does not vary with household characteristics widely believed to affect female empowerment in our study area.

decision. We also find that, among those subjects who did not demand agency ex ante, only 4% of those who discover their partner got them the wrong food and drink decide to pay a small fee to get their preferred bundle. Furthermore, about the same proportion of subjects insists on exerting agency even when the partner gets their food or drink right. On the other hand, among those subjects who exerted agency ex ante, we find that 36% of them continue to exert agency ex post even when they are getting the right food and drink from their partner. Results are shown in Figure 11 and bottom panel of Table 7. These findings are difficult to reconcile with a pure instrumental value of agency: there is too much demand for agency when the partner's selection is correct, and not enough when the partner is wrong.

< Table 7 here. >

< Figure C1 here. >

< Figure 11 here. >

It remains that ex post demand for agency falls when the partner gets the correct food. To test this formally, we regress demand for ex post agency A_i^p on the actual value of agency – which is known by construction. The results, shown in Table 8, are not too dissimilar from those shown in Table 6: ex post demand A_i^p increases with the gain from agency and falls with the price of agency. But estimated coefficients are smaller than what pure instrumental motivations would imply. We also find that women are less likely than men to exert agency ex post when matched with a stranger, suggesting a reluctance in going against that person's decision. This suggests that at least part of the ex ante agency exercised by women in our experiment reflects pent-up demand for agency within the household, and that much of it is driven by non-instrumental considerations.²⁵

< Table 8 here. >

As a result of all the behavioral patterns documented here, a large proportion of subjects

²⁵ We also estimate Table 8 with interaction terms between matching x gender dummies and either female age less than 30, or age difference between spouse 10 or more. As for Table 6, the coefficients of the interaction terms are not statistically significant (except for one).

do not receive their preferred bundle. Part of this is due to the fact that their partner either does not know their preferences or chooses to ignore them; part is due to the fact that subjects do not focus their agency on situations when the expected or realized gain from agency is the largest. Put differently, subjects are not particularly good at targeting agency to situations where they are least likely to receive their preferred choice. For instance, in LAB2, ex ante agency increases the proportion of subjects who receive their preferred food and drink only from 48% to 62%. More surprising, ex post agency reduces this proportion to 56% – primarily because many women who chose to exert agency ex ante refrain from doing so ex post, even though their partner selected the wrong bundle.²⁶ This is quite remarkable given that, in the context of the experiment, individual consumption choices are deeply shrouded from their partners. This suggests that attitudes towards agency are internalized by subjects and at least partly enforced through internalized roles and norms.

7 The field experiment

In addition to the two lab experiments we have discussed, we implemented a simplified version of our design as a field experiment to verify the external validity of our lab findings. The detailed experimental protocol is given in the Online Appendix A3.²⁷

Subjects are clients of a rural microfinance institution participating to the randomized controlled trial of a microfinance product with credit and savings characteristics (see Afzal, d’Adda, Fafchamps, Quinn, and Said (2018) and Afzal, d’Adda, Fafchamps, Quinn, and Said (2019) for details). This means that the subject population is similar to that of lab experiments 1 and 2, i.e., primarily middle-aged women and their husband. The RCT spanned a period of one year, with a baseline survey at the beginning and an endline survey at the end. The experiment was conducted with 1991 respondents, 80% of whom were married.

In the baseline survey we told participants that, as a token of our appreciation for their participation in the RCT, at endline we would offer them a small monetary reward plus

²⁶ Without exercising agency, 52% of LAB2 female subjects would receive their preferred food and drink. This proportion rises to 68% when ex ante agency is taken into account; but it falls back to 59% with ex post agency instead. The corresponding proportions for men are 43%, 55% and 53% – confirming that reluctance towards ex post agency is virtually non-existent among male subjects.

²⁷ As is apparent in the Online Appendix A3, we also attempted to measure willingness to pay for agency in a hypothetical, non-incentivized way. This attempt, however, yielded results that suggest the questions were not fully understood or not taken seriously. They are omitted here.

one of three possible leather items engraved with initials of their choice. The three items to choose from were: a woman's purse; a man's wallet; and a child pencil case. A photograph is provided in Online Appendix C. The items were chosen to be relatively similar in quality and value, but to be desirable to induce potential competition between spouses. To further reinforce competition, the items were gendered – i.e., for an adult man or woman – except for the pencil case which can be regarded as a household public good from the point of view of the spouses. Initials were added to make the item individual-specific, so as to minimize resale and gifting the good to someone else.

A female enumerator asked each female participant to choose one of these three objects and to tell us which initials to inscribe on it – e.g., her initials on the purse, her husband's initials on the wallet, or her child's initials on the pencil case. The same question was separately asked to the husband by another enumerator. No further action was taken at baseline.

One year later at endline, we revisited both husband and wife and offered them the following choices. We reminded the husband of the item he had chosen at baseline, and asked him to confirm or revise his choice. We told him that a coin toss would decide whether the household would receive his preferred item or his wife's preferred item. We then asked him whether he wished to delegate the final choice of item to his wife. To those who refused, we asked whether they were willing to delegate the choice to their wife in exchange for a monetary transfer. Two price levels (50 PKR and 200 PKR) were offered to those who refused.

We separately told each wife that a coin toss would determine whether we offer her household the item she had chosen at baseline, or the item her husband has just selected.²⁸ We told the wife that she could secure her chosen item by forfeiting a fraction of the monetary compensation for participating in the study. Two separate price levels were offered, and responses are recorded for both. These choices were offered to each female participant even if her husband decided to delegate the choice to her. We then revealed whether her husband had delegated the choice to her, in which case the female participant received what she selected and forfeited nothing. If the husband had not delegated, we first selected one of the two price levels using a coin toss. If the coin toss yielded a decision not to pay for

²⁸ Efforts were made during data collection to prevent communication between husband and wife while the two interviews were ongoing separately. Given the logistical difficulty of preventing communication between spouses in a field setting, we cannot however rule out that communication took place between some of the participants.

executive agency, we proceeded to a second coin toss to determine whether the offered item was her choice or her husband's. Otherwise the female participant forfeited the selected amount from her participation fee, and received the item of her choice.

This design allows us to test hypotheses H3a and H3b. For the latter we use the fact that, with a one year interval between the two surveys, there is ample time for spouses to share information about their baseline choices. We also observe altruism in the baseline choice: since the items are gender-specific, altruistic husbands can select the purse and altruistic wives can select the wallet. Each spouse can also select the pencil case for one of their children. The novelty of this design is that it allows investigating demand for power as follows:

H2b Are husband willing to pay for power over their wife's consumption? We investigate this question by examining the proportion of husbands who refuse to delegate the choice of item to their wife, and by testing whether this refusal can be reversed by the offer of a monetary transfer.

Sample size and power calculations are reported in Appendix B (Tables D5 and D6). Given the large sample size, we can detect fairly small effect sizes – of the order of 4 percentage points for the effect of the treatment on agency, 3.5 percentage points for the cost of agency on its own, and 5.8 percentage points for their combination. Regarding the husband's willingness to defer to his wife, we can detect effects as small as 0.9 percentage points with 80% probability.

8 Empirical results from the field experiment

We first look at the gift selections made by husbands and wives. The purse is most popular, being selected by 81% of women and 64% of men. The wallet comes second, selected by 32% of men and 15% of women. Only 4% of men and women select the pencil case. There is considerable overlap between the choices made: 73% of couples select the same gift. Participants seem aware of this on average: 72% of women and 69% think their spouse has made the same selection as them. These beliefs, however, are only true 59% to 63% of the time, respectively. Moreover, beliefs are not aligned across spouses: 57% of couples both believe their selections are identical, 17% both believe they each selected different things, and 27% have misaligned beliefs, i.e., one spouse thinks the other has selected the same

8. EMPIRICAL RESULTS FROM THE FIELD EXPERIMENT

thing, and the other thinks the opposite. This means that in 43% of the couples at least one spouse believes that they have selected different things. This creates space for instrumental value of agency, which we capture with a dummy M_i equal to 1 if individual i believes that his/her spouse has selected the same gift and 0 otherwise.

In Table 9 we regress the husband's refusal to delegate on M_i . We also include a dummy T_i if i 's household was assigned to the microfinance treatment and 0 otherwise. Only 16 husbands opt for the coin toss and refuse to fully delegate the choice of gift to their wife, providing little support for hypothesis H2b. Yet we find that a husband is significantly more likely to delegate when he believes his wife selects the same gift as him – a finding in line with the instrumental value of agency. It remains that 31% men believe their wife selected a different gift, and only a small fraction of them refuse to delegate the gift choice to their wife. In LAB1 and LAB2 we found that many subjects – including men – disregard the stated preferences of their spouse. Here we find overwhelming willingness to delegate. A possible interpretation is that process matters: if male subjects are explicitly asked to defer to their wife, many agree to do so – especially in the context of a female-oriented microfinance intervention. But if they are not asked to defer, they happily impose their own preferences. We also find that, among the 16 men who refuse to delegate, only 2 agree to delegate in exchange for PKR50 and 3 for PKR200 – an amount equivalent to 40% of the value of the gift. This suggests of those men who refuse to delegate, most are animated by motives not amenable to financial compromise.

< Table 9 here. >

In Table 10 we estimate a similar regression for women's decision to forfeit money so as to receive their preferred gift. Since each woman makes this decision twice – once facing a price of PKR50 and once with PKR200 – the estimated regression combines both decisions.²⁹ Most women pay for agency: 77% when the price of agency is PKR50, 61% when it is PKR200 (i.e., 40% of the full cost of the gift). These proportions are much higher than the 28% of women who believe that their husband chose something else. We nonetheless find support for the instrumental value of agency: a woman who believes her husband chose the same gift as her is 4 percentage points less likely to pay for agency. We also find responsiveness to the cost of agency.

²⁹ To allow for possible correlation between the two agency decisions, standard errors are clustered at the individual level.

< Table 10 here. >

Regarding the effect of being offered the microfinance treatment, we see that women invited to participate are 4 percentage points less likely to demand agency. Combined with the observation that average demand for agency is high, we conclude that pent-up demand for agency is high among participating women, but women empowered by the microfinance intervention feel slightly less need to pay for agency. This interpretation is consistent with the idea that empowerment reduces pent-up demand for pure agency, and with existing evidence on the positive impact of access to finance on female empowerment (Ashraf, Karlan, and Yin, 2010). Finally, we find that women who selected the pencil case are significantly more likely to pay to make sure they get it. This latter finding is consistent with the empirical evidence suggesting that women with more agency or financial power tend to spend more on their children.

9 Conclusion

In this paper we have experimentally investigated demand for agency within households. Using two lab experiments and one field experiment, we have tested specific hypotheses regarding demand for agency and power within and across households. We have investigated whether individuals know and respect the preferences of others, and whether subjects have pent-up demand for agency.

Contrary to what is regularly assumed in much intrahousehold analysis, we find evidence that spouses are often ill-informed about each other's consumption preferences. Also, they are often no better at guessing their spouse's preferences than those of a random stranger. We also find a surprisingly high propensity for subjects to disregard what they believe or know about each others' preferences. Women in particular are more likely than men to disregard information about their male relative's preferences. This is true even though, given our setting, there is little reason to suspect subjects of wanting to impose consumption choices on others 'for their own good' or to follow moral precepts. We interpret this finding as suggestive of pent-up demand for power, that is, for imposing on others a consumption bundle that knowingly deviates from their preferences.

We find significant evidence of demand for agency in all three experiments. Some of the

observed variation can be explained by differences in the instrumental value of agency or in the cost of exercising agency. But subjects often make choices that are incompatible with a pure instrumental motive. In particular, we find many subjects willing to pay for agency even when they are informed that the choice made by their partner is the same as theirs. We take this evidence as suggesting a pure demand for agency, i.e., a willingness to pay for having executive agency over consumption choices, irrespective of their material consequences. These findings add to the experimental evidence that people do not just have preferences over material outcomes (as captured by a utility function); they also have preferences over the process by which these material outcomes are achieved. Much of the existing evidence involves moral considerations – e.g., the willingness to punish (e.g., [Charness and Rabin \(2002\)](#)) or the desire to redistribute (e.g., [Zizzo and Oswald \(2012\)](#)). In this paper, we find evidence of demand for agency for its own sake, not simply to pursue a material goal.

We set out to study pent-up demand for agency among Pakistani women, who are often believed to be under the domination of a male member of their household – e.g., their father or their husband. The evidence we uncover suggests that the relationship between gender and agency is more complex than initially recognized. First, the fact that household members often ignore – or choose to ignore – each other’s consumption preferences is a surprising finding which, a priori, confers much instrumental value to individual executive agency over own consumption. While demand for agency responds to the benefits and costs of agency among both men and women, we also find female subjects in our study population to be equally or more willing to exert agency than their male counterparts. This is true in spite of the fact that, when asked about executive and consultative agency within the household, our study population appears strongly patriarchal.

What have we learned about demand for agency? Men and women seem to value making consumption choices for themselves and others, over and beyond what these choices imply for their own material consumption. The process by which consumption is decided seems to be an important consideration for intrahousehold welfare – and this includes women wanting to impose their choice on men nearly as much as men wanting to impose their choice on women. To an economist, these tendencies are disturbing because they imply that, even in relatively poor households such as those we study, people are willing to reduce allocative efficiency in consumption simply to assuage a desire for power and agency. More research is needed on preferences over process in intrahousehold decisions and on their effect on material and subjective welfare.

Results from the field experiment throw additional light on how ‘pent-up demand’ for agency should be interpreted, at least in the context of our experiments. Based on survey questions, the women in our study population have little executive agency within their own household. Our experiments give them an opportunity to manifest a repressed desire to make choices for themselves – and others. Pent-up demand for power and agency is thus a manifestation of lack of empowerment, a venting off steam, so to speak. It suggests that, given the opportunity, individuals who have little say over household decisions that affect them directly are willing to engage in inefficient actions – such as paying to receive items that someone else had already selected for you, or deliberately forcing others to consume things they do not prefer. Seen in this light, the patterns we document here are reminiscent of those documented by [Jakiela and Ozier \(2015\)](#): the authors showed that women prefer making a low return investment that is hidden from their spouse than a high return investment that is observable to others in the household. When the evidence is taken together with ours, it suggests that people who feel unempowered are willing to make inefficient – and potentially destructive – choices in order to achieve a degree of agency over their consumption. If this interpretation is correct, empowering women (and other household members) should reduce pent-up demand for agency and power, and as a result has the potential to reduce inefficiency in the intrahousehold allocation of resources.

References

- AFZAL, U., G. D’ADDA, M. FAFCHAMPS, S. QUINN, AND F. SAID (2018): “Two Sides of the Same Rupee? Comparing Demand for Microcredit and Microsaving in a Framed Field Experiment in Rural Pakistan,” *The Economic Journal*, 128(614), 2161–2190.
- (2019): “When Nudge Turns to Shove: A Field Experiment Adding Commitment Features to a Commitment Savings Product,” mimeo, Oxford University.
- ALAN, S., S. ERTAC, AND I. MUMCU (2018): “Gender Stereotypes in the Classroom and Effects on Achievement,” *The Review of Economics and Statistics*, 100(5), 876–890.
- ALDERMAN, H., P. CHIAPPORI, L. HADDAD, J. HODDINOTT, AND R. KANBUR (1995): “Unitary versus Collective Models of the Household: Is It Time to Shift the Burden of Proof?,” *The World Bank Research Observer*, 10(1), 1–19.
- AMBLER, K. (2015): “Don’t tell on me: Experimental evidence of asymmetric information in transnational households,” *Journal of Development Economics*, 113, 52–69.
- ANDERSON, S., AND J. BALAND (2002): “The Economics of ROSCAs and Intrahousehold Resource Allocation,” *The Quarterly Journal of Economics*, 117(3), 963–995.

- ANDREWS, I., AND M. KASY (2019): "Identification of and Correction for Publication Bias," *American Economic Review*, 109(8), 2766–94.
- ASHRAF, N. (2009): "Spousal control and intra-household decision making: An experimental study in the Philippines," *American Economic Review*, 99(4), 1245–1277.
- ASHRAF, N., E. FIELD, AND J. LEE (2014): "Household Bargaining and Excess Fertility: An Experimental Study in Zambia," *American Economic Review*, 104, 2210–2237.
- ASHRAF, N., D. KARLAN, AND W. YIN (2010): "Female Empowerment: Impact of a Commitment Savings Product in the Philippines," *World Development*, 38(3), 333–344.
- BAKHTIAR, M. (2019): "Sharing the Pie: Undernutrition, Intra-household Allocation, and Poverty," Unpublished phd thesis, University of Maryland.
- BANERJEE, A., D. KARLAN, AND J. ZINMAN (2015): "Six Randomized Evaluations of Microcredit: Introduction and Further Steps," *American Economic Journal: Applied Economics*, 7, 1–21.
- BANERJEE, A., E. LA FERRARA, AND V. OROZCO (2018): "The Entertaining Way to Behavioral Change: Fighting HIV with MTV," mimeo.
- BARTLING, B., E. FEHR, AND H. HERZ (2014): "The Intrinsic Value of Decision Rights," *Econometrica*, 82(6), 2005–2039.
- BECKER, G. S. (1981): *A Treatise on the Family*. Harvard UP, Cambridge Mass.
- BEHRMAN, J. (1993): "Intrahousehold distribution and the family," in *Handbook of Population and Family Economics*, ed. by M. R. Rosenzweig, and O. Stark, vol. 1, Part A, chap. 04, pp. 125–187. Elsevier, 1 edn.
- BERGSTROM, T. C. (1997): "A Survey of Theories of the Family," in *Handbook of Population and Family Economics*, ed. by M. R. Rosenzweig, and O. Stark, pp. 21–79. North-Holland, Amsterdam.
- BERNARD, T., S. DERCON, K. ORKIN, AND A. TAFESSE (2016): "The Future in Mind: Aspirations and Forward-Looking Behaviour in Rural Ethiopia," CSAE Working Paper Series 2014-16, Centre for the Study of African Economies, University of Oxford.
- BLOCH, F., AND V. RAO (2002): "Terror as a bargaining instrument: A case study of dowry violence in rural India," *American Economic Review*, 92(4), 1029–1043.
- BOBONIS, G. (2009): "Is the Allocation of Resources within the Household Efficient? New Evidence from a Randomized Experiment," *Journal of Political Economy*, 117(3), 453–503.
- BOLTON, G., J. BRANDTS, AND A. OCKENFELS (2005): "Fair Procedure: Evidence from Games Involving Lotteries," *The Economic Journal*, 115, 1054–1076.
- BROWN, C., R. CALVI, AND J. PENGLASE (2020): "Sharing the Pie: Undernutrition, Intra-household Allocation, and Poverty," mimeo.
- BROWNING, M., F. BOURGUIGNON, P.-A. CHIAPPORI, AND V. LECHENE (1994): "Income and Outcomes: A Structural Model of Intrahousehold Allocation," *Journal of Political Economy*, 102(6), 1067–1096.

- BROWNING, M., AND P.-A. CHIAPPORI (1998): "Efficient Intra-Household Allocations: A General Characterization and Empirical Tests," *Econometrica*, 66(6), 1241–1278.
- BROWNING, M., P.-A. CHIAPPORI, AND V. LECHENE (2010): "Efficient Intra-Household Allocations: A General Characterization and Empirical Tests," *Economic Journal*, 120(545), 786–799.
- BROWNING, M., P.-A. CHIAPPORI, AND A. LEWBEL (2013): "Estimating Consumption Economies of Scale, Adult Equivalence Scales, and Household Bargaining Power," *Review of Economic Studies*, 80(4), 1267–1303.
- BROWNING, M., P.-A. CHIAPPORI, AND Y. WEISS (2014): *Economics of the Family*. Cambridge University Press, Cambridge.
- BURSZTYN, L., A. L. GONZALEZ, AND D. YANAGIZAWA-DROTT (2018): "Misperceived Social Norms: Female Labor Force Participation in Saudi Arabia," mimeo.
- CAMERER, C. F., A. DREBER, E. FORSELL, T.-H. HO, J. HUBER, M. JOHANNESSON, M. KIRCHLER, J. ALMENBERG, A. ALTMEJD, AND T. CHAN (2016): "Evaluating replicability of laboratory experiments in economics," *Science*, 351(6280), 1433–36.
- CARLSSON, F., P. MARTINSSON, P. QIN, AND M. SUTTER (2009): "Household Decision Making and the Influence of Spouses' Income, Education, and Communist Party Membership: A Field Experiment in Rural China," Scholarly Paper 1395246, SSRN.
- CASTILLA, C. (2014): "What's yours is mine, and what's mine is mine: Bargaining power and income concealing between spouses in India," Working paper.
- CASTILLA, C. (2015): "Trust and Reciprocity between Spouses in India," *American Economic Review*, 105(5), 621–624.
- CASTILLA, C., AND T. WALKER (2013): "Trust and Reciprocity between Spouses in India," *American Economic Review*, 103, 263–268.
- CHARNESS, G., AND M. RABIN (2002): "Understanding Social Preferences with Simple Tests," *Quarterly Journal of Economics*, 117(3), 817–816.
- CHEN, J. (2013): "Identifying Non-cooperative Behavior among Spouses: Child Outcomes in Migrant-sending Households," *Journal of Development Economics*, 100(1), 1–18.
- CHIAPPORI, P.-A. (1997a): "Intrahousehold Resource Allocation in Developing Countries: Methods, Models and Policy," in *Collective Models of Household Behavior: The Sharing Rule Approach*, ed. by J. H. Lawrence Haddad, and H. Alderman. IFPRI, Washington D.C.
- (1997b): "Introducing Household Production in Collective Models of Labor Supply," *Journal of Political Economy*, 105(1), 191–209.
- CHRISTENSEN, G., AND E. MIGUEL (2016): "Transparency, Reproducibility, and the Credibility of Economics Research," NBER Working Papers 22989, National Bureau of Economic Research, Inc.
- DASGUPTA, U., AND S. MANI (2015): "Only Mine or All Ours: Do Stronger Entitlements Affect Altruistic Choices in the Household," *World Development*, 67, 363–375.

- DE BRAUW, A., D. GILLIGAN, J. HODDINOTT, AND S. ROY (2014): "The Impact of Bolsa Família on Women's Decision-Making Power," *World Development*, 59, 487–504.
- DE LAAT, J. (2014): "Household Allocations and Endogenous Information: The case of split migrants in Kenya," *Journal of Development Economics*, 106, 108–117.
- DE PALMA, A., N. PICARD, AND A. ZIEGELMEYER (2009): "Individual and Couple Decision Behavior under Risk: Evidence on the Dynamics of Power Balance," *Theory and Decision*, 70(2), 45–64.
- DEAN, J., AND S. JAYACHANDRAN (2019): "A Family Affair: Family Members' Role in Female Employment Decisions in India," mimeo., Northwestern University.
- DEATON, A., AND C. PAXSON (1998): "Economies of Scale, Household Size, and the Demand for Food," *Journal of Political Economy*, 106(5), 897–930.
- DEER, C. D., AND J. TWYMAN (2012): "Asset Ownership and Egalitarian Decision Making in Dual-headed Households in Ecuador," *Review of Radical Political Economics*, 44(3), 313–320.
- DERCON, S., AND P. KRISHNAN (2000): "In Sickness and in Health: Risk Sharing within Households in Rural Ethiopia," *Journal of Political Economy*, 108(4), 688–727.
- DUFLO, E. (2012): "Women Empowerment and Economic Development," *Journal of Economic Literature*, 50(4), 1051–79.
- DUFLO, E., AND C. UDRY (2004): "Intrahousehold resource allocation in Cote d'Ivoire: Social norms, separate accounts and consumption choices," Working Paper 10498, National Bureau of Economic Research.
- DUPAS, P., D. KARLAN, J. ROBINSON, AND D. UBFAL (2018): "Banking the Unbanked? Evidence from Three Countries," *American Economic Journal: Applied Economics*, 10(2), 257–97.
- ECKEL, C. (2016): "Making Decisions for Others: The Consequences of Gender Stereotypes," mimeo., Texas A & M.
- ECKEL, C. C., AND P. J. GROSSMAN (1998): "Are Women Less Selfish than Men?: Evidence from Dictator Experiments," *The Economic Journal*, 108(448), 726–735.
- (2001): "Chivalry and Solidarity in Ultimatum Games," *Economic Inquiry*, 39(2), 171–188.
- FAFCHAMPS, M., B. KEBEDE, AND A. R. QUISUMBING (2009): "Chivalry and Solidarity in Ultimatum Games," *Oxford Bulletin of Economics and Statistics*, 71(4), 567–599.
- FAFCHAMPS, M., AND A. R. QUISUMBING (2008): "Household Formation and Marriage Markets," in *Handbook of Development Economics Volume 4*, ed. by T. P. Schultz, and J. Strauss. Elsevier.
- FALK, A., AND M. KOSFELD (2006): "The Hidden Cost of Control," *The American Economic Review*, 96(5), 1611–1630.
- FEHR, E., H. HERZ, AND T. WILKENING (2013): "The Lure of Authority: Motivation and Incentive Effects of Power," *The American Economic Review*, 103(4), 1325–1359.

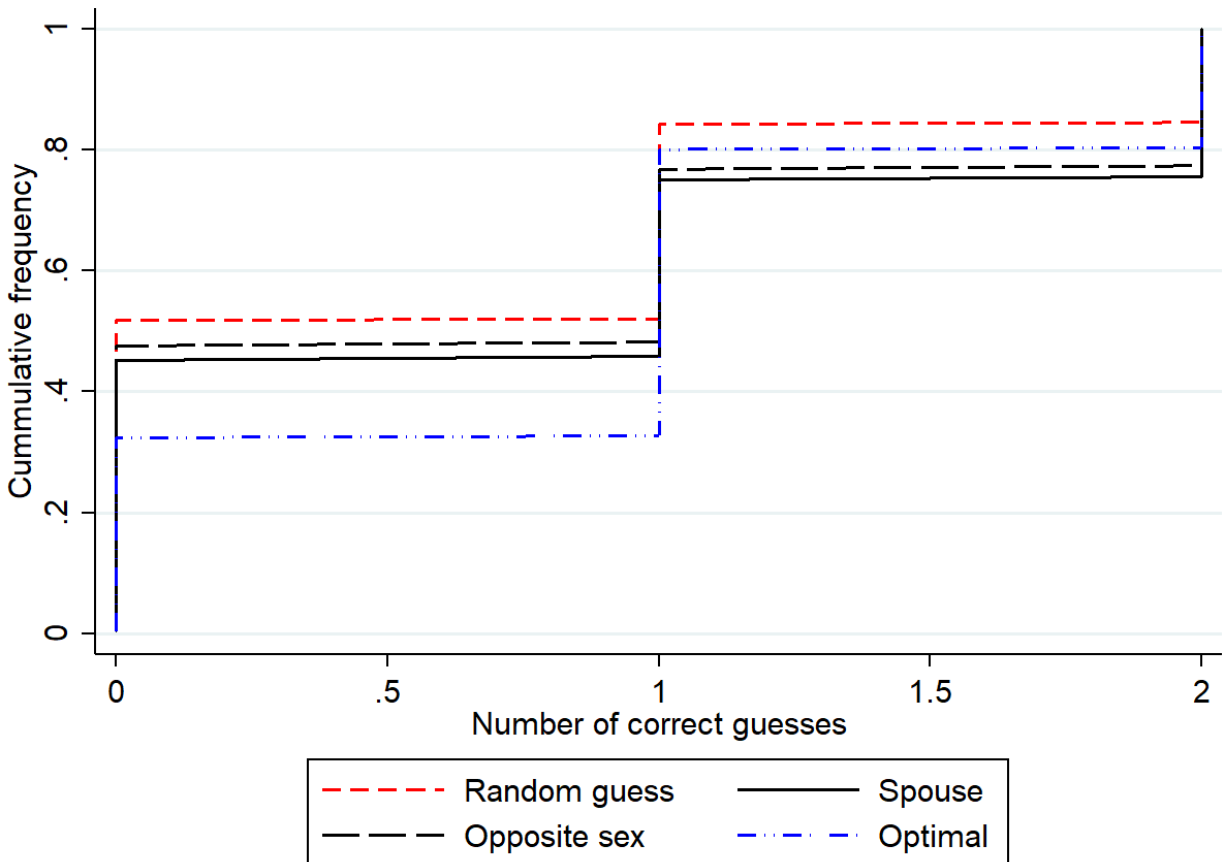
- FERRO-LUZZI, A., C. SCACCINI, S. TAFFESE, B. ABERRA, AND T. DEMEKE (1990): "Seasonal Energy Deficiency in Ethiopian Rural Women," *European Journal of Clinical Nutrition*, 44(1), 7–18.
- FIALA, N. (2017): "Business is tough, but family is worse: The role of family constraints on microenterprise development in Uganda," mimeo., The World Bank.
- FIELD, E., N. RIGOL, S. SCHANER, AND C. T. MOORE (2016): "On Her Account: Can Strengthening Women's Financial Control Boost Female Labor Supply?," Working Paper.
- FIELD, E., AND K. VYBORNY (2016): "Female Labor Force Participation: Pakistan Country Study for the Asian Development Bank," Policy brief, Asian Development Bank.
- FORUM, W. E. (2020): "Global Gender Gap Report 2020," Technical report, World Economic Forum.
- GLENNERSTER, R., C. WALSH, AND L. DIAZ-MARTINA (2018): *A Practical Guide to Measuring Women's and Girls' Empowerment in Impact Evaluations*. J-Pal, Boston.
- GÜTH, W., AND H. WECK-HANNEMANN (1997): "Do People Care about Democracy? An Experiment Exploring the Value of Voting Rights," *Public Choice*, 91, 27–47.
- HADDAD, L., J. HODDINOTT, AND H. ALDERMAN (1997): *La Pensee Sauvage*. Johns Hopkins University Press, Baltimore and London.
- HAYAT, N., A. HUSSAIN, AND H. YOUSAF (2016): "Food Demand in Pakistan: Analysis and Projections," *South Asia Economic Journal*, 17(1), 94–113.
- HODDINOTT, J., AND L. HADDAD (1995): "Does Female Income Share Influence Household Expenditures? Evidence from Cote d'Ivoire," *Oxford Bulletin of Economics and Statistics*, 57(1), 77–96.
- HODDINOTT, J., S. SANDSTRÖM, AND J. UPTON (2018): "The Impact of Cash and Food Transfers: Evidence from a Randomized Intervention in Niger," *American Journal of Agricultural Economics*, 100(4), 1032–1049.
- HOEL, J. B. (2015): "Heterogeneous Households: A Within-subject Test of Asymmetric Information between Spouses in Kenya," *Journal of Economic Behavior & Organization*, 118, 123–135.
- HOU, X. (2011): "Women's Decision Making Power and Human Development Evidence from Pakistan," Policy research working paper 5830, The World Bank.
- IVERSEN, V., C. JACKSON, B. KEBEDE, A. MUNRO, AND A. VERSCHOOR (2006): "What's Love Got To Do With It? An Experimental Test of Household Models in East Uganda," Discussion Papers in Economics 06/01, Royal Holloway University of London.
- (2011): "Do Spouses Realise Cooperative Gains? Experimental Evidence from Rural Uganda," *World Development*, 39(4), 569–578.
- JAFAR, T. H. (2006): "Women in Pakistan have a greater burden of clinical cardiovascular risk factors than men," *International journal of Cardiology*, 106(3), 348–354.
- JAKIELA, P., AND O. OZIER (2015): "Does Africa Need a Rotten Kin Theorem? Experimental Evidence from Village Economies," *Review of Economic Studies*, 83(1), 231–268.

- KEBEDE, B., M. TARAZONA, A. MUNRO, AND A. VERSCHOOR (2014): "Intra-household Efficiency: An Experimental Study from Ethiopia," *Journal of African Economies*, 23(1), 105–150.
- KRISHNAN, P., AND S. KRUTIKOVA (2013): "Non-cognitive skill formation in poor neighbourhoods of urban India," *Labour Economics*, 24, 68–85.
- KROESE, F. M., D. R. MARCHIORI, AND D. T. D. DERIDDER (2015): "Nudging healthy food choices: a field experiment at the train station," *Journal of Public Health*, 38(2), e133–e137.
- LAWTON, J., N. AHMAD, L. HANNA, M. DOUGLAS, B. BAINS, AND N. HALLOWELL (2008): "We should change ourselves, but we can't: accounts of food and eating practices amongst British Pakistanis and Indians with type 2 diabetes," *Ethnicity & Health*, 13(4), 305–319, PMID: 18701991.
- LEVI-STRAUSS, C. (1962): *La Pensee Sauvage*. Librairie Plon, Chicago, Illinois.
- (1964-1971): *Mythologiques (4 Volumes)*. University of Chicago Press, Plon, Paris.
- LUNDBERG, S., R. POLLAK, AND T. WALES (1997): "Do Husbands and Wives Pool Their Resources? Evidence from the United Kingdom Child Benefit," *The Journal of Human Resources*, 32(3), 463–80.
- LUNDBERG, S., AND R. A. POLLAK (1996): "Bargaining and Distribution in Marriage," *Journal of Economic Perspectives*, 10(4), 139–158.
- MALIK, S., H. NAZLI, AND E. WHITNEY (2015): "Food Consumption Patterns and Implications for Poverty Reduction in Pakistan," *The Pakistan Development Review*, 54(4), 651–670.
- MALUCCIO, J. A., J. HODDINOTT, J. R. BEHRMAN, R. MARTORELL, A. R. QUISUMBING, AND A. D. STEIN (2009): "The Impact of Improving Nutrition During Early Childhood on Education among Guatemalan Adults," *The Economic Journal*, 119(537), 734–763.
- MANI, A. (2011): "Mine, yours or ours? The efficiency of household investment decisions: An experimental approach," Working paper.
- McELROY, M. B. (1990): "The Empirical Content of Nash-Bargained Household Behavior," *Journal of Human Resources*, 25(4), 559–583.
- MELLIN-OLSEN, T., AND M. WANDEL (2014): "Changes in food habits among Pakistani immigrant women in Oslo, Norway," *Ethnicity and Health*, 10, 311–339.
- MESSER, E. (1984): "Sociocultural aspects of nutrient intake and behavioral responses to diet," in *Nutrition and Behavior*, ed. by J. Galler. Plenum Press, New York.
- MISCHEL, W., E. B. EBBESEN, AND R. Z. ANTONETTE (1972): "Cognitive and attentional mechanisms in delay of gratification". *Journal of Personality and Social Psychology*, *Journal of Personality and Social Psychology*, 21, 2014–218.
- MÖETTEL, S., C. KELLER, M. SIEGRIST, J. BARBEY, AND T. BUCHER (2016): "Consumers' practical understanding of healthy food choices: a fake food experiment," *The British journal of nutrition*, 116, 559–66.
- MUNRO, A., I. BATEMAN, AND T. McNALLY (2008): "The Family Under the Microscope: An Experiment Testing Economic Models of Household Choice," Scholarly Paper 1138969, SSRN.

- OWENS, D., Z. GROSSMAN, AND R. FACKLER (2014): "The Control Premium: A Preference for Payoff Autonomy," *American Economic Journal: Microeconomics*, 91, 138–161.
- PAKISTAN MINISTRY OF FINANCE (2018): "Pakistan Economic Survey 2017-18," Technical report, Ministry of Finance, Government of Pakistan.
- PITT, M. M., M. R. ROSENZWEIG, AND M. HASSAN (1990): "Productivity, Health, and Inequality in the Intrahousehold Distribution of Food in Low-Income Countries," *American Economic Review*, 80(5), 1139–1156.
- POLLAK, R. A. (2004): "An Intergenerational Model of Domestic Violence," *Journal of Population Economics*, 17(2), 311–329.
- RAO, V. (1997): "Wife-beating in Rural South India: A Qualitative and Econometric Analysis," *Social Science & Medicine*, 44(8), 1169–1180.
- ROBINSON, J. (2012): "Limited Insurance within the Household: Evidence from a Field Experiment in Kenya," *American Economic Journal: Applied Economics*, 4(4), 140–164.
- SAFDAR, N., E. BERTONE-JOHNSON, L. CORDEIRO, T. JAFAR, AND N. COHEN (2014): "Dietary patterns of Pakistani adults and their associations with sociodemographic, anthropometric and life-style factors," *Journal of Nutritional Science*, eCollection.
- SATHYAMALA, C. (2019): "Meat-eating in India: Whose food, whose politics, and whose rights?," *Policy Futures in Education*, 17(7), 878–891.
- SCHANER, S. (2012): "Do Opposites Detract? Intrahousehold Preference Heterogeneity and Inefficient Strategic Savings," *American Economic Journal: Applied Economics*, 7(2), 135–174.
- SEN, A. (1999): *Development as Freedom*. Alfred Knopf, New York.
- STRAUSS, J., AND D. THOMAS (1998): "Health, Nutrition, and Economic Development," *Journal of Economic Literature*, 36(2), 766–817.
- THOMAS, D. (1994): "Like Father, like Son; Like Mother, like Daughter: Parental Resources and Child Height," *Journal of Human Resources*, 29(4).
- VERSCHOOR, A., B. KEBEDE, A. MUNRO, AND M. TARAZONA (2019): "Spousal Control and Efficiency of Intra-household Decision Making: Experiments among Married couples in India, Ethiopia and Nigeria," *European Journal of Development Research*, forthcoming.
- WILSON, C. (2010): "Eating, eating is always there: food, consumerism and cardiovascular disease. Some evidence from Kerala, south India," *Anthropology & Medicine*, 17(3), 261–275, PMID: 21153961.
- WOOLLEY, F. (2000): "Control over money in marriage," Carleton Economic Papers 00-07, Carleton University, Department of Economics, revised 2003.
- ZIZZO, D. J., AND A. J. OSWALD (2012): "Are people willing to pay to reduce others' incomes?," *Annales d'Economie et de Statistique*, 63-64, 39–62.

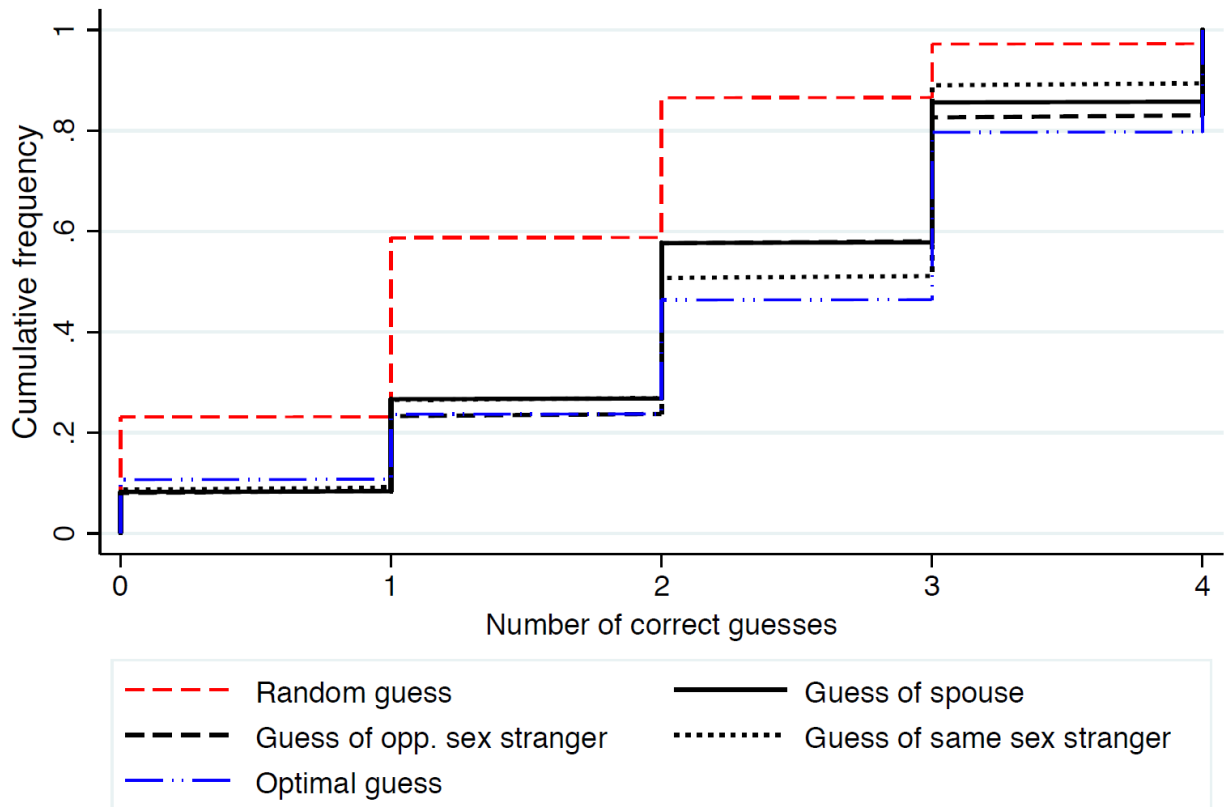
Figures

Figure 1: Cumulative distribution of guess quality in LAB1



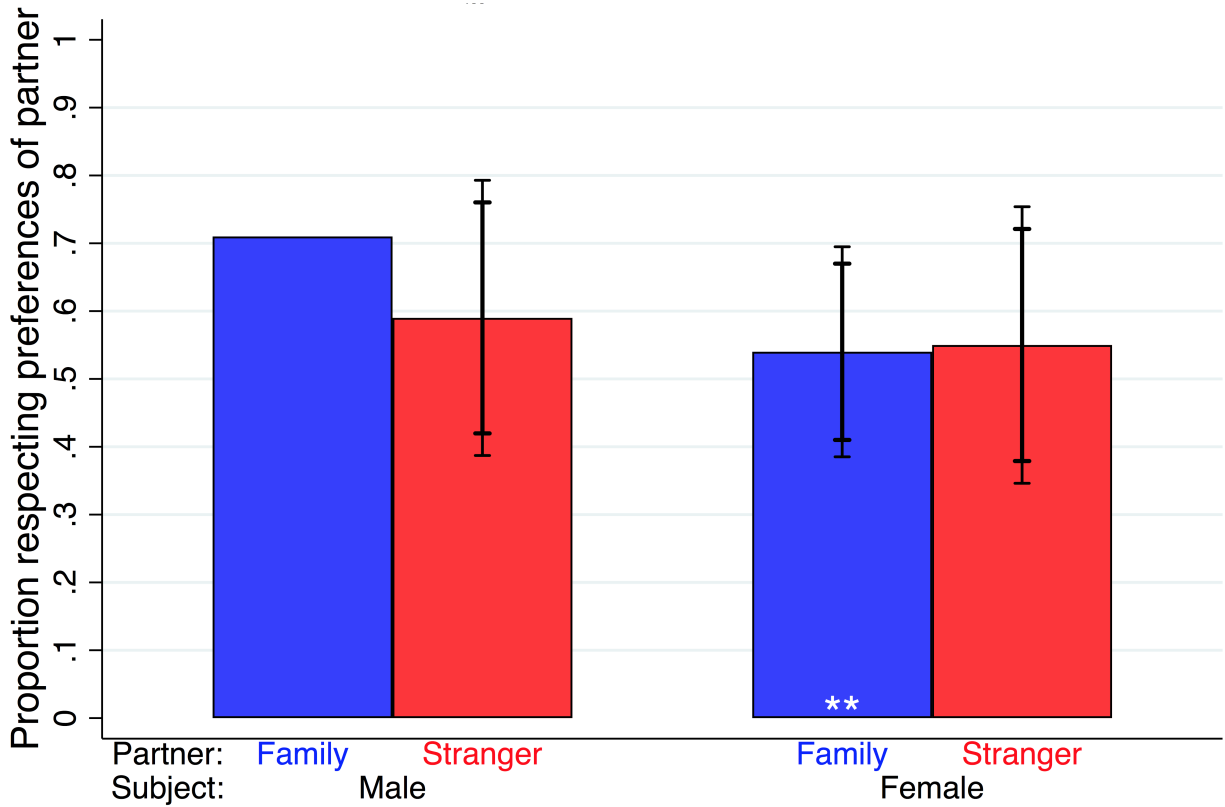
Notes: Figure 1 shows the cumulative distribution of guess quality for different types of guesses. In LAB1, guess quality takes three values: 2 for correctly guessing the top and bottom ranked juice; 1 for correctly guessing either the top or bottom ranked juice; and 0 for guessing neither. The Guess of spouse and Guess of stranger lines depicts the distribution of guess quality of decisions taken by LAB1 participants, depending on their matching treatment. The Random guess line depicts the hypothetical distribution of guess quality of a subject who guesses at random. The Optimal guess line depicts the hypothetical distribution of guess quality of an informed subject who guesses optimally, that is, who picks the mode of the sample distribution as their best guess. A shift downwards implies a better guess quality.

Figure 2: Cumulative distribution of guess quality in LAB2



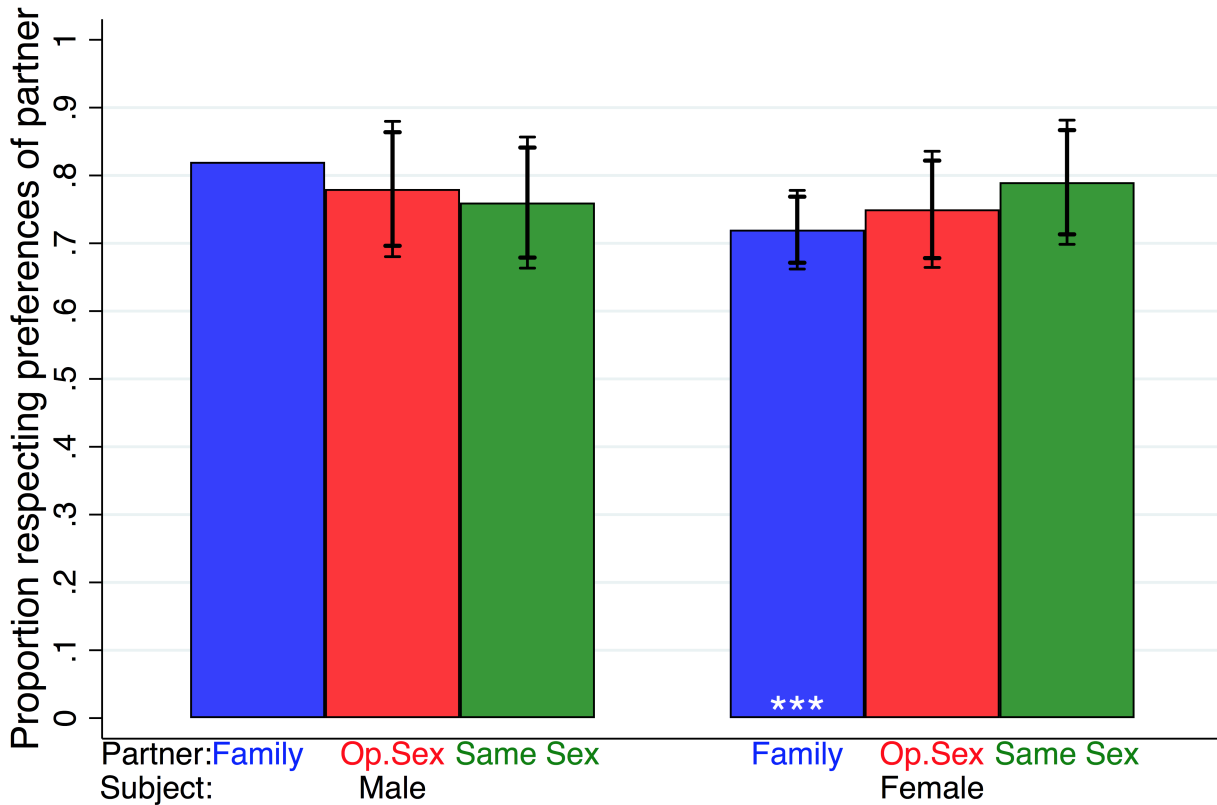
Notes: Figure 2 shows the cumulative distribution of guess quality for different types of guesses. In LAB2, guess quality takes five values: 4 for correctly guessing the top and bottom ranked food and drink; 1, 2 or 3 for making 1, 2 or 3 of these four guesses correctly; and 0 for not getting any of the four guesses right. The lines for Guess of spouse, Guess of opposite sex stranger, and Guess of same sex stranger depicts the distribution of correct guesses made by LAB2 participants, depending on their matching treatment. The Random guess line depicts the hypothetical distribution of guess quality of a subject who guesses at random. The Optimal guess line depicts the hypothetical distribution of guess quality of an informed subject who guesses optimally, that is, who picks the mode of the sample distribution as their best guess. A shift downwards implies a better guess quality.

Figure 3: Respecting partner preferences
Uninformed treatment in LAB1



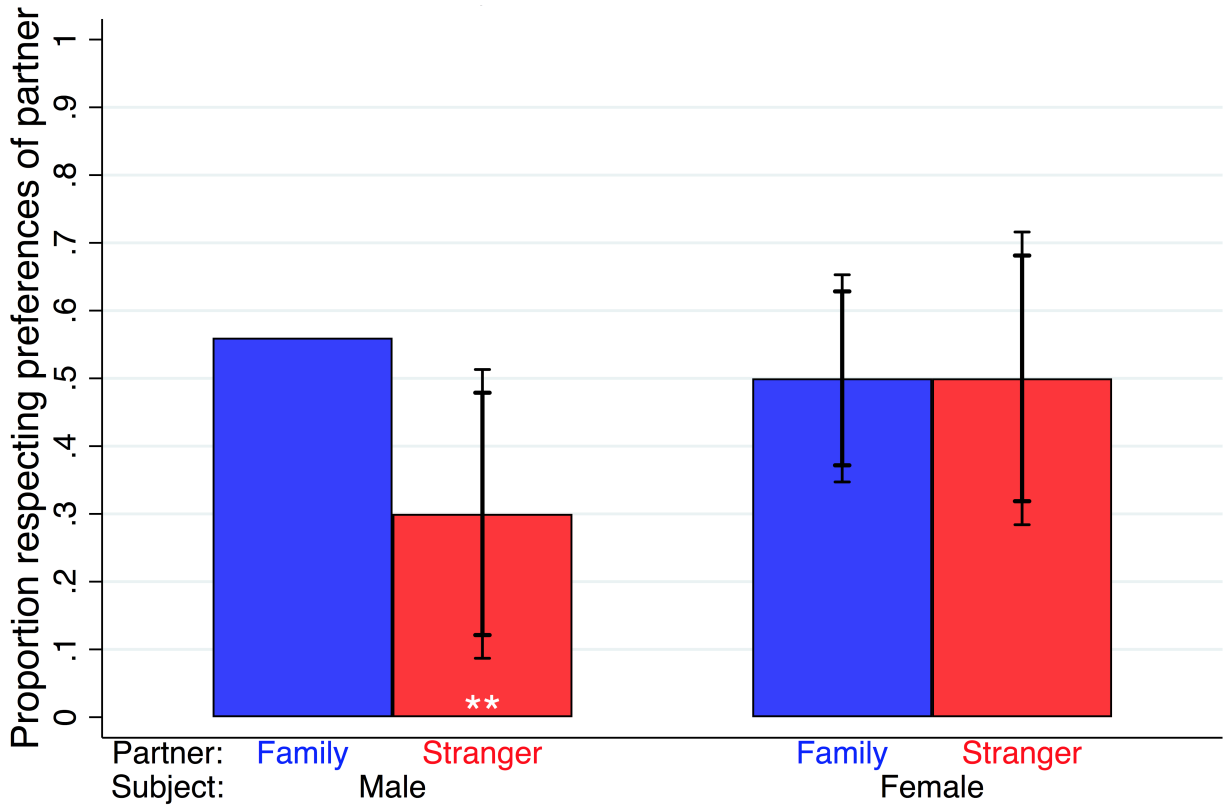
Notes: Figure 3 is a graphical presentation of the results from Table 3, column 1, LAB1. The first bar corresponds to the intercept in Table 3, that is, the frequency with which male participants respect the preferences of their wife. The other bars are equal to the intercept plus the estimated coefficient in Table 3. For instance, the second bar is equal to the intercept minus the coefficient of the Male-Stranger match dummy. Whiskers correspond to the 90% and 95% confidence intervals of these coefficients relative to the intercept. Stars similarly correspond to the significance level of a test of equality with the intercept, that is, with the Male-Family match average. A treatment dummy is significant if the Male-Family bar falls outside the confidence interval.

Figure 4: Respecting partner preferences
Uninformed treatment in LAB2



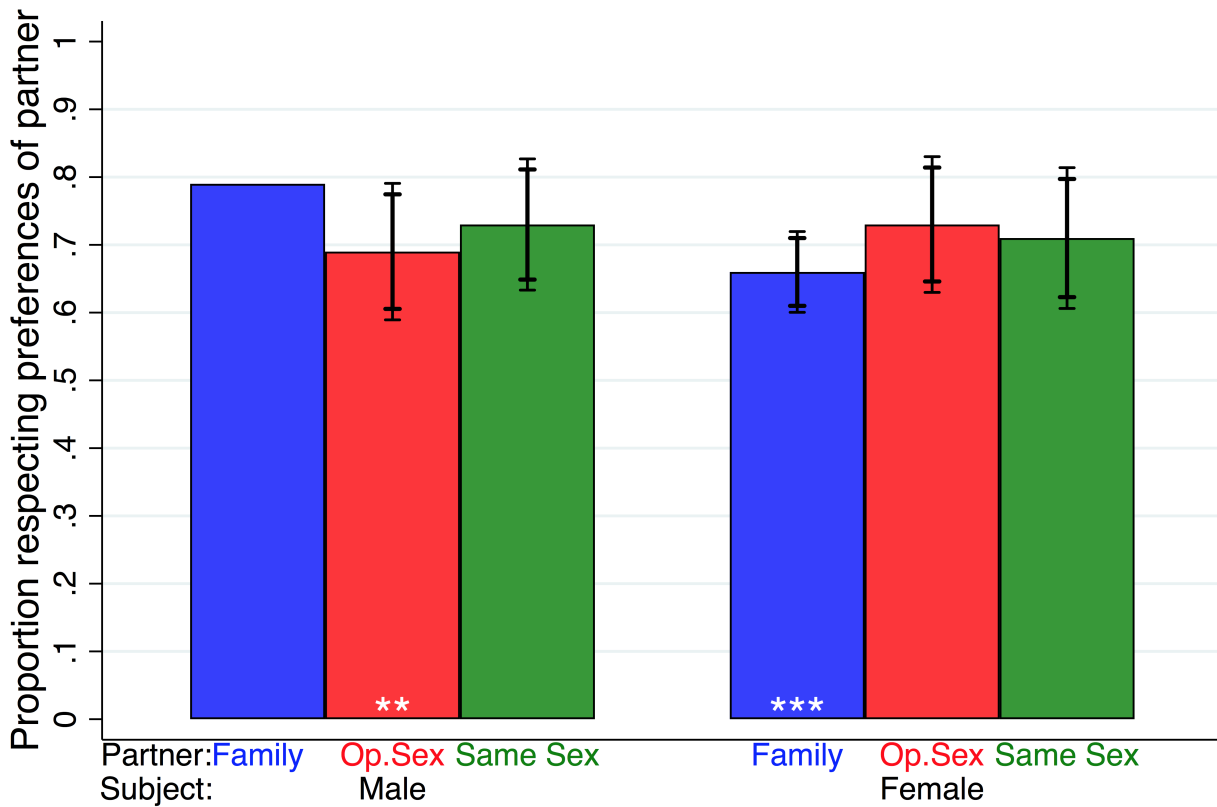
Notes: Figure 4 is a graphical presentation of the results from Table 3, column 1, LAB2. The first bar corresponds to the intercept in Table 3, that is, the frequency with which male participants respect the preferences of their wife. The other bars are equal to the intercept plus the estimated coefficient in Table 3. For instance, the second bar is equal to the intercept minus the coefficient of the Male-Stranger match dummy. Whiskers correspond to the 90% and 95% confidence intervals of these coefficients relative to the intercept. Stars similarly correspond to the significance level of a test of equality with the intercept, that is, with the Male-Family match average. A treatment dummy is significant if the Male-Family bar falls outside the confidence interval.

Figure 5: Respecting partner preferences
Informed treatment in LAB1



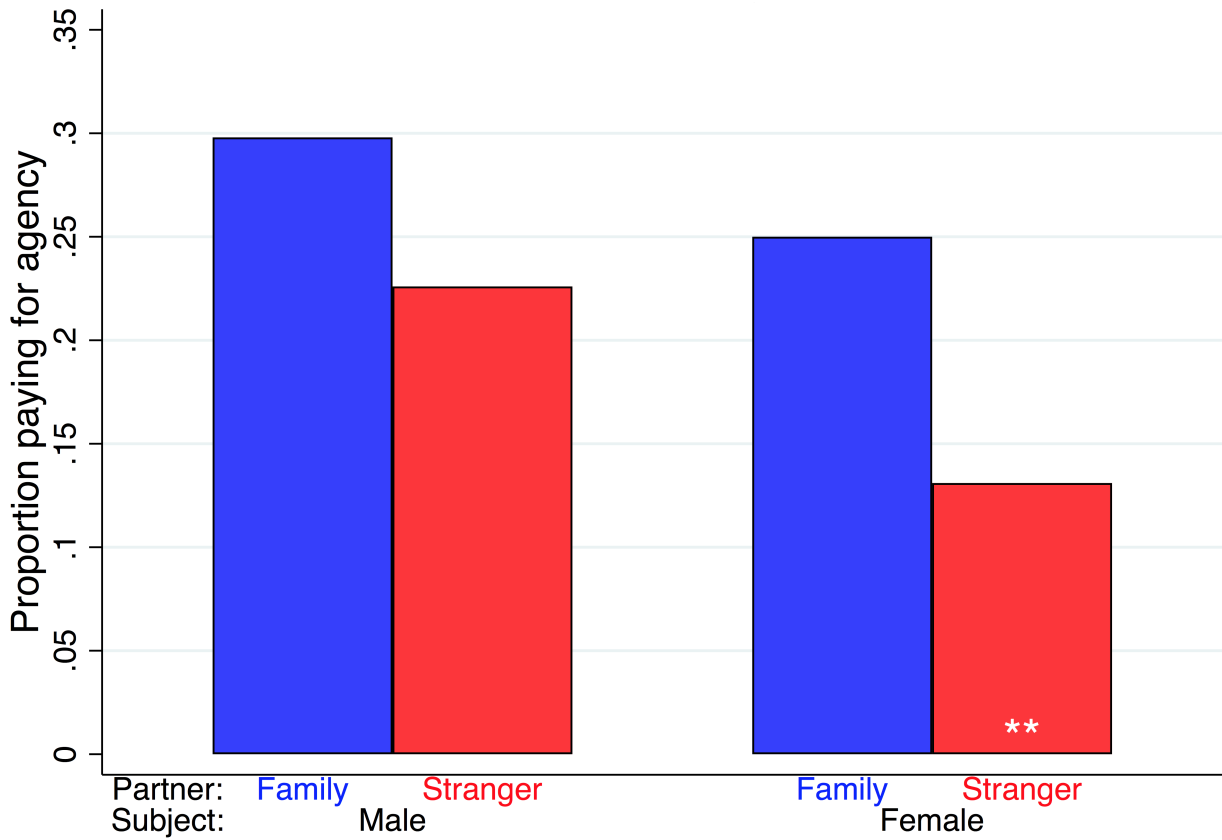
Notes: Figure 5 is a graphical presentation of the results from Table 3, column 2, LAB1. The first bar corresponds to the intercept in Table 3, that is, the frequency with which male participants respect the preferences of their wife. The other bars are equal to the intercept plus the estimated coefficient in Table 3. For instance, the second bar is equal to the intercept minus the coefficient of the Male-Stranger match dummy. Whiskers correspond to the 90% and 95% confidence intervals of these coefficients relative to the intercept. Stars similarly correspond to the significance level of a test of equality with the intercept, that is, with the Male-Family match average. A treatment dummy is significant if the Male-Family bar falls outside the confidence interval.

Figure 6: Respecting partner preferences
Informed treatment in LAB2



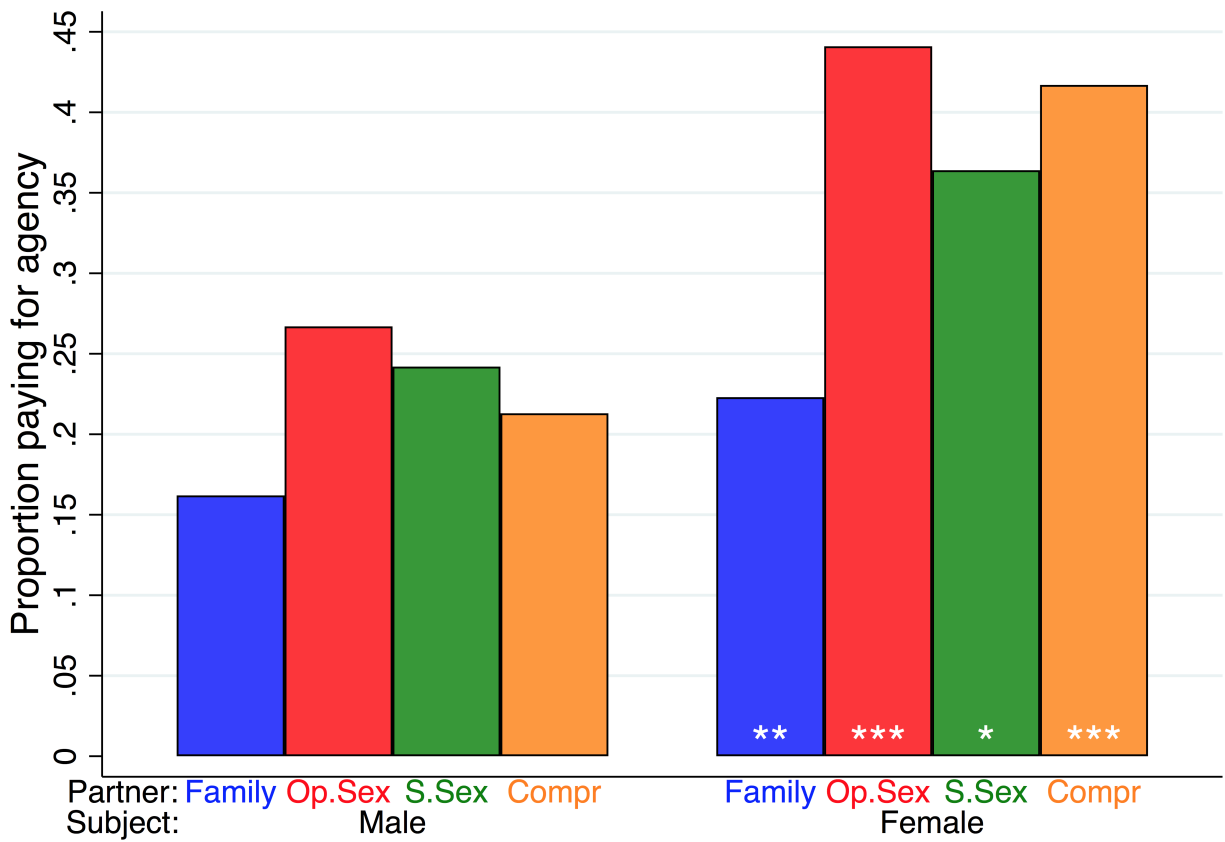
Notes: Figure 6 is a graphical presentation of the results from Table 3, column 2, LAB2. The first bar corresponds to the intercept in Table 3, that is, the frequency with which male participants respect the preferences of their wife. The other bars are equal to the intercept plus the estimated coefficient in Table 3. For instance, the second bar is equal to the intercept minus the coefficient of the Male-Stranger match dummy. Whiskers correspond to the 90% and 95% confidence intervals of these coefficients relative to the intercept. Stars similarly correspond to the significance level of a test of equality with the intercept, that is, with the Male-Family match average. A treatment dummy is significant if the Male-Family bar falls outside the confidence interval.

Figure 7: Demand for ex ante agency - LAB1



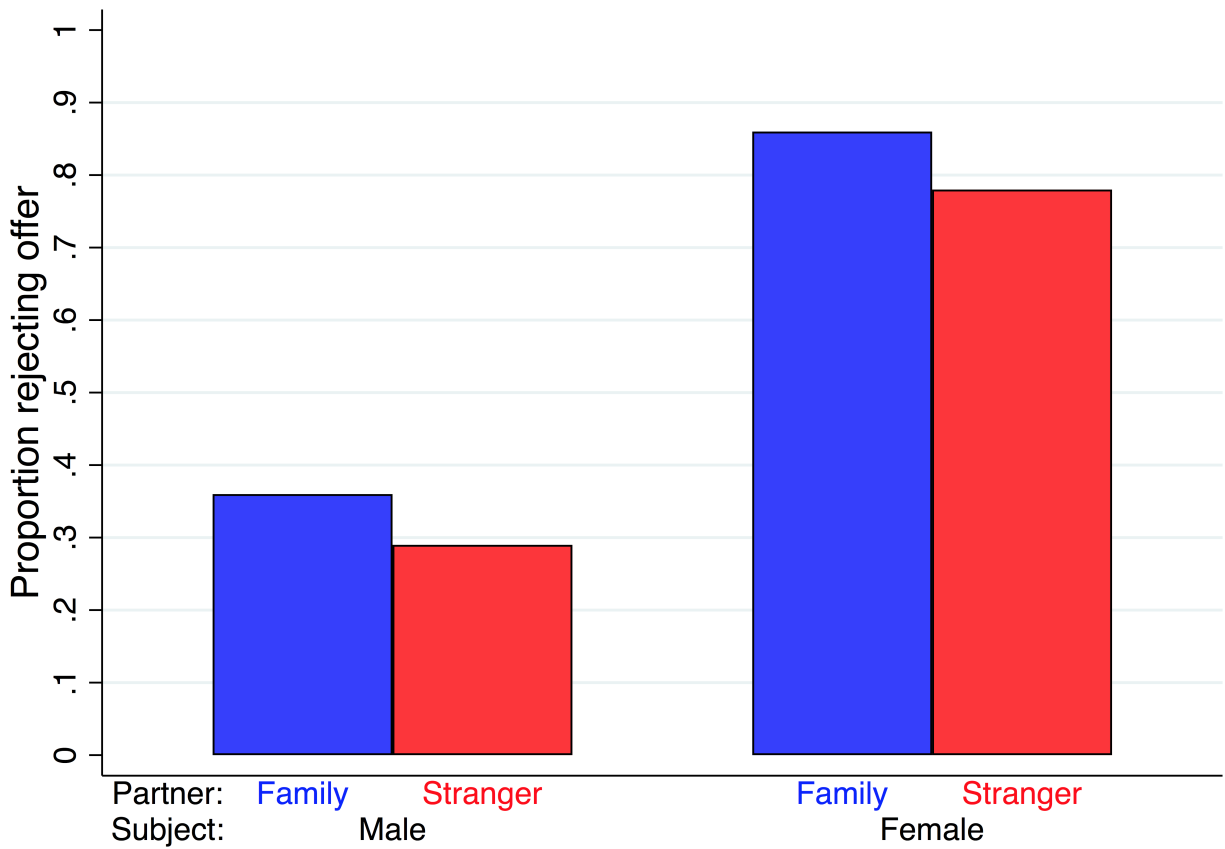
Notes: Figure 7 is a graphical presentation of the results from Table 5, LAB1. The first bar corresponds to the frequency with which male participants pay for agency when matched with their wife or female family member. The other bars correspond to the other proportions reported in the Table. Stars report the significance level of a test of equality with the bar of the same color, e.g., is Female-Stranger equal to Male-Stranger.

Figure 8: Demand for ex ante agency - LAB2



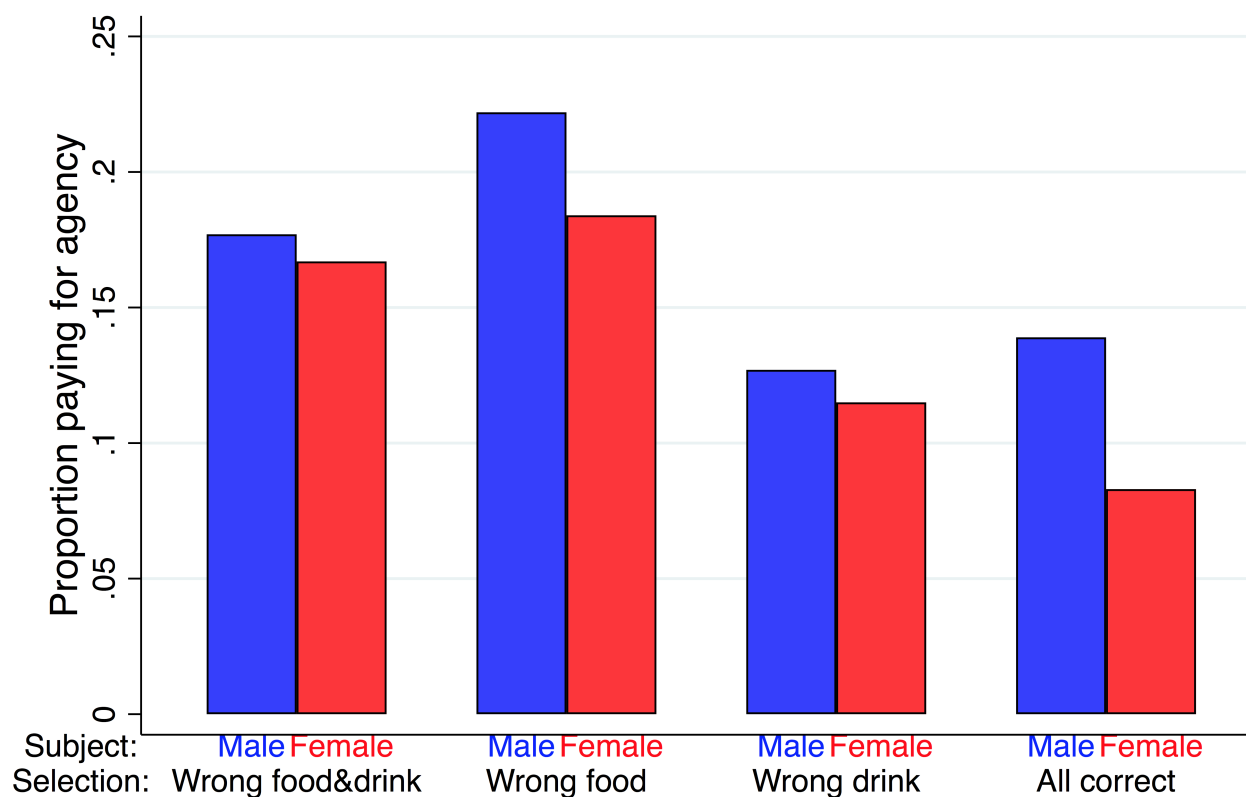
Notes: Figure 8 is a graphical presentation of the results from Table 5, LAB2. The first bar corresponds to the frequency with which male participants pay for agency when matched with their wife or female family member. The other bars correspond to the other proportions reported in the Table. Stars report the significance level of a test of equality with the bar of the same color, e.g., is Female-Opposite Sex Stranger equal to Male-Opposite Sex Stranger.

Figure 9: Any rejection in the ultimatum game



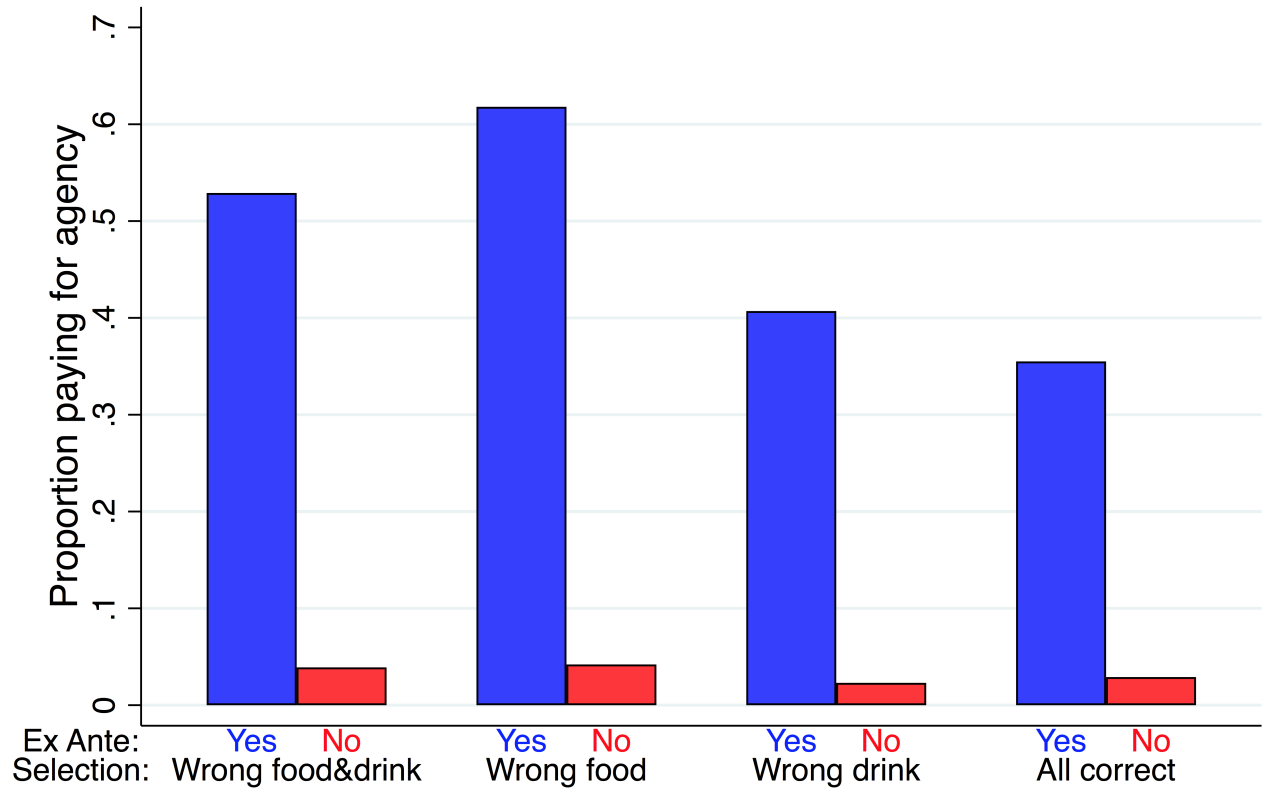
Notes: Figure 9 reports sample proportions of subjects rejecting any of the offers made in the ultimatum game. Since this game was played with a strategy method, we observe willingness to reject for all subjects, irrespective of the choice made by the proposer. Similar results are found if we restrict the attention to rejections of offers below 60% instead. The differences between Male and Female subjects are both statistically significant.

Figure 10: Demand for ex post agency - LAB2
Depending on revealed choice of partner



Notes: Figure C1 is a graphical representation of the top panel of Table 7. The first two bars correspond to the frequency with which male and female participants pay for agency when they know they will receive the wrong food and drink. The second set of two bars reports the frequency with which male and female participants pay for agency when they know they will receive the correct drink but the wrong food. The third set of two bars reports the frequency with which male and female participants pay for agency when they know they will receive the correct food but the wrong drink. The fourth set of two bars reports the frequency with which male and female participants pay for agency when they know they will receive the correct food and drink.

Figure 11: Demand for ex post agency - LAB2
Depending on partner choice and ex ante agency



Notes: Figure 11 is a graphical representation of the bottom panel of Table 7. The Figure compares ex post demand for agency conditional on whether the subject demanded agency *ex ante*, that is, before knowing what the partner had selected for them. The first two bars correspond to the frequency with which participants who receive the wrong food and drink are willing to pay for agency conditional on whether they demanded ('Yes') or did not demand ('No') agency *ex ante*. The second set of two bars does the same for those who receive the right drink but the wrong food. The third set of two bars does the same for those who receive the right food but the wrong drink, and the last set does the same for those who receive the right food and drink.

Tables

Table 1: Descriptive statistics on the RCT and LAB samples

	LAB1		LAB2		FIELD	
	<i>n</i>	<i>mean</i>	<i>n</i>	<i>mean</i>	<i>n</i>	<i>mean</i>
Age	336	38.3	716	36.1	1991	39.4
Can read and write	324	0.63	716	0.48	1991	0.49
Average monthly household expenses (PKR)	336	14,406	716	14,291	1991	18,474
Self employed (females)	156	0.26	358	0.14	1991	0.11
Housewives (females)	156	0.37	358	0.87	1991	0.74
Head of the household (females)	168	0.10	358	0.00	1991	0.12
Spouse of the household head (females)	168	0.74	358	0.73	1991	0.74

Note: For LAB1 and LAB2 we report the average age and literacy for participating subjects of both sexes, as well as their joint household income. For the field experiment, we report the average age and literacy of the female respondent, as well as her household income. The last four variables refer to female subjects only.

Table 2: Ability to guess partners' preferences by matching type

Matching type	LAB1		LAB2	
	Coef.	t-stat	Coef.	t-stat.
Family member	0.185	2.61 **	0.892	17.12 ***
Stranger of opposite sex	0.143	2.02 **	0.958	11.98 ***
Stranger of same sex	n.a.		0.925	12.12 ***
Computer	n.a.		-0.381	-4.58 ***
Optimal guesses benchmark	0.262	4.54 ***	1.071	25.15 ***
Female dummy	0.054	1.14	-0.057	-1.63
Intercept	0.586	12.46	1.354	38.95
Number of observations	1008 (336)		4296 (1432)	

Notes: The dependent variable is the quality of the guess. In LAB1 it equals 1 if i correctly guesses j 's top and bottom ranked juice. In LAB2 it equals 4 if i has 4 correct guesses (i.e., correctly guesses j 's top ranked food and drink and bottom ranked food and drink), 3 if i has 3 correct guesses, etc. The omitted match category is an artificial set of observations in which each subject guesses the partner's preferences using population frequencies as probabilities. As a result, coefficients can be interpreted as improvement over random guessing, e.g., the intercept is the average quality of a random guess, and the coefficient of spouse/family member shows by the improvement of the guess relative to random guessing. We also include optimal guessing by an uninformed subject as benchmark to facilitate comparisons. Note that this regression corresponds to one specific vector of random guesses. The absolute value of coefficients changes with each draw, but relative values do not. Possible variation in the significance of coefficients (relative to random) is discussed in the text.

In LAB1 there are 336 subjects. For each of these observations, one random guess and one optimal uninformed guess are then added, thereby adding 336×2 fictitious observations. In LAB2 subjects appear twice: once matched with their family member, and once with a stranger, thereby making 1432 observations. For each of these observations, one random guess and one optimal uninformed guess are then added, thereby adding 1432×2 fictitious observations. The role of these fictitious observations is to allow an easy comparison of actual guesses to these two benchmarks.

Standard errors are clustered at the pair level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 3: Respect for partner's preferences

		Uninformed treatment		Informed treatment	
		Does the subject pick their best guess for partner?		Does the subject pick the partner's top rank?	
LAB1 - juice choice		Coef.	t-stat	Coef.	t-stat.
Gender of subject	Matching				
Male	Stranger	-0.117	-1.13	-0.262	-2.41 **
Female	Family	-0.173	-2.19 **	-0.059	-0.75
Female	Stranger	-0.162	-1.56	-0.061	-0.55
Amount given in DG game		0.076	0.05	-0.049	-0.29
Amount received in DG game		-0.027	-0.18	0.151	0.91
Intercept		0.710	4.83	0.560	3.48
Number of observations		170		166	
LAB2 - food and drink choice		Coef.	t-stat	Coef.	t-stat.
Gender of subject	Matching				
Male	Opposite sex	-0.036	-0.70	-0.102	-1.98 **
Male	Same sex	-0.061	-1.23	0.060	-1.21
Female	Family	-0.101	-3.40 ***	-0.124	-4.08 ***
Female	Opposite sex	-0.663	-1.51	-0.061	-1.20
Female	Same sex	-0.029	-0.63	-0.080	-1.50
Amount given in DG game		-0.021	-0.44	0.055	1.05
Amount received in DG game		0.041	0.85	-0.144	-2.40 **
Drink dummy		0.036	1.61	0.049	1.94 *
Intercept		0.819	18.41	0.787	16.28
Number of observations		1216		1216	

LAB2 observations include family matching observations plus stranger matching; subjects matched with a computer are not included since computers have no preferences. Furthermore, observations for food and drinks are combined. This means in LAB2 there are four observations per subject: food and drink for family matching; and food and drink for stranger matching – except for subjects matched with a computer, in which case there are two observations per subjects: food and drink for family matching. For uninformed subjects, the dependent variable equals 1 if the subject picks their best guess of their partner's top ranked item, and 0 otherwise. For informed subjects, the dependent variable equals 1 if the subject picks what they know to be their partner's top ranked item, and 0 otherwise. In LAB1, the number of informed and uninformed subjects differs slightly due to variation in the number of subject pairs across sessions.

Standard errors are clustered at the pair level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 4: Marginal effect of information on choice, conditional on guessing the partner's top rank

	Initial guess (before receiving information)			
	Subject guessed wrong		Subject guessed right	
LAB1 - juice choice				
Frequency of correct choice	Sample average		Sample average	
When uninformed	27.1%		73.0%	
When informed	41.4%		69.9%	
Probability of correct choice	<i>dydx</i>	t-stat.	<i>dydx</i>	t-stat.
Overall	14.2%	2.05 **	-5.4%	-0.64
Male subject/family match	55.6%	5.37 ***	24.1%	1.73 *
Male subject/stranger match	-1.7%	-0.14	-19.4%	-1.10
Female subject/family match	4.2%	-0.28	-21.1%	-1.47
Female subject/stranger match	-0.4%	-0.28	-1.4%	-0.09
Number of observations	204		132	
LAB2 - food and drink choice				
Frequency of correct choice	Sample average		Sample average	
When uninformed	24.3%		87.0%	
When informed	38.1%		85.9%	
Probability of correct choice	<i>dydx</i>	t-stat.	<i>dydx</i>	t-stat.
Overall	13.7%	3.94 ***	-1.1%	-0.57
Male subject/family match	27.4%	4.16 ***	0.0%	-0.01
Male subject/opposite sex match	15.4%	1.59	-1.2%	-0.19
Male subject/same sex match	4.3%	0.40	1.8%	0.41
Female subject/family match	4.5%	0.74	-3.8%	-0.99
Female subject/opposite sex match	25.0%	2.36 **	1.6%	0.23
Female subject/same sex match	6.1%	0.61	-2.4%	-0.47
Number of observations	803		1629	

Marginal effects are estimated using a regression of the dependent variable on a fully interacted set of an informed treatment dummy, a gender dummy, and dummies for each matching type. The regression is estimated separately for subjects who incorrectly guessed the top rank of their partner, and subjects who guessed correctly. The marginal effects of the information treatment that are reported in the Table are obtained using the 'margins, dydx' command in Stata. In LAB2 observations for food and drinks are combined. This means that in LAB2 there are up to four observations per subject: food and drink for family matching; and food and drink for stranger matching – except for subjects matched with a computer, in which case there are two observations per subjects: food and drink for family matching.

Standard errors are clustered at the pair level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 5: Marginal effect of information on choice, conditional on guessing the partner's top rank

LAB1 - juice choice		matching type		t-stat. vs			
	family	stranger	family				
Male subject	29.8%	25.0%		-0.69			
Female subject	22.6%	13.1%		-1.61			
t-stat. female/male	-1.03	-1.99 **					
Number of observations	336	336					
LAB2 - food and drink choice			matching type				
	opposite sex		t-stat. vs	same sex		t-stat. vs	t-stat. vs
	family	stranger	family	stranger	family	computer	family
Male subject	16.2%	26.7%	2.23 **	24.2%	1.69 *	21.3%	1.16
Female subject	22.3%	44.1%	4.27 ***	36.4%	2.73 **	41.7%	3.68 ***
t-stat. female/male	2.16 **	3.26 ***		1.91 *		3.29 ***	
Number of observations	716	236		264		216	

In LAB1 willingness to pay for agency equals 1 if the subject prefers half a glass of their preferred to a coin toss. In LAB2 willingness to pay for agency equals 1 if the subject forfeits a fraction of their show-up fee to receive their top food and drink instead of receiving the food and drink selected by their partner. LAB2 subjects play twice: matched with a family member; and matched with a stranger of the opposite or same sex, or with the computer. The number of observations show the number of LAB2 subjects playing the different matching types.

Standard errors are clustered at the pair level. T-statistics for pairwise tests are obtained by first estimating a regression of demand for agency on a fully interacted set of dummies for gender and matching type. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 6: Testing demand for ex ante instrumental agency

		LAB1		LAB2	
Gain from agency (instrumental):		Coef.	t-stat.	Coef.	t-stat.
Drink		-0.069	-0.27	-0.940	-0.35
Food		n.a.		0.136	2.32 **
Cost of agency		n.a.		-0.001	-1.66
Matching and gender:					
Gender	Matching				
Male	Opposite sex	-0.044	0.65	0.094	2.06 **
Male	Same sex	n.a.		0.087	2.05 **
Male	Computer	n.a.		0.034	0.73
Female	Family	-0.068	-0.99	0.070	2.44 **
Female	Opposite sex	-0.160	-2.47 **	0.285	5.64 ***
Female	Same sex	n.a.		0.207	4.46 ***
Female	Computer	n.a.		0.241	4.58 ***
Intercept		0.312	4.01	0.153	4.87
Number of observations		336		1432	

The Table reports IV estimates of the effect of the expected gain from agency on willingness to pay for agency. The dependent variables is as in Table 5. At the time of making the decision, subjects do not know what the partner has selected for them. Instruments include a fully interacted set of dummies for gender, informed treatment, matching type, and own top rank. In LAB1 the predicted gain in the probability of getting preferred juice varies between 8% and 44%, with a mean of 25% (s.d. 9%). In LAB2 the predicted gain vary between 8% and 100% for both food and drink, with an average of 36% (s.d. 24%) for food and 34% (s.d. 26%) for drink. The cost of agency takes values 5, 20 and 50, equally randomized across subjects. For all matching types, demand for agency in LAB2 tests as significantly higher for female than male subjects.

Standard errors are clustered at the pair level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 7: Proportion of LAB2 subjects who demand ex post agency

Food selected by partner is:	incorrect	incorrect	correct	correct	overall
Drink selected by partner is:	incorrect	correct	incorrect	correct	overall
Proportion of subjects who demand agency after being informed of partner's selection for them:					
All subjects	17.2%	20.5%	12.2%	10.8%	14.0%
Number of observations	250	269	230	683	1432
Male subjects	17.7%	22.2%	12.7%	13.9%	16.1%
Number of observations	136	144	126	310	716
Female subjects	16.7%	18.4%	11.5%	8.3%	11.9%
Number of observations	114	125	104	373	716
Proportion of subjects who demand agency after being informed of partner's selection for them:					
Among subjects who demanded agency before being informed of their partner's selection					
All subjects	52.9%	61.8%	40.7%	35.5%	45.0%
Number of observations	68	76	59	166	369
Among subjects who do not demand agency before being informed of their partner's selection					
All subjects	3.9%	4.2%	2.3%	2.9%	3.2%
Number of observations	182	193	171	517	1063

Notes: Each percentage is the proportion of LAB2 subjects willing to pay for agency after having been informed of their partner's food and drink selection for them. Subjects only make one decision combining food and drink. The top panel reports these proportions for all subjects and by gender, depending on whether the partner selected the correct food and drink or not. The bottom panel breaks down these proportions between subjects who demanded agency ex ante – i.e., before being informed of their partner's selection for them – and those who did not.

Table 8: Testing demand for ex post pure agency

		LAB2	
Gain from agency (actual)		Coef.	t-stat.
Food		0.077	3.56 ***
Drink		-0.004	-0.21
Cost of agency		-0.002	-3.89 ***
Matching and gender:			
Gender	Matching		
Male	Opposite sex	0.138	3.15 ***
Male	Same sex	0.066	1.78 *
Male	Computer	0.025	0.64
Female	Family	-0.017	-0.78
Female	Opposite sex	0.039	1.04
Female	Same sex	-0.008	-0.25
Female	Computer	0.049	1.24
Intercept		0.139	6.23
Number of observations		1432	

The Table reports OLS estimates of the effect of the actual gain from agency on willingness to pay for agency. The dependent variables equals 1 if the subject forfeits a fraction of the showup fee to receive their top ranked food and drink, and 0 otherwise. At the time of making the decision, subjects know what the partner has selected for them. The cost of agency takes values 5, 20 and 50, equally randomized across subjects.

Standard errors are clustered at the pair level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 9: Husband's willingness to delegate in the field

	Coef.	t-stat.
Husband's preference = choice he expects wife to make	0.010	2.17 **
Treated dummy	0.000	-0.01
Intercept	0.985	191.53
Number of observations	1991	

Notes: The Table reports OLS estimates of the effect of the actual loss from delegation on willingness to delegate. The dependent variables equals 1 if the subject is willing to delegate the choice of gift to his wife, and 0 otherwise. At the time of making the decision, subjects do not know what the partner has selected for them, but they have been asked to make a guess. The main regressor of interest equals 1 if the preference of the husband is equal to the choice he expects his wife to make.

Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Table 10: Testing demand for ex ante instrumental agency in the field experiment

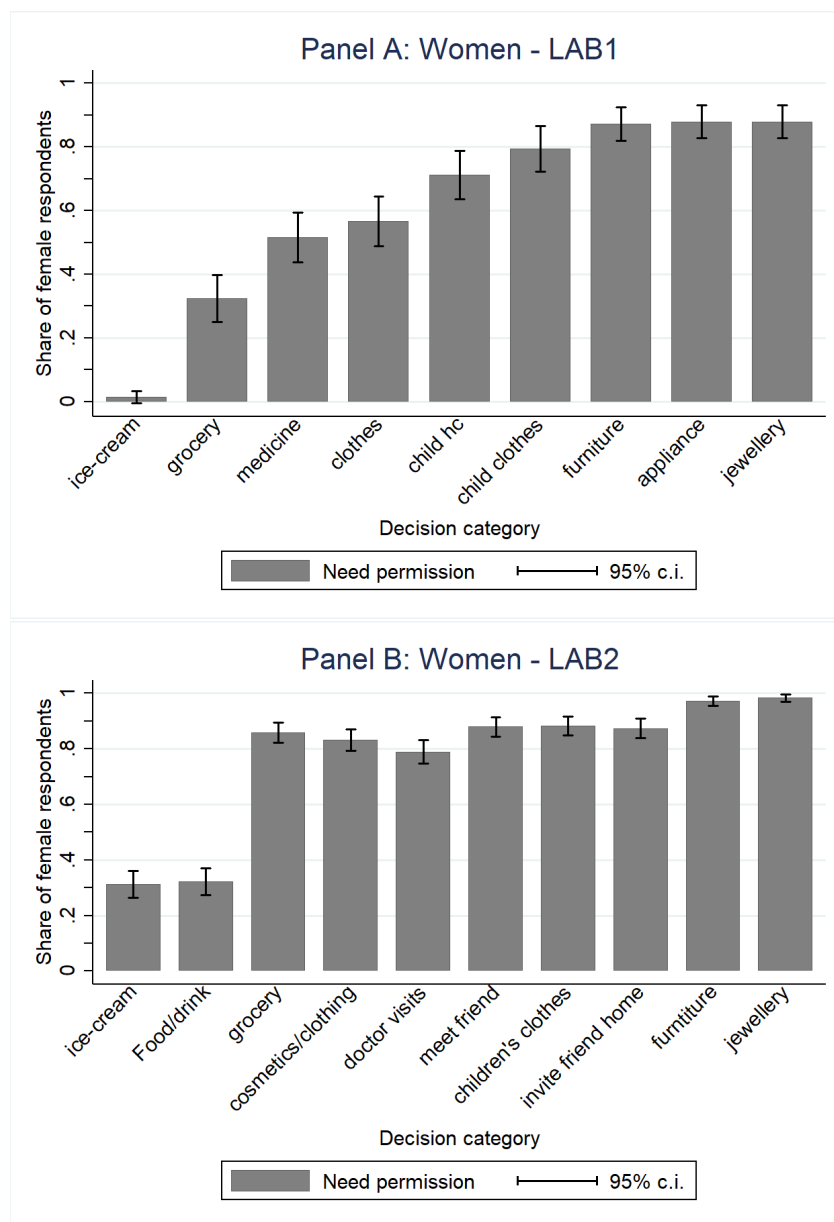
	Coef.	t-stat.
Wife's preference = choice she expects husband to make	-0.039	-2.01 **
High cost of agency dummy	-0.160	-14.92 ***
Treated dummy	-0.039	-2.01 **
Preferences (purse is the omitted category)		
Wallet	0.010	0.40
Pencil case	0.178	5.28 ***
Intercept	0.814	35.55
Number of observations	3982	

Note: The Table reports OLS estimates of the value and cost of agency on willingness to exert agency. The dependent variables equals 1 if the subject is willing to forfeit part of a monetary participation fee, and 0 otherwise. Subjects make two separate decisions, one for which the cost of agency is PKR50 (the default); and the other for PKR200 (High cost of agency dummy=1). At the time of making the decision, subjects do not know what the partner has selected for them, but they have been asked to make a guess. The main regressor of interest equals 1 if the preference of the wife is equal to the choice she expects her husband to make.

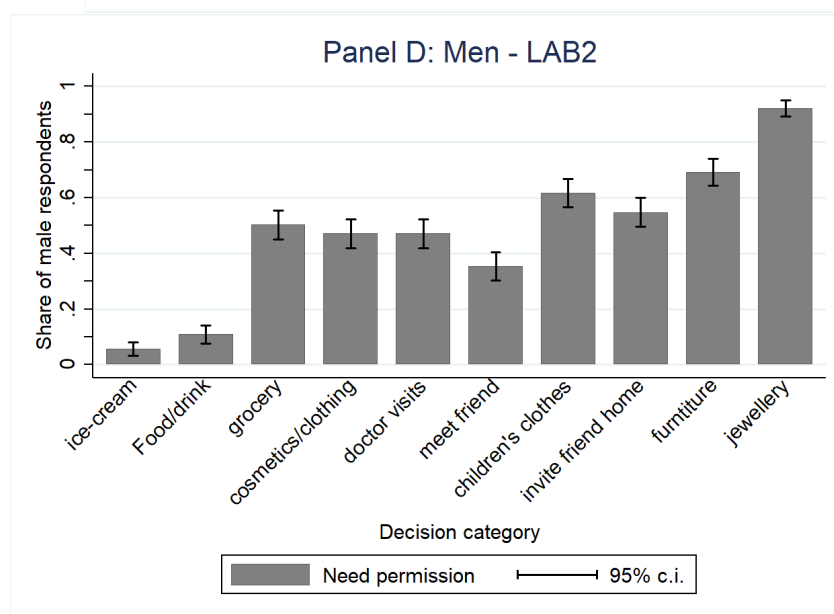
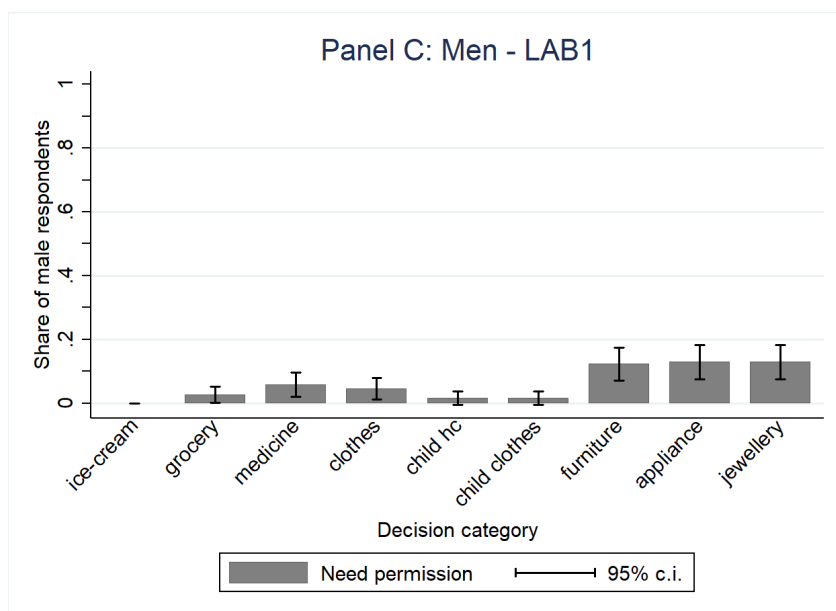
Standard errors are clustered at the subject level. Stars correspond to significance levels: * for 10%, ** for 5%, and *** for 1%.

Appendix A: Executive and consultative agency

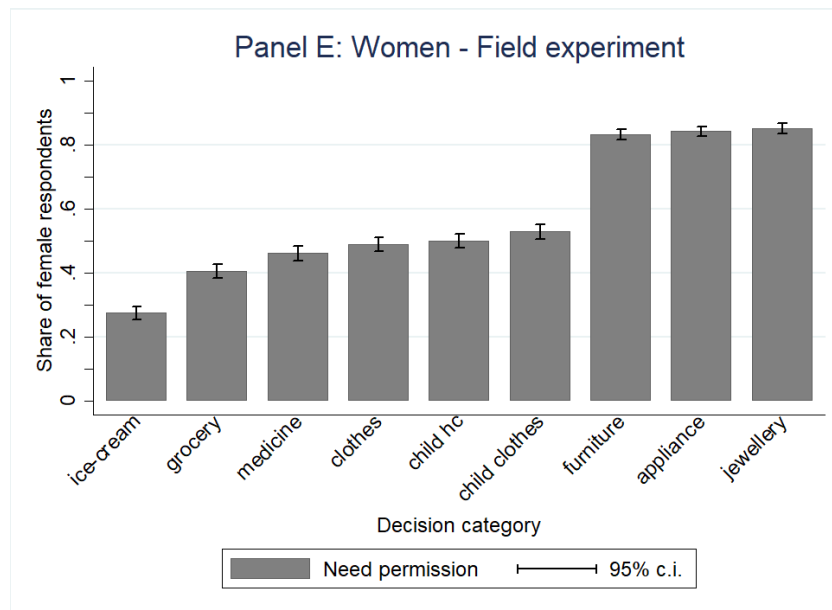
Figure A1: Executive agency:
Share of respondents who need permission from spouse



Notes: The bar labelled 'jewellery' represents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *sell* jewellery?'. In LAB2 the bar labelled 'invite friend home' presents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *invite a friend home*?'. All the other bars represents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *buy* the listed item?' Whiskers show the 95% confidence interval for each bar.

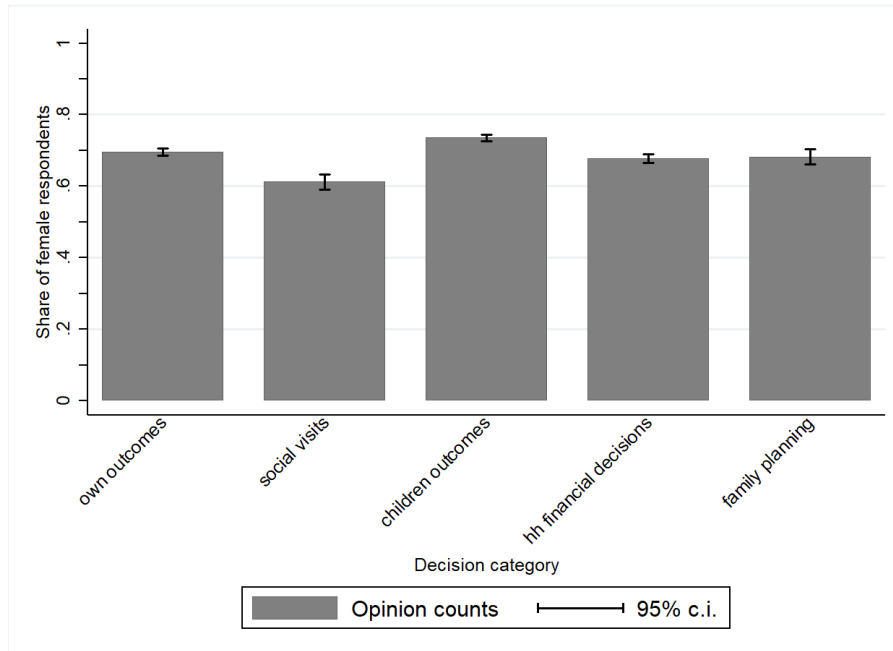


Notes: The bar labelled 'jewellery' represents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *sell* jewellery?'. In LAB2 the bar labelled 'invite friend home' presents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *invite a friend home*?'. All the other bars represent the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *buy* the listed item?'. Whiskers show the 95% confidence interval for each bar.



Notes: The bar labelled 'jewellery' represents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *sell* jewellery?'. In LAB2 the bar labelled 'invite friend home' presents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *invite a friend home*?'. All the other bars represents the percentage of respondents who answer 'yes' to the question 'Do you need permission from your spouse to *buy* the listed item?' Whiskers show the 95% confidence interval for each bar.

Figure A2: Consultative agency:
Share of women whose opinion is taken into account by husband



Notes: Each bar represents the percentage of female respondents in the field experiment who answer 'yes' to the question 'Does your husband take your opinion into account in decisions regarding [a particular decision]?' The 'own outcomes' decision category is the average of answers to questions on decisions regarding the respondent's: medical care; ability to work for earned income, and ability to borrow money from an MFI. The 'social visits' decision category is the average of answers to questions on decisions to visit various types of family members. The 'children outcomes' category is the average of answers to questions on: boys' schooling; girls' schooling; children medical care; and the marriage of the children. The 'financial decisions' category is the average of answers to questions on: the purchase of electronic appliances for the household; decisions about house repairs; and decisions regarding the sale or purchase of a house. The 'family planning' category covers decisions about family planning. Whisker bars show the 95 confidence interval for each bar.

Appendix B: Proxying the instrumental value of agency

By experimental design subject i receives their preferred bundle with probability 1 when exerting agency. In LAB1, a coin toss determines whether a subject receives their selected juice or the juice selected for them by their partner. Let d_i^k equal 1 if the partner selects i 's preferred good k and 0 otherwise. The realized value of agency R_i for good k is thus:

$$R_i^k = \frac{1}{2}(1 - d_i^k)$$

where k only takes one value – juice. In LAB2, the subject receives the food and drink their partner chooses for them, unless they pay for agency. The value of agency is then:

$$R_i^k = 1 - d_i^k$$

for $k = \{\text{food, drink}\}$. When deciding whether to exert agency or not, subject i does not know d_i^k , but they can form an expectation of the probability that $d_i^k = 1$. Let this probability be written $E[d_i^k] = p_i^k$. The instrumental value of agency is thus the ex ante predicted value of R_i^k :

$$\begin{aligned} V_i^k &= E[R_i^k] \\ &= \frac{1}{2}(1 - p_i^k) \text{ in LAB1} \\ &= 1 - p_i^k \text{ in LAB2} \end{aligned}$$

As demonstrated earlier, p_i^k varies systematically with experimental treatments (e.g., matching type and information treatment) and characteristics of subject i (e.g., gender, preference ranking) – e.g., because they affect the partner's knowledge of i 's preference ranking and their willingness to accommodate them. To capture this we estimate a regression model of the form:

$$d_i^k = \sum_m \sum_n \sum_r \sum_g D_m D_n D_{r_i^k} D_{g_i} + e_i^k \quad (2)$$

where the D_s 's are categorical variables for matching type m , information dummy n , preference ranking of i for good k denoted r_i^k , and gender of i denoted g_i . Let \hat{p}_i^k denote the expected value of d_i^k predicted from the above estimated regression, estimated separately for LAB1 and LAB2 and for each good k . This value can then be used to obtain an estimate \hat{V}_i^k of V_i^k for each experiment and consumption good. Equivalently, we can regress model (2) directly on R_i^k to obtain an estimate of $E[R_i^k]$. In LAB1 \hat{V}_i^k varies between 8% and 44% (50% is the maximum feasible), with a mean of 25% (s.d. 9%). In LAB2 it varies between 8% and 100% for both food and drink, with an average of 36% (s.d. 24%) for food and 34% (s.d. 26%) for drink.

Ex ante demand for agency A_i^b can then be written as:

$$A_i^b = \alpha + \sum_k \beta_k R_i^k + \gamma C_i + \sum_m \sum_g D_m D_{g_i} + u_i \quad (3)$$

where C_i denotes experimental variation in the price of agency (only in LAB2) and where the realized value of agency R_i^k is instrumented using \widehat{V}_i^k . This is equivalent to using $\sum_m \sum_n \sum_r \sum_g D_m D_n D_{r_i} D_{g_i}$ as instruments in equation (3). Gender and matching type dummies are included as controls because they may affect agency directly – for instance because women are reluctant to impose their own choice when matched with a male family member.

We also estimate a version of model (3) for ex post agency A_i^p :

$$A_i^p = \alpha + \sum_k \beta_k R_i^k + \gamma C_i + \sum_m \sum_g D_m D_{g_i} + u_i$$

Here no instrumentation/prediction is required since, by construction, i knows R_i^k when deciding A_i^p .

Appendix C: Ultimatum game decisions

Table C1: Rejection in ultimatum game by gender and match type

	matching type		t-stat. vs family
	family	stranger	
Any rejection			
Male subject	36.4%	28.6%	-1.03
Female subject	85.5%	77.8%	-1.28
t-stat. female/male	6.83 ***	6.64 ***	
	matching type		t-stat. vs family
	family	stranger	
Rejecting offers below 600			
Male subject	33.8%	26.0%	-1.05
Female subject	84.3%	75.3%	-1.44
t-stat. female/male	6.83 ***	6.87 ***	
Number of observations	318		

This Table only uses LAB1 subjects who show sufficient understanding of the ultimatum game. That is, if they can answer three test questions on Player 1 and Player 2 earnings correctly. Similar results are obtained using all subjects. In the top panel the dependent variable equals 1 if the subjects rejects any of the offers received in the ultimatum game, and 0 otherwise. In the bottom panel the dependent variable equals 1 if the subject rejects any offer below 600PKR in the ultimatum game, and 0 otherwise. The reported averages and t-statistics are based on a regression of the rejection dummy on a fully interacted of dummies for gender and matching type, with standard errors clustered at the level of subject pairs. t-statistics significant at the 10better are shown in bold.

Appendix D: Sample size and power calculations for lab and field experiments

Table D1: Number of observations by treatment cell in LAB1

Matched with	Uninformed			Informed			All Total
	Male	Female	Total	Male	Female	Total	
Family member(*)	42	43	86	41	41	82	164
Stranger of opposite sex	42	42	84	42	42	84	164
Total	85	85	170	83	83	166	328

Source: lab data. There is one observation per subject. The matched family member is the husband in 75% of subject pairs. Subject pairs are randomly assigned to an informed or uninformed treatment (see text for details).

Table D2: Number of observations by treatment cell in LAB2

Matched with	Uninformed			Informed			All Total
	Male	Female	Total	Male	Female	Total	
Spouse	179	179	358	179	179	358	716
Stranger of opposite sex	59	59	118	59	59	118	236
Stranger of same sex	66	66	132	66	66	132	264
Computer	54	54	108	54	54	108	216
Total	358	358	716	358	358	716	1432

Source: lab data. There are two observations per subject, one matched with spouse, and one matched with one of three possible 'strangers': opposite sex, same sex, or computer. Subject pairs are randomly assigned to the informed or uninformed treatment (see text for details).

Table D3: Minimum detectable effect size in LAB1

Comparison:	Sample sizes:		Detectable effect size
	N1	N2	
One-way	168	168	12.5%
Two-way	84	84	18.1%
Three-way	42	42	26.0%

Assumptions: Dependent variable is dichotomous. Identifiable effect size reported for $\alpha < 0.1$, power=0.8, and proportion among controls= 0.25. Very slightly different values are obtained for different proportions among controls.

Table D4: Minimum detectable effect size in LAB2

Comparison:	Sample sizes:		Detectable effect size
	N1	N2	
One-way	716	716	5.9%
One-way	716	236	8.4%
One-way	716	264	8.1%
One-way	716	216	8.7%
Two-way	358	358	8.4%
Two-way	358	118	12.1%
Two-way	358	132	11.6%
Two-way	358	108	12.5%
Two-way	118	118	15.1%
Two-way	132	132	14.2%
Two-way	108	108	15.8%
Three-way	179	179	12.1%
Three-way	179	59	17.3%
Three-way	179	66	16.6%
Three-way	179	54	17.9%
Three-way	59	59	21.8%
Three-way	66	66	20.5%
Three-way	54	54	22.8%

Assumptions: Dependent variable is dichotomous. Identifiable effect size reported for $\alpha < 0.1$, power=0.8, and proportion among controls= 0.25. Very slightly different values are obtained for different proportions among controls.

Table D5: Number of observations by treatment cell in the field experiment

	Control	Treated	All
Delegation by husband	487	1441	1928
Cost of agency to wife:			
50	504	1487	1991
200	504	1487	1991
	1008	2974	3987

Source: survey data. There are two observations on demand for agency for each female respondents, one response per cost of agency.

Table D6: Minimum detectable effect size in the field experiment

Comparison:		Sample sizes:		Detectable effect size
		N1	N2	
Delegation:		487	1441	0.9%
Agency:	Treated-control	1008	2974	4.0%
	Cost of agency	1991	1991	3.5%
	Two-way	504	1487	5.8%

Assumptions: Dependent variable is dichotomous. Identifiable effect size reported for $\alpha < 0.1$, power=0.8, and proportion among controls= 0.25 – except for delegation, where the proportion among controls is set to 99% to match the actual data. Very slightly different values are obtained for different proportions among controls.

Online Appendix A: Experimental protocols

A1. First laboratory experiment

At the time of invitation, all couples were given basic information on the experiment and details on the time, date, and expected duration of the session (2-3 hours). Each experimental session was held in a central location, at less than 20 minutes drive via public transport from any of the sampled *muhallas*. To facilitate participation by employed subjects, in particular men, we held sessions over the weekend. Each couple was also informed of the compensation and expected earnings from participation: a participation fee of Rs. 1000 (\$10) (i.e., Rs. 2000 per couple), provided that they stayed for the entire duration of the session; and additional earnings of at most Rs. 1000 (\$10). Informed consent was collected from all participants before the start of each session, and payments were made individually and privately at the end. Male questionnaires were not administered at the time of the RCT survey, thus data on males was collected at the time of the experiment.

Recruitment

Half of the LAB1 female subjects (98) are drawn in 2014 from among clients of a microfinance organization (the National Rural Support Programme, henceforth NRSP) participating in a randomized controlled trial (RCT). NRSP offers microenterprise loan products in urban and peri-urban areas of Bhakkar and Chakwal in the Pakistan Punjab and targets its financial products towards middle-aged married couples. Our initial intent was to recruit all of the LAB1 sample from the RCT sample in the Chakwal district. This proved impossible, however, because many invited households declined to participate due to time constraints. To make up for the shortfall, the LAB1 sample include randomly selected couples from the same *muhallas* – or geographical clusters – where the RCT households reside. More precisely, we first randomly selected from the list of female RCT participants within each *muhalla* one subject to be invited to the experiment. *Muhallas* were used as sampling units to limit the flow of information between participants of different sessions. We then invited to the same session one couple from every 3rd household living on the same street as the RCT invitee. These two steps were repeated until we found enough couples to participate in the session. 58% of the LAB1 sample is from the original RCT sample, and the remaining 42% are randomly selected pairs from the same *muhallas*.

Women are invited to participate with their husband. In case the woman is unmarried or the husband is absent, the subject is invited to come accompanied by the adult male with the greatest power over household's finances.

Sequence of events during experiment sessions

1. Upon arrival, subject pairs are assigned to their respective gender-specific room. 74.4% of the participants came with their spouse; 14.88% with their son and 10.72% with male household members (for instance, brother, brother-in-law).

2. Each subject pair is randomly assigned to a matching treatment: either with spouse/household member they came with; or with stranger of opposite gender. 50.6% of the participants were paired with family member and 49.4% are paired with a stranger.
3. Each subject in the stranger matching treatment is assigned a partner; this is done without replacement, which means that all subjects in the stranger treatment have one partner and one partner only; by construction, the partner is not the household member they came with
4. Half of the subjects are randomly assigned to the information treatment. The randomization is done by pair ID codes assigned at the start of the treatment.
5. No contact is allowed between subjects of opposite genders during the entire experiment. Men and women are seated in separate rooms
6. Subjects of the same gender are seated in compartments separated by cardboard sheets. Contact between subjects in the same room is strongly discouraged but not impossible.
7. Preference game is always played first in each session.
 - Subjects taste small samples of the three juice flavors.
 - Subjects rank the three flavors by order of preference.
 - Subjects pick the flavor they want to receive a full glass of.
 - Subjects guess the preference ordering of their partner.
 - Subjects in the information treatment are informed of the preference order of their partner.
 - Subjects pick the flavor they want their partner to receive a full glass of.
 - Subjects choose whether to take half-a-glass of their selected flavor, or 50% chance of a full glass of their selected flavor and 50% chance of a full glass of the flavor selected for them by their partner.
 - A coin toss determines which flavor the subject receives.
 - Subjects consume the juice.
8. Subjects play the Dictator (D), Taking (T) and Ultimatum (U) activities. The order of play is randomized across sessions as follows:

Game Order	Session No.
D-T-U	7,11,15,
D-U-T	3,5,9
T-U-D	1
T-D-U	4
U-D-T	2,6,8
U-T-D	10,13

9. The last activity is played. This is always the norms elicitation activity. Subjects answer two incentivized questions about financial autonomy of women. The two questions are answered twice; once the answers are matched to the spouse and once the answers are matched to a random stranger sitting in the next room. Subjects receive a fixed payoff of Rs. 250 for every

question matched to a person sitting in the next room. Question about an ordinary purchase (scarf) is always asked before the question on investment decision. The order in the which answer is matched to either the household member or stranger is randomized. This order of matching is as follows:

Answers Matched to:	Session No.
Household member, Stranger	1, 3, 5, 7, 9, 11, 13, 15
Stranger, Household member	2, 4, 6, 8, 10, 12, 14

10. Show-up fee + pay off from randomly selected activity (DG/TG/UG/norms) is paid to each participant in cash. The participants are provided this case in white envelopes and in privacy.

We reproduce below the full protocol used in the experiment. The text below was read in Urdu to all participating subjects during the experiment. Square brackets [] contain instructions for enumerators.

Introduction to the community

Thank you [Community Head name or NRSP representative?], for organizing this meeting and allowing us to be here.

Also, thank you all for taking the time to be here today. My name is [experimenter's name], and I will be facilitating this meeting. Helping me today, we also have here [introduce everyone]. Before we start, we would like to give you Rs ____ as a compensation for your time. These Rs ____ are not a part of the activity and are yours to keep.

Purpose

- Today, we will conduct several activities in your community.
- The purpose of these activities is to better understand how people in this community make decisions.
- The results of the study may eventually be published in a scientific article or part of a book.
- It is not part of a development project of any sort.
- Your community and other communities around [Province name] were selected to participate from a large group of potential communities.

Activities

We will perform several tasks here today. At the end of all the tasks, we will draw a number from this hat [show numbers and hat]. Each number represents one of the tasks that you will have performed, number 1 for task 1, number 2 for task 2, and so on. The number that is drawn will determine which task is paid to you. This means that every task that you play today has the same chance of being paid to you. So you have to be careful to choose exactly what you want for each task, because that decision can be the one that determines your payment at the end. Is this clear to everyone? Do you have questions on this?

For our activities, we will select 20 participants. In a moment, I will explain how we select the participants. Before that, I want to make some general comments. Participants will be performing some tasks in exchange for real money that they will be able to take home. You should understand that this is not my money. It is money given to me by Oxford University, to use to conduct a research study.

- We only need 20 individuals to participate in these tasks. Thus, unfortunately, not all of you will be able to participate.
- We will have a lottery to determine who will participate.

- To complete the lottery, we will write down your name and the name of your spouse on a piece of paper and then, fold the paper in half.
- Next, you will place your folded piece of paper in a bag.
- This means that we need one piece of paper for each couple present here today.
- We will then ask one of you to draw 10 pieces of paper from the bag containing the names.
- Those whose names are drawn will stay here and participate in the tasks, while the others will go home.

Is this clear to everyone? Does anyone have any questions on how we will select the 20 participants?

Please note that the meeting may take 3-4 hours, so if you think you will not be able to stay that long please let us know now.

Consent

- Before we begin, I will explain the basic activities we will do together, and the rules that we will follow.
- [Read Consent Statement]

If you wish to participate, please say, "I do." If you do not wish to participate, please advise us. You will be free to leave then. You will not be able to stay in the activity room(s) if you do not wish to participate.

[Random draw of names]

Those of you, whose names have not been called, can leave now. Thank you all for taking the time to come today.

[After people have left]

You will be matched with a partner for some of the tasks that you will perform today. Who your partner is depends on a random draw.

- We will now ask one member of each couple to draw a card from this bag [Hold bag up and show its content].
- The bag contains 5 yellow cards and 5 green cards.
- If you draw a yellow card, we will give you and your spouse a yellow name tag to wear. If you draw a green card, we will give you and your spouse a green name tag to wear.
- The color of the card you draw will determine who your partner is for some of the tasks today.

We will explain more about your partner later, but for now we will go around the room for the random draw and to distribute the name tags.

[After people have been assigned to the spouse or stranger matching]

We will now take all women to one room, and all men to another room. Please follow [Assistant's name] if you are a woman, or [Assistant's name] if you are a man.

[Take the selected participants into the rooms and have them sit.]

[To the participants]

Introduction to participants

Welcome, and thank you again.

- Before we proceed any further, let me stress something that is very important. Many of you were invited here without understanding very much about what we are planning to do today. If at any time you find that this is something that you do not wish to participate in for any reason, you are of course free to leave at anytime. If you do choose to leave, you won't be able to come back into the activity room(s) until everyone is finished performing all the activities.
- Before we start, please make sure your mobile phones are switched off, to avoid interruptions during the meeting.
- If you have heard about activities that have been conducted here in the past you should try to forget everything that you have been told. These are completely different tasks.
- Please also be advised, there are no right or wrong choices, so you should choose whatever you think is best for yourself and not look at your neighbor's choices. It is important to remember that not everyone will win the same amount in the task. Everyone will still receive the ____ payment for participation, regardless of how much you win in the task.
- We are about to begin. It is important that you listen as carefully as possible to the instructions, because only people who understand the tasks will actually be able to perform them. I will run through some examples to make sure you understand.
- You cannot ask questions out loud or talk about the tasks with anyone else while we are here together.
- If you have questions at any time during the meeting, please raise your hand and ask, and we will come to you and answer them in private.
- I will read through a script to explain all the activities that we will perform here today. As you may know, these activities are conducted in other localities beside this one, so it is very important that people in every locality receive exactly the same information, and this is the reason why I must read from this script.

NO TALKING

- I will now say something very important. You cannot ask questions out loud or talk about the tasks with anyone else while we are here together.
- If you need to ask a question at any time, please raise your hand and I will come to you so I can answer your question privately.
- I will explain the tasks, do demonstrations, and let you practice the tasks before we perform them for real. These demonstrations and practices are to help you understand the rules and clarify any questions.
- Please be sure that you obey these rules because it is possible for one person to spoil the tasks for everyone by talking in front of the group. If this happens, we will not be able to continue forward with the tasks today and you will not be paid for the tasks.
- Is this clear to everyone? Does anyone have any questions so far about what will go on today?

[If anyone asks a question out loud, explain again that all questions must be asked in private]

REAL PAYMENT

- In today's activities, you will have the opportunity to receive a cash payment. The amount that you will receive depends on your decisions and on the decisions of others. It also depends on what task is selected to be paid.
- Remember that at the end of all the activities, we will draw a number from a hat. That number will determine for which task you will be paid. This means that each task that you perform has the same chance of being selected to be paid.
- Remember also, that in addition to what you will earn from the activities, each of you will receive ____ for participating in today's meeting. This money is yours, regardless of what happens during the activities. It will be paid to you in cash together with your earnings from the activities.
- It is real money, which you will be allowed to keep for yourself or do what you wish. This money will be paid to you in cash at the end of the meeting.
- During the activities you will make your decisions using paper slips [show slips], each representing 100 Rs. These paper slips will be converted into cash when you get paid at the end of the meeting.

CONFIDENTIALITY

- Your decisions and your payment are private and confidential. Nobody, apart from a member of our team will know what you earned, and he/she will not tell anyone.
- You all have a dark bag. You will have to make your decisions inside the bags, so that nobody else can see what you decide.

Instructions for preferences game (Task 1)

We are now ready to begin a task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately. This is NOT the same task that you just performed, so be sure to listen to the instructions carefully.

Who will be your partner in this task? You remember that earlier we asked you to draw a card. Half of you drew yellow cards, the other half drew green cards. Your partner for this task is determined by the color of the card you drew.

- Those of you who drew a green card will be paired with a stranger in the other room. None of you will know exactly with whom you are paired. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone. [If this is not the first task: Your partner in this task is the same as the one in the previous task.]
- Those of you who drew a yellow card will be paired with their spouse in the other room.

Do you have questions on who your partner will be in this task? If you have questions, please raise your hand and I will come to you to answer your question privately.

[If this is not the first task: Your partner for this task is the same as the one for the previous task(s). That is, for those of you who drew a green card, your partner will be the same stranger in the other room that was paired with you in the previous task(s), while for those of you who drew a yellow card, your partner will be your spouse in the other room.]

Part 1:

I have here three different flavors of juice – apple, pineapple and orange. Before we begin this task, I would like you to taste each of these flavors and rank them on the basis of how much you like them. You should rank your favored flavor as number 1, your second-favored flavor as number 2, and your least favored flavor as number 3. You cannot rank two flavors equally. My assistant(s) will offer you a sample of the three flavors of juice, and then you should write down your ranking on the sheet we will provide you. [Distribute a sheet with pictures of the 3 fruits, subjects should write a number next to each fruit representing the ranking.]

Does anyone have any questions? Please raise your hand and my assistant or I will come and address your query.

Part 2:

Your partner in the other room has also been asked to rank the three flavors of juice. We would like you to guess your partner's ranking. We will now distribute a sheet, where you can write your guess. We will give you Rs. ____ for guessing correctly! This money will be paid to you at the end of all activities, on top of your earnings from the task that is randomly selected to be paid.

Part 3:

Now, we will distribute to half of you a sheet, containing the ranking given by your partner. The others will not know how your partner ranked the juice flavors.

[The experimenter and assistants distribute to a randomly selected half of participants (half from each group) the partner's ranking sheet.]

Now I would like for you to make two decisions:

- Choose what flavor you would like to consume.
- Choose a flavor for your partner to consume. It does not have to be the same flavor that you choose for yourself, nor it must necessarily be your partner's preferred flavor, if you know it.
- In the other room, your partner is being asked to do the same.
- There is a fifty percent chance that you will be given the flavor that you chose for yourself, and a fifty percent chance that you will be given the flavor that your partner chose for you. Similarly, your partner has a fifty percent chance to be given the flavor that he or she chose for him or herself, and a fifty percent chance to be given the flavor that you chose for him or her.
- Neither you nor your partner will be able to exchange the juice you are given with anyone else.

Shall we begin? Does anyone have any questions? Please raise your hand and my assistant or I will come and address your query.

We will now distribute a decision sheet, where you can mark your choices [Distribute a decision sheet, with space to record one choice for the subject and one for the partner]

Please fill in your choice in the sheet of paper in front of you and fold it to let us know you are done. My assistants and I will come and collect your decision sheet.

Part 4:

We will now call you one by one to the back of the room and give you your juice. We will fill a large glass of juice for you [Show glass: the glass should be opaque, so that others cannot see how much juice is in it]. Remember, there is a fifty percent chance that you will get your favorite flavor, and a fifty percent chance that you will get the flavor that your partner picked for you. How will we decide if you'll get your favorite flavor or your partner's pick? We will toss a coin when we come to you. If the coin toss yields heads, then you will be given your favorite flavor; if tails, your partner's pick.

When we call you to give you your juice, before knowing whether you'll get your favorite flavor or your partner's pick for you (i.e. before tossing the coin), we will give you the opportunity to make sure you get your favorite flavor.

How? If you are willing to give up some of the juice, we will give you your favorite flavor of juice for sure. So, if you choose to have your favorite juice for sure, you will be given only half a glass of it. If instead you choose to have your favorite juice with a fifty percent chance, or your partner's pick with a fifty percent chance, then you'll be given a full glass of it.

We will now call you one by one.

[At individual meetings] Here I have the piece of paper with your ranking of the juice flavors, another piece of paper with your partner's pick for you, and a coin that I will toss to determine if you will get one full glass of your favorite flavor or of your partner's pick.

Would you like me to toss the coin and get a full glass of juice, or would you like to get your half a glass of your favorite flavor for sure? [record decision and implement it].

Instructions for dictator game (Task 2)

[Note: before each session, the order of tasks 1-3 is randomized]

We are now ready to begin another/the first task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately. [If this is not the first task] This is NOT the same task that you just performed, so be sure to listen to the instructions carefully.

- This task is performed by pairs of individuals. Each pair is made up of a Player 1 and a Player 2. We will play two rounds of this task.
- Each of you will perform this task with someone from the other room.
- Who your partner is depends on the color of the card you drew earlier, as I will explain to you shortly.
- [researcher's name] will provide \$10 to Player 1 in each pair of players..
- Player 1 must decide how to divide this money between himself or herself and Player 2. Player 1 may allocate between \$0 and \$10 to Player 2.
- Player 2 takes home whatever Player 1 allocates to them, and Player 1 takes home whatever he or she does not allocate to Player 2.

Who will be your partner in this task? You remember that earlier we asked you to draw a card. Half of you drew yellow cards, the other half drew green cards. Your partner for this task is determined by the color of the card you drew.

- Those of you who drew a green card are paired with a stranger in the other room. None of you will know exactly with whom you are paired. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone.
- Those of you who drew a yellow card are paired with your spouse in the other room.

Do you have questions on who your partner is for this task? If you have questions, please raise your hand and I will come to you to answer your question privately.

[If this is not the first task: Your partner for this task is the same as the one for the previous task(s). That is, for those of you who drew a green card, your partner is the same stranger in the other room that was paired with you in the previous task(s), while for those of you who drew a yellow card, your partner is your spouse in the other room.]

We now run through 5 examples to show how the task might be performed.

[Notes: the researchers and assistants work through the examples and test questions with paper slips, each representing a 100 Rs note, on a flat surface with a line drawn on it demarcating the areas assigned to Players 1 and 2. Each of the examples presented below is presented either as an example or used as a test question as required. If more test questions are needed the researcher or assistant begin again with the first example above. The script below is written assuming that 6 more examples were given, 3 presented as test scenarios/practice rounds, i.e., the subjects are asked questions about the amounts the subjects would take home. The 11 examples/tests – 5 above, 6 below – cover the full set of possible choices for Player 1.]

1. Here is the \$10. Imagine that Player 1 chooses to allocate \$9 to Player 2. Then, Player 2 will go home with \$9 and Player 1 will go home with \$1 (\$10 minus \$9 equals \$1).
2. Here is another example. Imagine that Player 1 chooses to allocate \$2 to Player 2. Then, Player 2 will go home with \$2 and Player 1 will go home with \$8 (\$10 minus \$2 equals \$8).
3. Here is another example. Imagine that Player 1 chooses to allocate \$5 to Player 2. Then, Player 2 will go home with \$5 and Player 1 will go home with \$5 (\$10 minus \$5 equals \$5).
4. Here is another example. Imagine that Player 1 chooses to allocate \$7 to Player 2. Then, Player 2 will go home with \$7 and Player 1 will go home with \$3 (\$10 minus \$7 equals \$3).
5. Here is another example. Imagine that Player 1 chooses to allocate zero to Player 2. Then, Player 2 will go home with zero and Player 1 will go home with \$10 (\$10 minus zero equals \$10).

[The experimenter and assistants hand out two envelopes for each subject. Each envelope features the subject's ID. The two envelopes are of different color. Moreover, Player 1's [2's] envelope has a 1 [2] written on it.]

We will now practice the task together. You will first practice the task as Player 1. You have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines Player 1's payment. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 2. As we work through the following examples, please put the paper slips into the empty envelope as indicated by the examples. We will walk around the room to check if your allocation matches the one from the example. This is important, because it allows us to make sure that everyone understands the task and how to make the decision.

Here are some more examples [The experiment assistants go around the room to check that subjects correctly place the paper slips into the envelopes. The experimenter explains the task again if mistakes are discovered]:

1. Imagine that Player 1 chooses to allocate \$10 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with \$10 and Player 1 will go home with zero (\$10 minus \$10 equals zero).]
 2. Here is another example. Imagine that Player 1 chooses to allocate \$4 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with \$4 and Player 1 will go home with \$6 (\$10 minus \$4 equals \$6).]
 3. Here is another example. Imagine that Player 1 chooses to allocate \$6 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with \$6 and Player 1 will go home with \$4 (\$10 minus \$6 equals \$4).]
 4. Suppose that Player 1 chooses to allocate \$1 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [\$9] And how much will Player 2 go home with? [\$1]
 5. Now try this one. Suppose that Player 1 chooses to allocate \$8 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [\$2] And how much will Player 2 go home with? [\$8].
 6. Now try this one. Suppose that Player 1 chooses to allocate \$3 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [\$7]. And how much will Player 2 go home with? [\$3].
- [Before each session, the order of rounds is randomly determined] You will all perform one round as player 1 and one round as player 2. You will first perform the task as Player 1 [or 2, depending on randomization], and then perform the task as Player 2 [or 1].
 - We don't know yet whether you will be paid for this task, nor whether you will be paid for your decisions as Player 1 or as Player 2. How will we choose whether to pay you for this task, and whether to pay you as Player 1 or Player 2? After we have finished performing all the tasks, we will first draw a number from the hat [show again numbers and hat] to determine which task will be paid. If we draw the number 1 from the hat, then it means that this task is the one selected to be paid. If so, we will toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2.

[For Player 1s] You will now perform the task as Player 1. You have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines your payment. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 2. Please put the paper slips you want to give to player to the empty envelope. Please make sure your choice is not observed by others in the room. You must now wait while the rest of the players, finish performing the task. [If Player 1 is selected to be the first role to be played] Then we will play the second round of this task, where you are Player 2.

[The experimenter and assistants collect the envelopes.]

[For Player 2s] You will now perform the task as Player 2. Player 1 in the other room who has been matched with you has allocated a sum of money to you. After we finish performing all the activities, if this task and the role of Player 2 is the one selected to be paid I will pay you what Player 1 has allocated to you.

We will now perform another task/We will now take a break. [Researcher's name] will pay you for this task [point to the pile of envelopes to demonstrate the amount] after we finish all the tasks, if this task is the one selected to be paid.

Instructions for taking game (Task 3)

We are now ready to begin another/the first task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately. [If this is not the first task: This is NOT the same task that you just performed, so be sure to listen to the instructions carefully.]

- This task is performed by pairs of individuals. Each pair is made up of a Player 1 and a Player 2. We will play two rounds of this task.
- Each of you will perform this task with someone from the other room.
- Who your partner will be depends on the color of the card you drew earlier, as I will explain to you shortly.
- [researcher's name] will provide \$10 to Player 2 in each pair of players..
- Player 1 (not Player 2) decides how to divide this money between himself or herself and Player 2. Player 1 must allocate between \$0 and \$10 to himself, leaving the rest for player 2.
- Player 2 takes home whatever Player 1 leaves them with, and Player 1 takes home whatever he or she does not leave to Player 2.

Who will be your partner in this task? You remember that earlier we asked you to draw a card. Half of you drew yellow cards, the other half drew green cards. Your partner for this task is determined by the color of the card you drew.

- Those of you who drew a green card will be paired with a stranger in the other room. None of you will know exactly with whom you are paired. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone. [If this is not the first task: Your partner in this task is the same as the one in the previous task.]
- Those of you who drew a yellow card will be paired with their spouse in the other room.

Do you have questions on who your partner will be in this task? If you have questions, please raise your hand and I will come to you to answer your question privately.

[If this is not the first task: Your partner for this task is the same as the one for the previous task(s). That is, for those of you who drew a green card, your partner will be the same stranger in the other room that was paired with you in the previous task(s), while for those of you who drew a yellow card, your partner will be your spouse in the other room.]

We will now run through 5 examples to show you how the task might be performed:

[Notes: the researchers and assistants work through the examples and test questions with paper slips, each representing a 100 Rs note, on a flat surface with a line drawn on it demarcating the areas assigned to Players 1 and 2. Each of the examples presented below is presented either as an example or used as a test question as required. If more test questions are needed the researcher or assistant begin again with the first example above. The script below is written assuming that 6 more examples were given, 3 presented as test scenarios/practice rounds, i.e., the subjects are asked questions about the amounts the subjects would take home. The 11 examples/tests – 5 above, 6 below – cover the full set of possible choices for Player 1.]

1. Here is the \$10 given to Player 2. Imagine that Player 1 chooses to leave \$9 to Player 2. Then, Player 2 will go home with \$9 and Player 1 will go home with \$1 (\$10 minus \$9 equals \$1).
2. Here is another example. Imagine that Player 1 chooses to leave \$2 to Player 2. Then, Player 2 will go home with \$2 and Player 1 will go home with \$8 (\$10 minus \$2 equals \$8).
3. Here is another example. Imagine that Player 1 chooses to leave \$5 to Player 2. Then, Player 2 will go home with \$5 and Player 1 will go home with \$5 (\$10 minus \$5 equals \$5).
4. Here is another example. Imagine that Player 1 chooses to leave \$7 to Player 2. Then, Player 2 will go home with \$7 and Player 1 will go home with \$3 (\$10 minus \$7 equals \$3).
5. Here is another example. Imagine that Player 1 chooses to leave zero to Player 2. Then, Player 2 will go home with zero and Player 1 will go home with \$10 (\$10 minus zero equals \$10).

[The experimenter and assistants hand out two envelopes for each subject. Each envelope features the subject's ID. The two envelopes are of different color. Moreover, Player 1's [2's] envelope has a 1 [2] written on it.]

We will now practice the task together. You will first practice the task as Player 2. You have been handed two envelopes. The blue [or other color] one with 10 paper slips in it is the one that determines Player 2's payment. The other envelope, the yellow [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 1. As we work through the following examples, please put the paper slips into the empty envelope as indicated by the examples. We will walk around the room to check if your allocation matches the one from the example. This is important, because it allows us to make sure that everyone understands the task and how to make the decision.

Here are some more examples [The experiment assistants go around the room to check that subjects correctly place the paper slips into the envelopes. The experimenter explains the task again if mistakes are discovered]:

1. Imagine that Player 1 chooses to leave \$10 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And

how much will Player 1 go home with? [Player 2 will go home with \$10 and Player 1 will go home with zero (\$10 minus \$10 equals zero).]

2. Here is another example. Imagine that Player 1 chooses to leave \$4 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with \$4 and Player 1 will go home with \$6 (\$10 minus \$4 equals \$6).]
 3. Here is another example. Imagine that Player 1 chooses to leave \$6 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with \$6 and Player 1 will go home with \$4 (\$10 minus \$6 equals \$4).]
 4. Suppose that Player 1 chooses to leave \$1 to Player 2. In this case, how much will Player 1 go home with? [\$9] And how much will Player 2 go home with? [\$1]
 5. Now try this one. Suppose that Player 1 chooses to leave \$8 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [\$2] And how much will Player 2 go home with? [\$8].
 6. Now try this one. Suppose that Player 1 chooses to leave \$3 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [\$7]. And how much will Player 2 go home with? [\$3].
- [Before each session, the order of rounds is randomly determined] You will all perform one round as Player 1 and one round as Player 2. You will first perform the task as Player 1 [or 2, depending on randomization], and then perform the task as Player 2 [or 1].
 - We don't know yet whether you will be paid for this task, nor whether you will be paid for your decisions as Player 1 or as Player 2. How will we choose whether to pay you for this task, and whether to pay you as Player 1 or Player 2? After we have finished performing all the tasks, we will first draw a number from the hat [show again numbers and hat] to determine which task will be paid. If we draw the number 1 from the hat, then it means that this task is the one selected to be paid. If so, we will toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2.

[For Player 1s] You will now perform the task as Player 1. You have been handed two envelopes. The blue [or other color] one with 10 paper slips in it is the one that determines Player 2's payment. The other envelope, the yellow [or other color] one, is empty and the paper slips you put in it will determine your payment. Please put the paper slips you want to allocate to yourself in the empty envelope. Please make sure your choice is not observed by others in the room. You must now wait while the rest of the players, finish performing the task. [If Player 1 is selected to be the first role to be played] Then we will play the second round of this task, where you are Player 2.

[The experimenter and assistants collect the envelopes.]

[For Player 2s] You will now perform the task as Player 2. Player 1 in the other room who has been matched with you has left you with a sum of money. After we finish performing all the activities, if this task and the role of Player 2 is the one selected to be paid I will pay you what Player 1 has left you with.

We will now perform another task/We will now take a break. [Researcher's name] will pay you for this task [point to the pile of envelopes to demonstrate the amount] after we finish all the tasks, if this task is the one selected to be paid.

Instructions for ultimatum game (Task 4)

We are now ready to begin another/the first task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately. [If this is not the first task: This is NOT the same task that you just played, so be sure to listen to the instructions carefully.]

- This task is performed by pairs of individuals. Each pair is made up of a Player 1 and a Player 2. We will play two rounds of this task.
- Each of you will perform this task with someone from the other room.
- Who your partner will be depends on the color of the card you drew earlier, as I will explain to you shortly.
- [researcher's name] will provide \$10 to Player 1 in each pair of players..
- Player 1 decides how to divide this money between him or herself and Player 2. Player 1 must allocate between \$0 and \$10 to himself, leaving the rest for Player 2.
- Before hearing the offer made to them by Player 1, Player 2 has to state whether he or she would accept or reject each of the possible offers between \$0 and \$10 that Player 1 could have made.
- If Player 2 has stated that he or she would accept Player 1's offer, then Player 2 gets the amount of the offer and Player 1 gets the remainder. If Player 2 has stated that he or she would reject Player 1's offer, then Player 1 and Player 2 receive no money for this task.

Who will be your partner in this task? You remember that earlier we asked you to draw a card. Half of you drew yellow cards, the other half drew green cards. Your partner for this task is determined by the color of the card you drew.

- Those of you who drew a green card will be paired with a stranger in the other room. None of you will know exactly with whom you are paired. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone. [If this is not the first task: Your partner in this task is the same as the one in the previous task.]
- Those of you who drew a yellow card will be paired with their spouse in the other room.

Do you have questions on who your partner will be in this task? If you have questions, please raise your hand and I will come to you to answer your question privately.

[If this is not the first task: Your partner for this task is the same as the one for the previous task(s). That is, for those of you who drew a green card, your partner will be the same stranger in the other room that was paired with you in the previous task(s), while for those of you who drew a yellow card, your partner will be your spouse in the other room.]

We will now run through 5 examples to show you how the task might be performed:

[Notes: the researchers and assistants work through the examples and test questions with paper slips, each representing a 100 Rs note, on a flat surface with a line drawn on it demarcating the areas assigned to Players 1 and 2. Each of the examples presented below is presented either as an example or used as a test question as required. If more test questions are needed the researcher or assistant begin again with the first example above. The script below is written assuming that 6 more examples were given, 3 presented as test scenarios/practice rounds, i.e., the subjects are asked questions about the amounts the subjects would take home. The 11 examples/tests – 5 above, 6 below – cover the full set of possible choices for Player 1.]

1. Here is the first example. Imagine that Player 1 offers \$9 to Player 2. Now, before hearing about this, Player 2 has stated that he would reject an offer of \$9 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 might have made, but we will not worry about that now.) Because Player 2 said he would reject \$9, Player 1 goes home with nothing and Player 2 goes home with nothing.
2. Here is another example. Imagine that Player 1 offers \$9 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$9 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 might have made, but we will not worry about that now.) In this case, Player 1 goes home with \$1 (\$10 minus \$9 equals \$1) and Player 2 goes home \$9.
3. Here is another example. Imagine that Player 1 offers \$2 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$2 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 might have made, but we will not worry about that now.) Because Player 2 said he would accept this offer, Player 1 goes home with \$8 (\$10 minus \$2 equals \$8), and Player 2 goes home with \$2.
4. Here is another example. Imagine that Player 1 offers \$2 to Player 2. But now, before hearing about this, Player 2 has stated that he would reject an offer of \$2 from Player 1. (Player 2 also stated whether he would accept or reject each of the other possible offers that Player 1 could have made, but we will not worry about that now.) In this case, Player 1 goes home with nothing, and Player 2 also goes home with nothing.
5. Here is another example. Imagine that Player 1 offers \$5 to Player 2. Now, before hearing about this, Player 2 has stated that he would reject an offer of \$5 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now.) Because Player 2 said he would reject an offer of \$5 from Player, Player 1 goes home with nothing and Player 2 goes home with nothing.
6. Here is another example. Imagine that Player 1 offers \$5 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$5 from Player 1. (Player 2

has also stated whether they would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now.) In this case, Player 1 goes home with \$5 (\$10 minus \$5 is \$5) and Player 2 goes home with \$5.

7. Here is another example. Imagine that Player 1 offers \$7 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$7 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now.) Because Player 2 said he would accept an offer of \$7, Player 1 goes home with \$3 (\$10 minus \$7 equals \$3). And Player 2 goes home with \$7.
8. Here is another example. Imagine that Player 1 offers \$7 to Player 2. But now, before hearing about this, Player 2 has stated that he would reject an offer of \$7 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 might have made, but we will not worry about that now.) In this case, Player 1 goes home with nothing, and Player 2 goes home with nothing.
9. Here is another example. Imagine that Player 1 offers \$0 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$0 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now.) Because Player 2 said he would accept \$0 from Player 1, Player 1 goes home with \$10 (\$10 minus zero is \$10) and Player 2 goes home with nothing.
10. Here is another example. Imagine that Player 1 offers \$0 to Player 2. But this time, before hearing about this offer, Player 2 has stated that he would reject an offer of \$0 from Player 1. (Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now.) In this case, Player 1 goes home with nothing and Player 2 goes home with nothing.

[The experimenter and assistants hand out two envelopes for each subject. Each envelope features the subject's ID. The two envelopes are of different color. Moreover, Player 1's [2's] envelope has a 1 [2] written on it.]

We will now practice the task together.

To practice the round of the task in which you have the role of Player 1, you have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines what Player 1's proposes to keep for him or herself. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the offer you make to Player 2. As we work through the following examples, please put the paper slips into the empty envelope as indicated by the examples. We will walk around the room to check if your allocation matches the one from the example. This is important, because it allows us to make sure that everyone understands the task and how to make the decision.

Here are some more examples [The experiment assistants go around the room to check that subjects correctly place the paper slips into the envelopes. The experimenter explains the task again if mistakes are discovered]:

1. Imagine that Player 1 offers \$10 to Player 2. Now, before hearing about this, Player 2 has stated that he would reject an offer of \$10 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then Player 1 goes home with nothing and Player 2 goes home with nothing.
2. Imagine now that Player 1 offers \$10 to Player 2. But this time, before hearing about this, Player 2 has stated that he would accept an offer of \$10 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then Player 1 goes home with nothing (\$10 minus \$10 equals zero (nothing)) and Player 2 goes home with \$10.
3. Imagine that Player 1 offers \$4 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$4 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then, Player 1 goes home with \$6 (\$10 minus \$4 equals \$6). And Player 2 goes home with \$4.
4. Imagine again that Player 1 offers \$4 to Player 2. Now, before hearing about this, Player 2 has stated that he would reject an offer of \$4 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then, Player 1 goes home with nothing. And, Player 2 goes home with nothing.
5. Imagine that Player 1 offers \$6 to Player 2. Now, before hearing about this, Player 2 has stated that he would reject an offer of \$6 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then Player 1 goes home with nothing and Player 2 goes home with nothing.
6. Imagine that Player 1 offers \$6 to Player 2. Now, before hearing about this, Player 2 has stated that he would accept an offer of \$6 from Player 1. Player 2 has also stated whether he would accept or reject all the other possible offers that Player 1 could have made, but we will not worry about that now. Then Player 1 goes home with \$4 (\$10 minus \$6 equals \$4). And Player 2 goes home with \$6.

Test question formats:

7. Suppose that Player 1 offers \$1 to Player 2 and that, before hearing about this, Player 2 has stated that he would accept an offer of \$1. In this case, how much will Player 1 go home with? [\$9] And how much will Player 2 go home with? [\$1].
8. And what if, before hearing about this, Player 2 has stated that he would reject an offer of \$1. In this case, how much will Player 1 go home with? [nothing] And how much will Player 2 go home with? [nothing]
9. Now try this one. Suppose that Player 1 offers \$8 to Player 2 and that, before hearing about this, Player 2 has stated that he would accept an offer of \$8. In this case, how much will Player 1 go home with? [\$2] And how much will Player 2 go home with? [\$8].

10. And what if, before hearing about this, Player 2 has stated that he would reject an offer of \$8. In this case, how much will Player 1 go home with? [nothing] And how much will Player 2 go home with? [nothing]
11. Now try this one. Suppose that Player 1 offers \$3 to Player 2 and that, before hearing about this, Player 2 has stated that he would reject an offer of \$3. In this case, how much will Player 1 go home with? [\$0] And how much will Player 2 go home with? [\$0]
12. And what if, before hearing about this, Player 2 has stated that he would accept an offer of \$3. In this case, how much will Player 1 go home with? [\$7] And how much will Player 2 go home with? [\$3]

To practice the round of the task in which you have the role of Player 2, you have been handed a decision sheet. The decision sheet shows you the 11 possible allocations that Player 1 can offer to Player 2. For each possible allocation, Player 2 has to decide whether he would accept that offer or not. If an offer is accepted, Player 1 and Player 2 are paid according to the corresponding allocation. If an offer is not accepted, then both players are paid 0 for this task. Player 2 decides whether to accept or reject an offer by ticking the yes or no box next to the offer.

Now please practice the round of the task in which you have the role of Player 2 by filling out the decision sheet, accepting or rejecting each possible offer made by Player 1. We will walk around the room to check if you have any problems filling out the decision sheet. This is important, because it allows us to make sure that everyone understands the task and how to make the decision.

- [Before each session, the order of rounds is randomly determined] You will all perform one round as player 1 and one round as player 2. You will first perform the task as Player 1 [or 2, depending on randomization], and then perform the task as Player 2 [or 1].
- We don't know yet whether you will be paid for this task, nor whether you will be paid for your decisions as Player 1 or as Player 2. How will we choose whether to pay you for this task, and whether to pay you as Player 1 or Player 2? After we have finished performing all the tasks, we will first draw a number from the hat [show again numbers and hat] to determine which task will be paid. If we draw the number 1 from the hat, then it means that this task is the one selected to be paid. If so, we will toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2.

[For Player 1s] You will now perform the task as Player 1. You have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines what you propose to keep for yourself. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the offer you make to Player 2. Please put the paper slips you want to give to player to the empty envelope. Please make sure your choice is not observed by others in the room. You must now wait while the rest of the players finish performing the task. [If Player 1 is selected to be the first role to be played] Then we will play the second round of this task, where you are Player 2.

[The experimenter and assistants collect the envelopes.]

[For Player 2s] You are a Player 2. Player 1 has allocated a sum of money to you. This money is in an envelope filled by someone in the other room. Before you know Player 1's offer to you, tell me

for each possible offer Player 1 could make whether you would accept or reject it [Hand subjects a sheet with different possible offer and have them select the ones they will accept and those they will reject. Each decision sheet is marked with the subject ID]. These decisions will determine what you actually receive once we see what Player 1 has offered you. Please note that you will not get a chance to change your mind after the envelope has been handed over. [Occasionally, when it seemed necessary, the players were given the following reminder...] Remember that Player 1's offer is already in an envelope. Nothing you decide now can change what is in it.

Now please make your decisions by filling out the decision sheet, accepting or rejecting each possible offer made by Player 1. Then fold the decision sheet in half, so that nobody can see your choices, and we will come to collect them.

[The experimenter and assistants collect the decision sheets, which depict graphically the following allocations and questions:

1. If Player 1 offered you \$10 and kept \$0 for him or herself would you accept or reject?
2. If Player 1 offered you \$9 and kept \$1 for him or herself would you accept or reject?
3. If Player 1 offered you \$8 and kept \$2 for him or herself would you accept or reject?
4. If Player 1 offered you \$7 and kept \$3 for him or herself would you accept or reject?
5. If Player 1 offered you \$6 and kept \$4 for him or herself would you accept or reject?
6. If Player 1 offered you \$5 and kept \$5 for him or herself would you accept or reject?
7. If Player 1 offered you \$4 and kept \$6 for him or herself would you accept or reject?
8. If Player 1 offered you \$3 and kept \$7 for him or herself would you accept or reject?
9. If Player 1 offered you \$2 and kept \$8 for him or herself would you accept or reject?
10. If Player 1 offered you \$1 and kept \$9 for him or herself would you accept or reject?
11. If Player 1 offered you \$0 and kept \$10 for him or herself would you accept or reject?]

We will now perform another tasks/We will now take a break. [Researcher's name] will pay you for this task [point to the pile of envelopes to demonstrate the amount] after we finish all the tasks, if this task is the one selected to be paid.

Instructions for Norm Elicitation game (Task 5)

For this task, I will read to you descriptions of a series of situations. These descriptions correspond to situations in which one person, a woman, must make a decision. For each situation, you will be given a description of the decision faced by the woman. After I read to you the description of the decision, I will describe a choice that the woman might have made, and you should decide whether making that choice would be "socially appropriate" or "socially inappropriate" . or By socially appropriate, we mean behavior that is consistent with moral or proper behavior, that is, behavior that most people agree is the "correct" or "moral" thing to do. Another way to think about what

we mean is that, if someone were to make a socially inappropriate choice, then someone observing the person's behavior might think poorly of that person or even get angry at that person.

In each of your responses, we would like you to answer as truthfully as possible, based on your opinions of what constitutes socially appropriate or socially inappropriate behavior.

To give you an idea of how the experiment will proceed, we will go through an example and show you how you will indicate your responses. I will now read to you an example of a situation. These cards that I am holding illustrate the situation and the decision sheet. [Experimenter illustrates the situation using a vignette, to make it easier for subjects to understand the situation].

Someone is at a local grocery store. While there, the person notices that someone has left a wallet/bag on the counter. How appropriate would it be to take the wallet for yourself?

If this were the situation we asked you about in the study, you would indicate the extent to which you believe taking the wallet would be "socially appropriate" or "socially inappropriate". Recall that by socially appropriate we mean behavior that most people agree is the "correct" or "moral" thing to do.

You should indicate your choice by filling the decision sheet [Hold up a reproduction of the decision sheet, where the answers are pictured using smiley faces/thumbs up or down]. As you can see, the decision sheet has four symbols on it:

- 2 thumbs down, corresponding to "very socially inappropriate"
- 1 thumb down, corresponding to "somewhat socially inappropriate"
- 1 thumb up, corresponding to "somewhat socially appropriate"
- and 2 thumbs up, corresponding to "very socially appropriate".

This is to help you recognize and remember what each of these options mean.

For example, suppose you thought that taking the wallet was very socially inappropriate. Then, you would indicate your response by selecting the last symbol, the one with the two thumbs down on the decision sheet.

Are there any questions about this example situation or about how to indicate your responses? I will now read to you several situations, all dealing with decisions that a woman might have to make. I will illustrate these situations using vignettes. For each of the choices, I would like you to think whether making that choice is very socially inappropriate, somewhat socially inappropriate, somewhat socially appropriate, or very socially appropriate for a woman to make. To indicate your response, you would place a check mark on the corresponding symbol on the decision sheet [Hold up reproduction of decision sheet again].

How will you get paid for this task? If this task is the one selected to be paid, we will pay you Rs 250 for each of your answers that matches the answer of someone in the other room, in addition to your participation fee. For instance, suppose the example situation above is part of this task, and this task is selected to be paid.

- Suppose your response was "somewhat socially appropriate,". Then you will receive Rs 250 for this question if the answer given by the person in the other room is also "somewhat socially appropriate".
- Suppose your response was "socially inappropriate". Then you will receive Rs 250 for this question if the answer given by the person in the other room is also "socially inappropriate".

Otherwise you would receive only the Rs 1000 participation fee.

Who is the person in the other room, whose answers is compared to your to determine your earnings from this task? It is a different person for each different question. We will explain exactly who this person is when we present each situation.

Do you have any questions? If you have any questions, please raise your hand and wait for the experimenter to come to you.

Question 1

We will now describe the first situation.

Imagine that a woman can buy a scarf for herself using money she has been given by her parents as a gift. She wants to buy a scarf. Her husband offers to go and buy the scarf for her. She can let the husband go shopping for her, or she can go herself. She decides to go shopping by herself.

How appropriate do you think it is for the woman to buy the scarf by herself? Do you think her decision is very socially appropriate, somewhat socially appropriate, somewhat socially inappropriate or very socially inappropriate? Tick the corresponding box in the answer sheet in front of you.

You will receive Rs 250 for this question only if your answer matches that of a randomly selected person in the other room, different from your spouse.

Question 2

I will now tell you about another situation, also dealing with a decision that a woman might have to make. Again, I would like you to think whether making that choice is very socially inappropriate, somewhat socially inappropriate, somewhat socially appropriate, or very socially appropriate. To indicate your response, you would place a check mark on the corresponding symbol on the decision sheet.

Imagine that a woman is running a business from her home. At the end of the month, she has some profits to re-invest. She can ask her husband to re-invest them for her, or she can choose herself, without consulting him. She decides to re-invest her profits in what she thinks best, without consulting her husband.

How appropriate do you think it is for the woman to make the investment decision on her own? Do you think her decision is very socially appropriate, somewhat socially appropriate, somewhat socially inappropriate or very socially inappropriate? Tick the corresponding box in the answer sheet in front of you.

You will receive Rs 250 for this question only if your answer matches that of a randomly selected person in the other room, different from your spouse.

Question 3

We will now describe another situation. This situation is the same as the first one, only this time your payment for this question is determined in a different way, so pay attention.

Imagine that a woman can buy a piece of clothing for herself, using money she has been given by her parents as a gift. She wants to buy a scarf. Her husband offers to go and buy the scarf for her. She can let the husband go shopping for her, or she can go herself. She decides to go shopping by herself.

How appropriate do you think it is for the woman to buy the scarf by herself? Do you think her decision is very socially appropriate, somewhat socially appropriate, somewhat socially inappropriate or very socially inappropriate? Tick the corresponding box in the answer sheet in front of you.

You will receive Rs 250 for this question only if your answer matches that of your spouse in the other room. So note the difference with respect to the first question: there, you would get paid if your answer matched that of a randomly selected person in the other room, different from your spouse. Now, you will get paid for this question if your answer matched that of your spouse in the other room.

Question 4

We will now describe another situation. This situation is the same as the second one, only this time your payment for this question is determined in a different way, so pay attention.

Imagine that a woman is running a business from her home. At the end of the month, she has some profits to re-invest. She can ask her husband to re-invest them for her, or she can choose herself, without consulting him. She decides to re-invest her profits in what she thinks best, without consulting her husband.

How appropriate do you think it is for the woman to make the investment decision on her own? Do you think her decision is very socially appropriate, somewhat socially appropriate, somewhat socially inappropriate or very socially inappropriate? Tick the corresponding box in the answer sheet in front of you.

You will receive Rs 250 for this question only if your answer matches that of your spouse in the other room. So note the difference with respect to the first question: there, you would get paid if your answer matched that of a randomly selected person in the other room, different from your spouse. Now, you will get paid for this question if your answer matched that of your spouse in the other room.

Final Instructions

We have now completed all the tasks. We will now draw one number from this bag to determine which task will be paid [ask one participant to draw a number in front of all other subjects. If task 2, 3 or 4 is drawn, then toss a coin to determine whether they will be paid as Player 1 or 2].

We will now call you one by one to give you your payment. Then you are free to leave.

Thank you all very much for participating in today's activities! Please don't hesitate to ask us questions if you have doubts before you leave.

A2. Second Laboratory Experiment

The study population differs from that of LAB1, in that the experiments were carried out in rural villages in Faisalabad, Punjab (Pakistan). This sample represents agriculture-dependent, low-income households. We conducted 30 lab-in-field sessions in 15 rural villages across Faisalabad. At the time of invitation, all couples were given basic information on the experiment and details on the time, date, and expected duration of the session (2-3 hours).³⁰

Each married couple was also informed of the compensation and expected earnings from participation: a participation fee of Rs. 500 (\$5) (i.e., Rs. 1000 per couple), provided that they stayed for the entire duration of the session; and additional earnings of at most Rs. 1000 (\$10). Informed consent was collected from all participants before the start of each session, and payments were made individually and privately at the end. Individual surveys were conducted at the end of the experiment session. The sequence of events at participant arrival was as follows:

Sequence of events during experiment sessions

- Upon arrival, subject pairs are assigned to their respective gender-specific room.
- No contact is allowed between subjects during the entire experiment. Men and women are seated in separate rooms. Respondents in the same room are seated in compartments separated by cardboard sheets. Contact between subjects in the same room is strongly discouraged but not impossible.
- Each subject in the stranger matching treatment is assigned a partner; this is done without replacement, which means that all subjects in the stranger treatment have one partner and one partner only; by construction, the partner is not the household member they came with
- Subjects in each session played each task one with the spouse and once with a ‘stranger’ as the partner. The stranger could be of three types - stranger of the opposite gender, stranger of the same gender, or paired with a ‘computer’ that uses numbers generated from a random number generating program. ‘Strangers’ were randomly allocated at the session level as follows:

Stranger type	Session No.
Stranger: opposite gender	3, 10, 11, 12, 13, 15, 16, 17, 18, 28
Stranger: same gender	1, 2, 19, 20, 21, 22, 24, 26, 29, 30
Computer	5, 6, 7, 8, 9, 14, 23, 25, 27

- Dictator task is always conducted first, with individuals playing as Player 1 or Player 2 in random order. The dictator task has two rounds - one played with the spouse as a partner, one played with a ‘stranger’. In each round, Player 1 allocates a share of a Rs 1000 (\approx \$10) endowment received from the research team to Player 2. The order of rounds is randomized as follows:

³⁰ Each experimental session was held in a central location, at less than 10 minutes drive via public transport

Order of round	Session No.
Spouse round, then stranger round	1, 2, 5, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20, 23, 24, 26, 27, 29
Stranger round, then spouse round	3, 4, 6, 7, 8, 11, 13, 21, 22, 25, 28, 30

- Preferences task is always played second. The task is played twice, once with the spouse as a partner and once with a stranger as the partner, with stranger type randomized on at a session level as summarized above. The following steps are taken in each round:
 1. Participants are given a menu of three food - *biryani*, *chicken tikka boti* and *zarda* (sweet rice), and three drink item - water, soft drink (coke), rooh afza (local sweet drink), to choose from for their lunch at the end of the session. Participants were asked to both highlight one food and one drink item they would like to consume and cross out the food and drink items that they do not want to consume.
 2. Participants are asked to guess their partner's preferences, earning Rs 50 if they guess either the food or the drink correctly and Rs 100 if they guess both.
 3. Participants are asked to select a food and drink item for their partners to consume at lunch. Half of the subjects are randomly assigned to the information treatment, done by pair ID codes assigned at the start of the treatment. [This step is not conducted with those paired with a 'computer'.]
 4. Participants are asked to select from two options: either consume the food and drink the partner has selected for you OR pay a nominal cost (Rs 5/20/50, randomly drawn out) from their participation fee to consume their own choice for sure.
 5. One round - spouse or stranger pairing, will be selected at random and participant's final choice will be implemented for serving lunch at the end of the session.
- A norms elicitation task is conducted. Respondents are asked to mark hypothetical decisions regarding spouse and others, against a scale of "appropriateness". The order of questions is randomized.
- Participants are served lunch.
- Individual surveys are conducted
- One round of the dictator task is randomly selected for payment via a coin toss. Participants receive a fixed participation fee + earnings from the dictator task.

We reproduce below the full protocol used in the experiment. The text below was read in Urdu to all participating subjects during the experiment. Square brackets [] contain instructions for enumerators.

Introduction to the community

Thank you all for taking the time to be here today. My name is [experimenter's name], and I will be facilitating this meeting. Helping me today, we also have here [introduce everyone]. Before we start, we would like to remind you that we will give you ____ as a compensation for your time, if you decide to participate. This ____ is not a part of the activity and is yours to keep. We will give you ____ at the end of the meeting, together with any other sum you will earn through the activities.

Purpose: Today, we will conduct several activities in your community. The purpose of these activities is to better understand how people in this community make decisions. The results of the study may eventually be published or part of a book. It is not part of a development project of any sort. Your community and other communities around Faisalabad were selected to participate from a large group of potential communities.

Activities

We will perform several tasks here today. For these activities, we will select 24 participants. In a moment, I will explain how we will select the participants. Before that, I want to make some general comments. The participants will be performing some tasks in exchange for real money that they will be able to take home. You should understand that this is not my money. It is money given to me by Lahore School, to use to conduct a research study. As we told you when we invited you to come here, the meeting may take 3 hours, so if you think you will not be able to stay that long without leaving please let us know now. [Couples who cannot stay for the length of the meeting should leave before they enter the lottery to participate. They do not get paid, as stated in the invitation] Those of you who cannot stay can leave now. Thank you all for taking the time to come today.

- We only need 24 individuals to participate in these tasks. Thus, unfortunately, not all of you will be able to participate.
- We will have a lottery to determine who will participate.
- To complete the lottery, we will take the coupon you came with today, which has your name on, and fold the coupon in half.
- Next, we will place your folded coupon of paper in this bag.
- This means that we need one coupon for each couple present here today.
- We will then ask one of you to draw 12 pieces of paper from this bag containing your coupons.
- Those whose names will be drawn will stay here and participate in the tasks, while the others will go home.

- We will give another coupon to those of you who will not be drawn to participate today: this coupon will guarantee that you will participate, if you come to a future meeting
- When we give you this coupon, we will show you the dates of the future meetings, so that you can tell us when you would like to come again

Is this clear to everyone? Does anyone have any questions on how we will select the 24 participants?

[Set aside the people with the coupons, collecting the coupons from them. Then proceed with the random draw of names.]

Those of you, whose names have not been called, can leave now. Thank you all for taking the time to come today.

[Pay show up fee to all subjects who have to leave (hand out pre-prepared envelopes containing _____ to each individual in the couple and have them sign a receipt). Then, after people have left, proceed]

We will now ask you to draw a name tag from this bag. This name tag will determine your ID for the activities. You are given an ID to preserve your anonymity: your name will not be kept anywhere in our records, only your ID.

Consent

- Before we begin, I will explain the basic activities we will do together, and the rules that we will follow.
- Read Consent Statement:

If you wish to participate, please say, "I do. If you do not wish to participate, please advise us. You will be free to leave then. You will not be able to stay in the activity room(s) if you do not wish to participate.

You will be matched with a partner for some of the tasks that you will perform today. We will explain more about your partner later.

We will now take all women to one room, and all men to another room. Please follow [Assistant's name] if you are a woman, or [Assistant's name] if you are a man.

[Take the selected participants into the rooms and have them sit. The Assistant directs each subject to her allocated seat.]

Welcome, and thank you again.

- Before we proceed any further, let me stress something that is very important. Many of you were invited here without understanding very much about what we are planning to do today. If at any time you find that this is something that you do not wish to participate in for any reason, you are of course free to leave at anytime. If you do choose to leave, you won't be able to come back into the activity room(s) until everyone is finished performing all the activities.

- Before we start, please make sure your mobile phones are switched off, to avoid interruptions during the meeting.
- If you have heard about activities that have been conducted here in the past you should try to forget everything that you have been told. These are completely different tasks.
- Please also be advised, there are no right or wrong choices, so you should choose whatever you think is best for yourself and not look at your neighbor's choices. It is important to remember that not everyone will win the same amount in the task. Everyone will still receive the ____ payment for participation, regardless of how much you win in the task
- We are about to begin. It is important that you listen as carefully as possible to the instructions, because only people who understand the tasks will actually be able to perform them. I will run through some examples to make sure you understand.
- You cannot ask questions out loud or talk about the tasks with anyone else while we are here together.
- If you have questions at any time during the meeting, please raise your hand and ask, and we will come to you and answer them in private.
- I will read through a script to explain all the activities that we will perform here today. As you may know, these activities are conducted in other localities beside this one, so it is very important that people in every locality receive exactly the same information, and this is the reason why I must read from this script.

NO TALKING

- I will now say something very important. You cannot ask questions out loud or talk about the tasks with anyone else while we are here together.
- If you need to ask a question at any time, please raise your hand and I will come to you so I can answer your question privately.
- I will explain the tasks, do demonstrations, and let you practice the tasks before we perform them for real. These demonstrations and practices are to help you understand the rules and clarify any questions.
- Please be sure that you obey these rules because it is possible for one person to spoil the tasks for everyone by talking in front of the group. If this happens, we will not be able to continue forward with the tasks today and you will not be paid for the tasks.
- Is this clear to everyone? Does anyone have any questions so far about what will go on today?

[If anyone asks a question out loud, explain again that all questions must be asked in private].

REAL PAYMENT

- In today's activities, you will have the opportunity to receive a cash payment. The amount that you will receive depends on your decisions and on the decisions of others. It also depends on what task is selected to be paid.

- Remember that at the end of all the activities, we will draw a number from a hat. That number will determine for which task you will be paid. This means that each task that you perform has the same chance of being selected to be paid.
- Remember also, that in addition to what you will earn from the activities, each of you will receive Rs 150 for participating in today's meeting. This money is yours, regardless of what happens during the activities. It will be paid to you in cash together with your earnings from the activities.
- It is real money, which you will be allowed to keep for yourself or do what you wish. This money will be paid to you in cash at the end of the meeting.
- During the activities you will make your decisions using paper slips [show slips], each representing 100 Rs. These paper slips will be converted into cash when you get paid at the end of the meeting.

CONFIDENTIALITY

- Your decisions and your payment are private and confidential. Nobody, apart from a member of our team will know what you earned, and he/she will not tell anyone.
- We will put up these partitions between you every time you have to take a decision. You will make your decisions behind the partitions, so that nobody else can see what you decide.

Instructions for dictator game, round 1 (Task 1)

We are now ready to begin the first task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately.

INTRODUCTION

- This task is performed by pairs of individuals. Each pair is made up of a Player 1 and a Player 2.
- Researcher [name] will provide Rs 1000 to Player 1 in each pair of players.
- Player 1 must decide how to divide this money between him or herself and Player 2. Player 1 must allocate between Rs 0 and the total Rs 1000 to Player 2.
- Player 2 takes home whatever Player 1 allocates to him or her, and Player 1 takes home whatever he or she does not allocate to Player 2.
- If spouse matching performed first: In this task, your spouse will be your partner.
- If stranger matching performed first: In this task, your partner will be the [stranger of the same gender/stranger of the opposite gender/computer – as randomized for the session] you were paired with in the previous task.

- Notice, your partner will also be making a decision for the allocation of this money.
- This means that you will all perform one round as Player 1 and one round as Player 2. You will first perform the task as Player 1, and then perform the task as Player 2.
- How will we choose whether to pay you for this task, and whether to pay you as Player 1 or Player 2? After we have finished performing all the tasks, we will first draw a number from the hat [show again numbers and hat] to determine which task will be paid. If we draw the number 1 from the hat, then it means that this task is the one selected for payment. If so, we will toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2.
- Is this clear to everyone? Please raise your hands if you have any questions and I will come and answer them privately.

We will now run through 5 examples to show you how the task might be performed.

[Notes: the researchers and assistants work through the examples and test questions with paper slips, each representing a Rs 100 note. They also take from and place the paper slips into two envelopes identical to the ones to be given to subjects, so as to demonstrate fully what subjects have to do. Each of the examples presented below is presented either as an example or used as a test question as required. If more test questions are needed the researcher or assistant begin again with the first example above. The script below is written assuming that 6 more examples were given, 3 presented as test scenarios/practice rounds, i.e., the subjects are asked questions about the amounts the subjects would take home. The 11 examples/tests, 5 above, 6 below, cover the full set of possible choices for Player 1.]

1. Here is the Rs1000. Imagine that Player 1 chooses to allocate Rs900 to Player 2. Then, Player 2 will go home with Rs900 and Player 1 will go home with Rs100 (Rs1000 minus Rs900 equals Rs100).
2. Here is another example. Imagine that Player 1 chooses to allocate Rs200 to Player 2. Then, Player 2 will go home with Rs200 and Player 1 will go home with Rs800 (Rs1000 minus Rs200 equals Rs800).
3. Here is another example. Imagine that Player 1 chooses to allocate Rs500 to Player 2. Then, Player 2 will go home with Rs500 and Player 1 will go home with Rs500 (Rs1000 minus Rs500 equals Rs500).
4. Here is another example. Imagine that Player 1 chooses to allocate Rs700 to Player 2. Then, Player 2 will go home with Rs700 and Player 1 will go home with Rs300 (Rs1000 minus Rs700 equals Rs300).
5. Here is another example. Imagine that Player 1 chooses to allocate zero to Player 2. Then, Player 2 will go home with zero and Player 1 will go home with Rs1000 (Rs1000 minus zero equals Rs1000).

[The experimenter and assistants hand out two envelopes for each subject. Each envelope features the subject's ID. The two envelopes are of different color. Moreover, Player 1's envelope has a 1 [2] written on it.]

We will now practice the task together. You will first practice the task as Player 1. You have been handed two envelopes. The red [or other color] one with 10 paper slips in it is the one that determines Player 1's payment. The other envelope, the white [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 2. As we work through the following examples, please put the paper slips into the empty envelope as indicated by the examples. We will walk around the room to check if your allocation matches the one from the example. This is important; because it allows us to make sure that everyone understands the task and how to make the decision.

Here are some more examples [The experiment assistants go around the room to check that subjects correctly place the paper slips into the envelopes. The experimenter explains the task again if mistakes are discovered]:

1. Imagine that Player 1 chooses to allocate Rs1000 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with Rs1000 and Player 1 will go home with zero (Rs1000 minus Rs1000 equals zero).]
2. Here is another example. Imagine that Player 1 chooses to allocate Rs400 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with Rs400 and Player 1 will go home with Rs600 (Rs1000 minus Rs400 equals Rs600).]
3. Here is another example. Imagine that Player 1 chooses to allocate Rs600 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. How much will Player 2 go home with? And how much will Player 1 go home with? [Player 2 will go home with Rs600 and Player 1 will go home with Rs400 (Rs1000 minus Rs600 equals Rs400).]
4. Suppose that Player 1 chooses to allocate Rs100 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [Rs900] And how much will Player 2 go home with? [Rs100]
5. Now try this one. Suppose that Player 1 chooses to allocate Rs800 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [Rs200] And how much will Player 2 go home with? [Rs800].
6. Now try this one. Suppose that Player 1 chooses to allocate Rs300 to Player 2. Please place the paper slips into the blue envelope corresponding to this decision. In this case, how much will Player 1 go home with? [Rs700]. And how much will Player 2 go home with? [Rs300].

We will now conduct the task for real. You will now perform the task as Player 1. Remember, your partner in this round is:

- If spouse matching performed first: your spouse
- If stranger matching performed first: the [stranger of the same gender/stranger of the opposite gender/computer as randomized for the session] you were paired with in the previous task.

You have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines your payment. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 2. Please put the paper slips you want to give to Player 2 in the empty envelope. Please make sure your choice is not observed by others in the room.

You must now wait while the rest of the players, finish performing the task. Then we will play the second round of this task, where you are Player 2. [The experimenter and assistants collect the envelopes.]

[For Player 2s] You will now perform the task as Player 2. As Player 2, you have no decision to make. Player 1 who has been matched with you has allocated a sum of money to you. After we finish performing all the activities, if this task and the role of Player 2 is the one selected to be paid I will pay you what Player 1 has allocated to you.

Instructions for dictator game, round 2

We will now perform another task. This task is the same as the previous one, except that your partner for this task is:

- If spouse matching performed second: your spouse
- If stranger matching performed second: the [stranger of the same gender/stranger of the opposite gender/computer as randomized for the session] you were paired with in the previous task.

Again, you will all perform one round as Player 1 and one round as Player 2. You will first perform the task as Player 1, and then perform the task as Player 2.

How will we choose whether to pay you for this task, and whether to pay you as Player 1 or Player 2? After we have finished performing all the tasks, we will first draw a number from the hat [show again numbers and hat] to determine which task will be paid. If we draw the number 2 from the hat, then it means that this task is the one selected for payment. If so, we will toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2.

Do you have questions on the task? [If there are questions: repeat instructions from introduction of task 1, and provide examples as needed].

Let's play the task for real. You have been handed two envelopes. The yellow [or other color] one with 10 paper slips in it is the one that determines your payment. The other envelope, the blue [or other color] one, is empty and the paper slips you put in it will determine the payment to Player 2. Please put the paper slips you want to give to Player 2 in the empty envelope.

Please make sure your choice is not observed by others in the room.

You must now wait while the rest of the players, finish performing the task. Then we will play the second round of this task, where you are Player 2.

[The experimenter and assistants collect the envelopes.]

[For Player 2] You will now perform the task as Player 2. As Player 2, you have no decision to make. Player 1 who has been matched with you has allocated a sum of money to you. After we finish performing all the activities, if this task and the role of Player 2 is the one selected to be paid I will pay you what Player 1 has allocated to you.

Instructions for preferences game (Task 2)

We are now ready to begin with the second task. Let me remind you that you may not ask questions or talk while you are here in the group. If you have any questions, you may raise your hand and I (the enumerator) or my assistant(s) will come answer your question privately. Please be sure to listen to the instructions carefully. This is NOT the same task that you just performed, so be sure to listen to the instructions carefully.

- This task is performed by pairs of individuals.
- Each of you will perform this task twice, once with your spouse (or your household member) and once with an anonymous partner.

[Enumerator: There are three types of anonymous partners. Each session will have only one kind. Please give instructions for the partner type according to the type specified for that session.]

- Stranger - other room treatment: You will be paired with a stranger in the other room i.e. of the opposite gender. None of you will know exactly with whom you are paired. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone.
- Stranger - same room treatment: You will be paired with a person in this room i.e. another male/female. Only [researcher's name] knows who is matched with whom, and she/he will never tell anyone.
- Computer treatment: You will be paired with the computer. This means that the partner's decisions will be the result of a random draw by the computer, which will appear on the computer screen and be communicated to the researcher.

Do you have questions on who your partner will be in this task? If you have questions, please raise your hand and I will come to you to answer your question privately.

The decisions that you will take as part of this task concern what you would like to have for lunch. We will be serving you lunch at the end of the session, to thank you for spending part of your day with us.

PART 1:

I have three different food items here today: *biryani* (savory), *chicken tikka boti* and *zarda* (sweet rice). I also have three different types of drinks: soft drink (coke), rooh afza and water. Before we begin this task, please have a look at these food items (without tasting) and select what kind of rice you would most like to eat and what you would like to drink at lunch today. Please circle the food item and drink you would most prefer to have for lunch today, and cross out the food item and drink

that you would least prefer to have for lunch today. You cannot rank two items equally. Once you have had a look at the items, we will ask you record your ranking on the sheet we will provide you. Remember, you may get for lunch the items that you circle. Distribute a sheet with pictures of the 3 (or as many) food items] Does anyone have any questions? Please raise your hand and my assistant or I will come and address your query.

[Subjects should circle=most preferred, cross-out=least preferred. The assistants collect the ranking sheets. While the experimenter proceeds with Part 2, the assistant(s) enters the rankings.]

ROUND 1: Spouse preferences (randomize order between spouse and anonymous): Your partner in this round is your family member, who you came with today. Your partner in the other room has also been asked to pick what food item and drink s/he would like to have for lunch. We would like you to guess your partner's pick. We will now distribute a sheet, where you can write your guess. Circle what you guess is your partner's preferred food item and drink for lunch today. We will give you Rs. 50 for correctly guessing the food or drink ranked as most preferred by your partner and Rs 100 if you guess both food and drink item preferred by your partner correctly. This money will be paid to you at the end of all activities, on top of your other earnings from the other tasks.

[Distribute another sheet with pictures of the 2 food items and 3 drinks. Subjects should circle=most preferred. The assistants collect the guessed partner's ranking sheets. While the experimenter proceeds with Part 3, the assistant(s) enter the guessed rankings.]

PART 2 [KNOW PARTNER'S RANKING treatment only]: Now, we will distribute to you a sheet, containing the ranking given by your partner, capturing his or her own preferences for the 3 foods items and 3 drinks.

[The experimenter and assistants distribute to participants the partner's ranking sheet. Provide this information to each participant with an odd number ID.]

PART 3: Now I would like for you to:

- Choose a food item and a drink for your partner to consume. It does not have to be the same items that you chose for yourself. [Say to KNOW PARTNER'S RANKING treatment individuals only:] It also need not be the items your partner selected for him/herself, if you know them.
- In the other room, your partner is being asked to do the same.
- Your preferred food and drink are what you circled earlier.
- Neither you nor your partner will be able to exchange the food item and drink you are given with anyone else.

Shall we begin? Does anyone have any questions? Please raise your hand and my assistant or I will come and address your query.

We will now distribute a decision sheet, where you can mark your choice of what food item and drink that you would like your PARTNER to consume

[Distribute a decision sheet, with space to record one choice for food and one choice for drink for the partner].

Please circle the food item and the drink that you would like your PARTNER to consume in the sheet of paper in front of you and fold it to let us know you are done. My assistants and I will come and collect your decision sheet.

ROUND 2- Anonymous partner preferences:

We will now repeat the activities we performed in round 1, only with a different partner. Remember, your partner in this round is (Enumerator: please announce according to the partner specified for that session),

- Stranger other room treatment: a person sitting in the next room. We will never reveal to you who this person is, and we will never reveal to this person that you have been matched with them. This will be kept completely secret.
- Stranger other room treatment: a person sitting in this room. We will never reveal to you who this person is, and we will never reveal to this person that you have been matched with them. This will be kept completely secret.
- Computer treatment: the computer, whose decisions are determined by a program generating random numbers.

[Computer treatment] The computer generated a random ranking of the food items and drinks, selecting at random one most preferred food and drink and one least preferred food item and drink. We have recorded that ranking.

[Other matching treatments] Recall that in the previous round, we asked each participant to rank the food items and drinks from most preferred to least preferred. We have kept those rankings.

We now would like you to guess your partner's ranking. We will distribute a sheet, where you can write your guess. Circle what you guess is your partner's preferred food item and drink. We will give you Rs. 50 for correctly guessing the food item or drink ranked as most preferred by your partner and Rs 100 if you guess both food and drink item preferred by your partner correctly. This money will be paid to you at the end of all activities, on top of your earnings from the other tasks.

[Distribute another sheet with pictures of the 3 food items and three drinks. Subjects should circle=most preferred, cross-out=least preferred. The assistants collect the guessed partner's ranking sheets. While the experimenter proceeds with Part 3, the assistant(s) enter the guessed rankings. These guesses are compared with the actual partner's ranking at the end of the session, when computing the payments]

PART 3: Now I would like for you to:

- For STRANGER SAME or OTHER ROOM ONLY: Choose a food item and a drink for your partner to consume. It does not have to be the same items that you chose for yourself. [KNOW PARTNER'S RANKING treatment individuals only:] It also need not be the items your partner selected for him/herself, if you know them.
- Your partner is being asked to do the same.
- Your preferred food and drink are what you circled earlier.

- Neither you nor your partner will be able to exchange the food item and drink you are given with anyone else.

Shall we begin? Does anyone have any questions? Please raise your hand and my assistant or I will come and address your query.

[For STRANGER SAME or OTHER ROOM ONLY:] We will now distribute a decision sheet, where you can mark your choice of what food item and drink that you would like your PARTNER to consume [Distribute a decision sheet, with space to record one choice for food and one choice for drink for the partner]. Please circle the food item and the drink that you would like your PARTNER to consume in the sheet of paper in front of you and fold it to let us know you are done. My assistants and I will come and collect your decision sheet.

PART 4

- We will now ask you to choose between two options: either you receive the food item and drink that your partner from round 1 or round 2 has picked for you; or you pay [Enumerator: this amount is randomized across sessions]. Rs. (5/20/50)- from your show-up fee and get your own choice of food and drink . We will do this twice. First, we will first ask you to make this choice with your partner from round 1, that is, the household member with whom you came/anonymous partner. Second, we will ask you to make this choice for the partner assigned to you in round 2. The person you came with will be asked to make similar decisions, but we will not reveal to that person or anyone else any of the choices you make.
- When you have made your choice for your partner in rounds 1 and 2, we will then select one of the two rounds at random and implement what you have decided. If the selected round is round 1, you will receive the food item and drink that your accompanying household member has selected for you, unless you agreed to pay Rs. (5/20/50) from your show-up fee to receive your own choice. If the selected round is round 2, you will receive the food item and drink that your unknown partner has selected for you, unless you agreed to pay Rs. (5/20/50) from your show-up fee to receive your own choice.
- You will only need to pay Rs. (5/20/50) for the selected round. For instance, suppose that you selected to pay Rs. (5/20/50) to get your own choice only with the round 1 partner AND round 2 is selected. In this case, you will receive what the round 2 partner selected for you and you will pay nothing. Alternatively, if you selected to pay Rs. (5/20/50) for round 1 and round 2 partners, you will pay Rs. (5/20/50) and you will receive your own choice for sure.
- We will not reveal to anyone the outcome of the coin toss that selects between your final decisions between round 1 and round 2.

We will now call you one by one to the back of the room to record your final decisions in privacy.

[At individual meetings. The experimenter has two decision sheets in front of him: the one with the subject's own pick (face up) and the one with the round 1 partner's pick for him/her (face down, folded to conceal id)]. Here I have the sheet with your most preferred and least preferred food item and drink, and another sheet with what was selected for you by your partner from round 1 (your spouse). You can either choose to have what your partner picked for you, or you can give Rs. (5/20/50) from your show-up fee of Rs. 500 and have your own choice. What is your decision?

Enumerator: Write down Decision 1

Now I will tell you what your partner has picked for you. What do you think your partner has picked for you? Your partner picked ____ and ____ for you. Would you like to change your earlier decision?

Enumerator: Note revised decision as Decision 2

[Repeat explanation of options if necessary. Record decision for Round 1.]

Now, I will ask you about Round 2, where you were matched to a random stranger. At the end we will toss a coin to decide whether we implement your decision for round 1 or round 2.

[The experimenter now has two decision sheets in front of him: the one with the subject's own pick (face up), as before; and the one with the round 2 partner's pick for him/her (face down, folded to conceal id)] Here I have the sheet with your most preferred and least preferred food item and drink, and another sheet with what was selected for you by your randomly assigned partner from round 2. You can either choose to have what your partner picked for you, or you can give Rs. (5/20/50) from your show-up fee of Rs. 500 and have your own choice. What is your decision? [Enumerator: Please refer to the session randomization list to find out what the cost is for each participant.]

Enumerator: Write down Decision 3 (own or partner choice)

Now I will tell you what your partner has picked for you. What do you think your partner has picked for you? Enumerator: Note guess 2 of partner's choice of food item ____ and drink ____

Your partner picked ____ and ____ for you. Would you like to change your earlier decision?

Enumerator: Note revised decision as Decision 4 (yes/no)

[Repeat explanation of options if necessary. Record decision for Round 2.]

[Enumerator: If decision 2 and 4 are the same, then Skip the coin toss]. Coin toss: Now we will toss a coin to select between the 2 rounds of this task. If the coin toss falls on heads, we will implement your final decision for round 1. If the coin toss falls on tails, we will implement your final decision for round 2.

Enumerator: Note outcome of coin toss.

Some of our team members will now prepare the food items based on the decisions. Meanwhile we will continue with the rest of the planned activities.

[Record decision for Round 1 and Round 2. When all subjects have made their decision, the assistant enters the coin toss data]

Instructions for Norm Elicitation game (Task 3)

For this task, I will read to you descriptions of a series of situations. These descriptions correspond to situations in which a person must make a decision. For each situation, you will be given a description of the decision faced by an individual. After I read to you the description of the decision, I will describe a choice that the individual might have made, and you should decide whether making that choice would be "acceptable" and "consistent with proper social or moral

behavior" or "unacceptable" and "inconsistent with proper social or moral behavior. By acceptable, we mean behavior that most people agree is the "correct" or "ethical" thing to do. Another way to think about what we mean is that, if someone were to make an unacceptable choice, then someone observing this behavior might get angry at the person who made the choice for acting in that manner.

In each of your responses, we would like you to answer as truthfully as possible, based on your opinions of what constitutes socially appropriate or socially inappropriate behavior.

To give you an idea of how the experiment will proceed, we will go through an example and show you how you will indicate your responses. I will now read to you an example of a situation. These cards that I am holding illustrate the situation and the decision sheet. [Experimenter illustrates the situation using a vignette, to make it easier for subjects to understand the situation].

Someone is at a local grocery store. While there, the person notices that someone has left a wallet/bag on the counter. How appropriate would it be to take the wallet?

If this were the situation we asked you about in the study, you would indicate the extent to which you believe taking the wallet would be "acceptable" and "consistent with proper social or moral behavior" or "unacceptable" and "inconsistent with proper social or moral behavior". Recall that by socially appropriate we mean behavior that most people agree is the 'correct' or 'ethical' thing to do.

You should indicate your choice by filling the decision sheet [Hold up a reproduction of the decision sheet, where the answers are pictured using thumbs up or down]. As you can see, the decision sheet has four symbols on it:

- 2 thumbs down, corresponding to "very unacceptable"
- 1 thumb down, corresponding to "somewhat unacceptable"
- 1 thumb up, corresponding to "somewhat acceptable"
- 2 thumbs up, corresponding to "very acceptable".

This is to help you recognize and remember what each of these options mean. For example, suppose you thought that taking the wallet was very unacceptable. Then, you would indicate your response by selecting the first symbol, the one with the two thumbs down on the decision sheet.

Are there any questions about this example situation or about how to indicate your responses? I will now read to you several situations, all dealing with decisions that you may have to make regarding your spouse, strangers or the researchers. I will illustrate these situations using vignettes. For each of the choices, I would like you to think whether making that choice is very unacceptable, somewhat unacceptable, somewhat acceptable and very acceptable. To indicate your response, you would place a check mark on the corresponding symbol on the decision sheet [Hold up reproduction of decision sheet again].

Participants have to answer ALL questions regardless of who they are matched with.

[Randomize order of 1, 2,3,4; randomize order of a and b]

Question 1a: (Spouse) “Is it acceptable to pick a snack for your spouse that is different from what you know they prefer.

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating]

[After participants have noted their opinions, read out the next statement and ask them rate it]

Question 1b: (Spouse) “Is it acceptable for you to pick for yourself a snack that is different from what your spouse picked for you.

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating]

[After participants have noted their opinions, read out the next statement and ask them to rate it]

Question 2a: (non-household members/strangers of opposite gender). “Is it acceptable to pick a snack for a man/woman (opposite gender) in the other room from outside your household that is different from what you know they prefer”

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating.]

[After participants have noted their opinions, read out the next statement and ask them rate it.]

Question 2b: (non-household members/strangers of opposite gender). “Is it acceptable for you to pick for yourself a snack that is different from what a man/woman (opposite gender) in the other room from outside your household has picked for you”.

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating.]

[After participants have noted their opinions, read out the next statement and ask them rate it.]

Question 3a: (non-household members/strangers of the same gender). “Is it acceptable to pick a snack for a man/woman (same gender) in the this room from outside your household that is different from what you know they prefer”

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating.]

[After participants have noted their opinions, read out the next statement and ask them rate it.]

Question 3b: (non-household members/strangers of the same gender). “Is it acceptable for you to pick for yourself a snack that is different from what a man/woman (same gender) in the this room from outside your household has picked for you”.

[The assistants hand out the decision sheet, with a short description of the situation (picking a snack) and the appropriateness rating.]

[After participants have noted their opinions, read out the next statement and ask them rate it.]

Final Instructions

This was the last activity. We will now compute your earnings and distribute them to you. While you are distributed your lunch, we will ask you a short questionnaire.

In order to compute your payment, we have to determine whether you will be paid for Task 1 or Task 2, and whether you will be paid for your decisions as Player 1 or Player 2. Recall that we said we would draw a number from a bag to determine which task you will be paid for, and would toss a coin to decide whether you would be paid as Player 1 or Player 2.

We will therefore ask the enumerator outside to draw the number and then toss a coin: if heads come up then you will be paid as Player 1; if tails come up, we will pay you as Player 2. We will also use a coin toss to determine if you get payment from round 1 or round 2 of task 1. We will inform each of you the outcome of the coin toss as we provide you your earnings in privacy.

[Enumerator: Please refer to the randomization lists provided to you to determine the color of the tag that will get payment for the spouse round and the color that will be paid for the stranger round. Also refer to the randomization list to find out whether each individual is paid as player 1 or player 2.]

Your final payment will therefore be determined by

- Your decision/Your partner's decision in task 1/2 (task that dictator was on that day).
- On top of these earnings, you will also receive the participation fee
- Also in addition, you will receive the money you earned in the first activity we performed, when we asked you to guess your partner's ranking of the food items flavors. Recall that we promised you we would give you Rs 50 if you guessed your partner's favorite food item or drink, and Rs 100 if you guessed both food item and drink preferred by your partner. If you guessed correctly, those earnings will be also included in your total payment.

[When distributing the payment envelopes]: Thank you very much for your participation! Please enjoy your lunch and don't hesitate to ask us questions if you have doubts before you leave.

A3. Field experiment

The details of the randomized controlled trial are given in Afzal, d'Adda, Fafchamps, Quinn, and Said (2019). The specific part of the endline questionnaire dealing with the gift experiment is reproduced below, together with the instructions for enumerators.

GIFT FOR PARTICIPATION

Thank you for answering our survey and being a part of our research.

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

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

[ENUMERATOR: If husband is available and willing to talk to us, proceed with step 1 and step 2. If husband not available or unwilling to talk to us, ask if it is possible to call him and agree with him on a time to talk. If husband not available to talk on the phone, agree with the wife on a time to visit the household again when the husband will be present.]

[Enumerator: If the respondent is unmarried or her husband does not live with her/is not a part of the household roster, then ask for the oldest male household member. Step 1 is then to be administered to this male individual.]

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

_____ section_9

STEP 1: Husband

1. You may remember that 8-9 months back we asked you to make a choice between three household items (a male wallet, a female wallet and children's pencil case). Your choice was [report Item selected at baseline] _____.

{ENUMERATOR: if he did not make a choice at baseline, we ask him to choose right now and note

a.Item selected: 1: male wallet, 2: female wallet, 3; child's pencil case.____ choice_1a

b.Recipient. i.e who is the item for? _____ choice_1b

c. What initials should appear on it?_____ choice_1c

2. Your wife was also asked to choose an item when we visited her 8-9 months back. As we explained last time, we will toss a coin to decide, between your choice and your wife's choice, which item your household will receive.

However, you can let your spouse choose in your stead, in which case, we will not toss a coin and simply select the gift according to your wife's choice.

Would you like to let your wife choose in your stead? _____[Yes/No] choice_2

If YES to 2[ENUMERATOR: Skip to 4]

3. If NO to 2: Would you be willing to let your wife choose in your stead if we offered you a voucher worth a certain amount of money? The value of this voucher is determined by a random draw and it can be either Rs. X or Rs. XX. The value of the voucher is written in this sealed envelope [ENUMERATOR: Show the envelope to the respondent without opening the seal]. Before I open this envelope and reveal the value of the voucher, I will ask you whether you would be willing to let your wife choose the gift instead of you in exchange for the voucher, for each of the two possible values of the voucher. Once I open the envelope and reveal the value of the voucher, we will implement your choice corresponding to that value of the voucher. The voucher can be redeemed at the NRSP office three-four weeks from today, and we will send an SMS to inform you when the gift or voucher is ready to be collected.

Before we proceed, do you have any questions on this? [ENUMERATOR: Answer any questions before proceeding.]

a. Would you let your wife choose the gift if the voucher were worth Rs. X? _____[Yes/No]
choice_3a

b. Would you let your wife choose the gift if the voucher were worth Rs. XX? _____[Yes/No]
[ENUMERATOR: Ask this question regardless of the answer to 3a] choice_3b

c. What is your best guess of your wife's choice among the three gift options? [_____
item] choice_3c

d. Suppose you knew for sure that your wife's choice was the male wallet, how much money should the voucher be worth to induce you to let your wife choose the gift? [_____] Rupees
choice_3d

e. Suppose you knew for sure that your wife's choice was the child's pencil case, how much should the voucher be worth to induce you to let your wife choose the gift? [_____] Rupees
choice_3e

f. Suppose you knew for sure that your wife's choice was the female wallet, how much should the voucher be worth to induce you to let your wife choose the gift? [_____] Rupees

g. Now we will find out the value of the voucher. [ENUMERATOR: Give the sealed envelope to the respondent to open.]

h. Earlier you said that you would/would not [report respondent's answer to 3a or 3b, depending on the voucher value] let your wife choose the gift in exchange for a voucher of this value. So we will now implement your choice.

i. [ENUMERATOR: If answer to 3a or 3b, is 'YES' to taking the voucher]

Take this voucher receipt of Rs _____. voucher_male

Please keep it safe. You will have to bring this voucher receipt with you to NRSP office to collect your money. We will now ask your wife to choose the gift.

[ENUMERATOR: If answer to 3a or 3b, is 'NO' to taking the voucher]

You will not receive the voucher, and your household's gift will be decided after we interview your wife.

[ENUMERATOR: Now go to step 2]

4. What is your best guess of your wife's choice among the three gift options? (1: male wallet, 2: female wallet, 3; child's pencil case.)_____ choice_4

5. Suppose that I was willing to give you a voucher worth a certain amount of money if you let your wife choose the gift instead of you.

a. Suppose also that you knew for sure that your wife's choice was the male wallet, how much money should the voucher be worth to induce you to let your wife choose the gift in your stead?

[_____ Rupees] choice_5a

b. Suppose you knew for sure that your wife's choice was the child's pencil case, how much should the voucher be worth to induce you to let your wife choose the gift in your stead?

[_____ Rupees] choice_5b

c. Suppose you knew for sure that your wife's choice was the female wallet, how much should the voucher be worth to induce you to let your wife choose the gift in your stead? [_____ Rupees] choice_5c

We also have a voucher in this envelope as a thank you for participating in our short questionnaire today. I will now/you may now open the envelope to see what the amount of this voucher is. This voucher can be redeemed at the NRSP office three-four weeks from today, and we will send an SMS to inform you when the gift and voucher are ready to be collected.

[Enumerator: Now go to step 2]

STEP 2: [ENUMERATOR: Go back to the female respondent.]

1. You may remember that 8-9 months back we asked you to make a choice between three household items (a male wallet, a female wallet and children's pencil case). Your choice was [report Item selected at baseline]_____.

{ENUMERATOR: if she did not make a choice about the initials to appear on the gift, ask now

a. What initials should appear on it?_____ choice_2_1}

2. Your husband was also asked to make a choice at that time and we have just asked him to confirm his choice.

3. As we explained last time, we will toss a coin to decide, between your choice and your husband's choice, which item your household will receive.

We will also give you a voucher for either Rs. 50 or Rs. 200. The value of the voucher is written in this sealed envelope [ENUMERATOR: Show the envelope to the respondent without opening the seal]. This voucher can be redeemed at the NRSP office three-four weeks from today, and we will send an SMS to inform you when the gift and voucher are ready to be collected.

Before I toss the coin to decide if you will get your choice or your husband's choice of gift, you can choose to forfeit the voucher and get your choice of the gift for sure –i.e. you can skip the coin toss and guarantee you get your choice for sure, in exchange for the voucher. Before I open this envelope and reveal the value of the voucher, I will ask you whether you would be willing to get your choice for sure in exchange for the voucher, for each of the two possible values of the

voucher. Once I open the envelope and reveal the value of the voucher, we will implement your choice corresponding to that value of the voucher.

4. Would you forfeit the voucher to get your choice for sure if the voucher were worth Rs. Y? _____[Yes/No] choice_2_4

5. Would you forfeit the voucher to get your choice for sure if the voucher were worth Rs. YY? _____[Yes/No] [ENUMERATOR: Ask this question regardless of the answer to 4] choice_2_5

6. What is your best guess of your husband's choice among the three gift options?(1: male wallet, 2: female wallet, 3; child's pencil case.)_____ choice_2_6

7. Suppose you knew for sure that your husband's choice was the male wallet, how much money would you be willing to give up to avoid the coin toss and make sure you got your choice for sure? [_____ Rupees] choice_2_7

8. Suppose you knew for sure that your husband's choice was the female wallet, how much money would you be willing to give up to avoid the coin toss and make sure you got your choice for sure? [_____ Rupees] choice_2_8

9. Suppose you knew for sure that your husband's choice was the child's pencil case, how much money would you be willing to give up to avoid the coin toss and make sure you got your choice for sure? [_____ Rupees] choice_2_9

10. Now we will find out the value of the voucher. [ENUMERATOR: Give the sealed envelope to the respondent to open]

11. Earlier you said that you would/would not [report respondent's answer to 4 or 5, depending on the voucher value] forfeit a voucher of this value in order to get your choice of gift for sure. So we will now implement your choice.

[If she has chosen to keep the voucher for the actual voucher value] For this value of the voucher you chose to toss the coin instead of forfeiting the voucher. Please toss the coin to determine whether you will get your choice or your husband's choice of gift. If the coin toss yields Head you will get your choice, if it yields Tails you will get your husband's choice. [Observe and record the outcome of the coin toss] The coin toss has come out _____[Head/Tails]. coin_toss

[If she has chosen to forfeit the voucher and get her own choice for sure for the actual voucher value] For this value of the voucher you chose to forfeit the voucher instead of tossing the coin. You will thus receive your choice of gift.

[If her husband had delegated the choice to her in step 1] For your information, your husband chose [report item chosen by husband] _____ as a gift. He also chose to let you choose the gift instead of him. Therefore, you will receive the gift of your choice and you will not have to forfeit the voucher/ toss a coin.

12. For your information, your husband chose [report item chosen by husband] _____ as a gift. He also chose to not let you choose the gift instead of him.

13. To summarise, according to your choices today, you will receive [report item that the respondent will receive as gift(1: male wallet, 2: female wallet, 3; child's pencil case.)] _____as a gift. final_gift

It will have [report initials that will have to be put on the gift that the respondent is to receive]
_____ initials inscribed on it. final_initials

This receipt records the gift that you are entitled to receive [Hand receipt].

[If applicable] This also has the voucher of Rs _____. voucher_female

Please keep it safe. You will have to bring this receipt with you to NRSP office to collect your gift and/or money, once you receive an SMS telling you that they are ready to be collected, in about 3-4weeks' time.

Online Appendix B: Agency questions

Question	Description	Answer codes	Sample
household_12	Do you need to ask someone's permission for making the following decisions, and if yes from whom? (a) Purchasing ice cream for children, (b) Purchasing grocery, (c) Purchasing medicine for myself (d) Purchasing personal cosmetics/clothing (e) Taking a child to a doctor (f) Purchasing children's books / clothes, (g) Purchasing furniture (h) Purchasing refrigerator / TV (i) Sale of personal jewelry	1: Nobody, 2: Husband, 3: Mother-in-law/father-in-law, 4: Son, 5: Daughter, 6: Other male, 7: Other female	Field experiment (women only) and LAB1
p_1	Do you need to ask someone's permission for making the following decisions, and if yes from whom? (a) Purchasing ice cream for children, (b) Selecting food or drink for myself, (c) Purchasing grocery for the household, (d) Purchasing personal cosmetics/clothing, (e) Buying a snack or drink from a street vendor, (f) Taking a household member to the doctor, (g) Meeting a friend in town, (h) Purchasing clothes for our children, (i) Inviting a friend to visit our house, (j) Purchasing furniture for the household, (k) Selling my personal jewelry	0: No, 1: Yes	LAB2
consumption_2	Are your preferences/opinion taken into consideration when making the following types of decisions within your household? (a) Decisions regarding boys' schooling, (b) Decisions regarding girls' schooling, (c) Decisions regarding your children's marriage, (d) Decision regarding your medical care, (e) Decision regarding your children's medical care, (f) Decision regarding family planning, (g) Social visits to your family, (h) Decisions regarding purchase of clothing/cosmetics (j) Decision to work for earned income, (k) Decision to borrow money from an MFI, (l) Purchase of HH appliances (refrigerator, TV, etc), (m) Decision about house sale/purchase, (n) Decision regarding sale of personal jewelry	1: Always, 2: Most of the time, 3: Some of the time, 4: Rarely, 5: Never	Field experiment (women only)

Online Appendix C: Photograph of personalized gifts for the field experiment

This photograph shows the three types of leather gifts offered to subjects in Experiment 3. The orange wallet with a metal clasp is a money purse that Pakistani women keep in their bag. It is inscribed with the name, or initials, of the respondent, as per respondent preference. The small black wallet to the right is the type of wallet that men use. It is inscribed with the name of the respondent's husband. Both the name of the respondent and of her husband are taken from the household survey roster. The brown pouch on the left is the type of pencil case used by school-age children. The case is embossed with the initials of the child chosen by the respondent to receive this item. The initials on the pencil case are similarly restricted to be one of the respondent's children recorded in the household survey roster.

Figure C1: Personalized gifts for respondents in experiment 3

