Social Norms, Women's Status and Gender Differences in Competitiveness: Evidence from Field Experiments in India's Northeast

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Abstract

We study the relationship between social norms governing women's status in society and gender differences in competitiveness. We conduct a lab-in-the-field experiment eliciting men's and women's inclinations to compete among three traditional societies with markedly different social norms, one patriarchic, one gender-balanced and one close to matriarchic. We find that the male-female gender difference in the inclination to compete increases monotonically with the degree of patriarchy. We also find that men make optimal decisions more often than women only in the patriarchic society while women's decisions are most superior to men's in the gender-balanced society. We can rule out gender differences in risk preferences as a driver of these results. We conclude that gender-balanced social norms rather than norms favoring women asymmetrically suffice to unleash women's economic potential relative to men's.

JEL Classifications: C93, D81, J15, J16.
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1 Introduction

In most modern societies, women are under-represented in leadership positions in virtually all important sectors, including politics (Paxton and Hughes, 2015), corporates (Izraeli et al., 1994) as well as academia (Morley, 2014). One key factor held responsible for this asymmetry are systematic differences in the inclination to compete (Geraldes, 2018). While a willingness to compete is essential to advance to prominent positions in polities and economies organized around competition, women have been found to be less willing to compete than men by various measures (Niederle and Vesterlund, 2007).

There has been a debate about whether these behavioral differences are primarily attributable to differences in genes across the sexes (Gneezy et al., 2006) or to the different social and economic roles men and women fill in society (Croson and Gneezy, 2009). This discourse is part of a broader nature versus nurture debate about gender differences in economic and social outcomes (Ridley, 2003). For competitive behaviour, there is some evidence in favour of a biological basis from evolutionary and sociobiology (Turkheimer, 2004). In contrast, the respective literatures in psychology and sociology tend to support the view that the observed gender differences are primarily a result of a sociocultural construct of gender and gender roles (Feingold, 1994).

In experimental economics, a ground-breaking contribution to this subject is the cross-cultural experimental study by Gneezy et al. (2009). They compare women's and men's choices to compete in a simple lab-in-the-field experiment conducted in two traditional societies which are selected so as to differ as much as possible in the social norms ruling men's and women's social and economic status. Going with the definition of patriarchy as "a system of organization in which the overwhelming number of upper positions in hierarchies are occupied by males" (Goldberg, 1993), these authors describe the Maasai in Tanzania as "a textbook example of patriarchal society." Acknowledging that truly matriarchal societies do currently not exist, they contrast the Maasai with the Khasi of northeastern India, who practice matrilineage - inheritance and clan membership follow the female lineage – and matrilocality – upon marriage a husband joins the wife's parental household. Consistent with the hypothesis that patriarchy discourages women and suppresses their economic potential, Gneezy et al. (2009) find that Maasai men compete more often than women, while the opposite obtains for the Khasi. These findings have been corroborated by Andersen et al. (2013) for adolescents in the Khasi and the Karbi ethnic groups, where the latter are a patriarchal society dwelling in an agro-climatically similar environment as the Khasi, in northeast India.

In this paper we re-visit the relationship between social norms and gender differences in competitiveness. Our point of departure is that the studies of Gneezy et al. (2009) and Andersen et al. (2013) are set in traditional societies whose norms represent the

extremes of the patriarchy-matriarchy spectrum. We ask whether the observed differences in behavior across these extremes also carry over to a society in which the norms governing men's and women's status are more balanced, as they are in most modern societies. In other words, is the difference between men's and women's inclinations to compete in a society with balanced norms smaller than in a patriarchal but larger than in a matrilineal and matrilocal society? Following Andersen et al. (2013), we choose to study this question among traditional societies in India's northeast. This region is ideal for such a pursuit as – due to the hilly topography and remoteness – there is a great deal of cultural diversity in an agro-climatically and politically homogeneous area of the size of Iceland.

Our research design comprises two steps. First, we systematically code traditional social norms important for a woman's status in society for all major traditional communities dwelling in two neighboring states of India's northeast from the ethnographic atlas *People of India* (Singh, 1998). To the best of our knowledge, we are first to explore this important volume, which, for India, covers many more ethnic groups than the well-known ethnographic atlas by Murdock (1967). From these data, we construct a patriarchy index, which confirms that the two ethnic groups studied by Andersen et al. (2013), the Karbi and the Khasi, are indeed on the two extremes of this spectrum. Our analysis also shows that the distribution of this index is strongly bimodal with the humps at the extremes.

Our original objective was to identify a traditional society in which men's and women's rights are symmetric – as in modern societies. A detailed examination of communities with intermediate index values revealed, however, that there is not a single society with roughly gender-symmetric norms. Regarding lineage, for example, there is no single case of bilateral descent (a child belongs to her father's and mother's clan to similar extents) and equigeniture (all children, regardless of their sex, inherit an identical share, the default rule in Indian law (Government of India, 2005)). Instead rights that are balanced across the sexes are such that men and women each have qualitatively different but – at least arguably – similarly important entitlements. Following Gneezy et al.'s (2009) focus on lineage and residency norms, we focus on configurations where a balance occurs for lineage norms ruling kinship and inheritance, as well as a couple's residence after marriage.

Among the 27 societies whose norms we code, there is only a single group with balanced norms in each of the three dimensions we consider, the Dimasa. This society is duolineal, meaning that a son belongs to his father's clan and a daughter to her mother's clan. There is male equigeniture for paternal properties, which comprise agricultural assets and real estate, female equigeniture for maternal properties, which include clothes, jewelry and looms, and equigeniture for items like kitchen apparel. Finally, the Dimasa practice neolocal residency, meaning that a couple founds a new residence after the birth of the first child. For comparison the Karbi, who live adjacent to the Dimasa, practice

male primogeniture (the first-born son inherits all property), patrilineage and patrilocality (at least the oldest son stays with his parents and is joined by his wife), while the Khasi practice female ultimogeniture (the last-born daughter inherits all property), matrilineage and matrilocality, where at least the youngest daughter stays with her parents and is joined by her husband.

In a second step we conduct the competition and risk experiments of Gneezy et al. (Gneezy, Leonard, and List, 2009) with men and women of the Karbi, Dimasa and Khasi communities. In this experiment, a subject receives is rewarded for successful tosses of a ball into a bin. Before tossing, the subject chooses whether her reward shall depend on her own successes only or whether she competes and earns a reward only if she succeeds more often than her (anonymous) competitor.

Our experimental results support the hypothesis of a monotonic relationship between patriarchy and gender differences in competitiveness: men compete 50 percent more often than women among the patriarchic Karbi, while among the duolineal Dimasa men compete only 18 percent more often. In contrast, Khasi men compete 15 percent less often than women. In regressions where we parametrize the extent of patriarchy derived from the first step of our analysis, we find that this relationship between women's status and competitiveness is statistically significant.

To assess whether patriarchy leads to worse economic outcomes for women through their choices, we also analyze the optimality of choices. We find that women among the patriarchic Karbi compete too little making suboptimal choices 25 percent more often than men. In contrast, there is no 'under-entry' into competition among both Khasi and Dimasa women, who make optimal choices 20 percent more often than men. The respective double difference is significant at the 90 percent significance level. To assess whether these differences in competitive behavior are due to differences in risk aversion, we also conduct a risk bearing experiment with each subject. While we find that women are significantly more risk averse than men, this gender difference does not correlate with the social norms determining women's status across the three societies, as in Gneezy et al. (2009).

We conclude that, in line with the two studies that have inspired our work (Gneezy et al. 2009, Andersen et al. 2013), patriarchal norms suppress women's economic potential by making them compete too little. In addition, our results suggest that gender-balanced social norms rather than the extreme of matrilineage and matrilocality suffice to heal gender asymmetries in economic outcomes. In fact, women's advantage over men regarding the optimality of choices is greatest among the group with gender-balanced norms. Overall, we view our findings as good news for modern societies' objective to unleash women's economic potential through equal rights and opportunities. Indirectly, however, our findings also highlight the importance of de facto social norms, by which we have

classified the societies of our study, rather than provisions toward gender equality that are only de jure. In this connection it is important to note that all three communities live under Indian law, which stipulates equigeniture as default, leaves the choice of first and last names of children entirely to the parents and makes no provisions for newlyweds' residency.

This paper contributes to a literature on the underpinnings of gender differences in economic behaviour by comparing traditional societies with different social norms. Comparing societies with stark differences in lineage, inheritance and household formation provides a unique opportunity to study the effects of social structure on gender differences in economic behaviour and outcomes. With this approach, differences in altruism have been studied by Gong et al. (2015), risk preferences by Gong and Yang (2012), risk preferences and gender stereotypes by Pondorfer et al. (2014), public good contributions by Andersen et al. (2008a), and bargaining behaviour by Andersen et al. (2018), to mention just a few. Most closely related to our study are the papers by Gneezy et al. (2009) and Andersen et al. (2013), who compare gender differences in competitive behaviour between a matrilineal and a patriarchal society.[1]

Our main innovations relative to these papers are, first, that ours is the first study to include a traditional society where the social status of the sexes is balanced in addition to the extremes of a patriarchic and a matrilineal society. We think this is useful to learn more about the effect of social norms in modern societies. Second, we take seriously the choice of societies included in our experiments by showing how the norms in these communities compare to the universe of traditional societies in the study area.

The remainder of this paper is structured as follows. The next section provides an overview of social norms among the ethnic groups populating India's northeast and describes in some detail the three societies among which we conducted our experiments. Section 3 describes our experimental design. We proceed to a discussion of the experimental results in Section 4 and Section 5 concludes.

2 Societal background

2.1 Social norms among ethnic groups in India's northeast

In our view, the choice of societies in Gneezy et al. (2009) and Andersen et al. (2013) is somewhat ad hoc as these authors do not put the societies which they study into the broader context of social norms prevailing in their country or region of residence. We take the two communities in Andersen et al.(2013)'s study as point of departure,

[1] In contrast, Gong and Yang (2012) find a greater difference in risk aversion between women and men in the patriarchal Yi community than among the adjacently living matrilineal Mosuo in southwestern China.

whose members dwell in the two abutting states Assam and Meghalaya, and collect data on relevant social norms for all traditional communities in these two states.[2] For this undertaking, we tabulate qualitative information from the ethnographic atlas *People of India* (Singh, 1998). This is a 32 volume compendium compiled by a team of anthropologists coordinated and sponsored by the Anthropological Survey of India, a government agency reporting to India's Ministry of Culture. It contains the findings of a systematic field campaign undertaken between 1985 and 1992, attempting to cover all distinct cultural and ethnic communities with at least 200 members in India, 4635 in total. The researchers spent an average of 5.5 days in each community and recorded various aspects of traditional and current social and economic organization obtained through first-hand interviews of key informants as well as participant observation. Unlike the well-known ethnographic atlas by Murdock (1967), in which various cultural and economic characteristics are tabulated for hundreds of traditional societies, the *People of India* (PoI) volumes include no tabulations.[3] Instead, each community is portrayed in a chapter of three to five pages of text. We choose to focus on groups which have traditionally dwelled in the two states, that is we exclude recently immigrated communities; 41 communities in the two PoI volumes on Assam and Meghalaya satisfy this criterion. We further eliminate nine communities for which PoI does not mention a population figure. Finally, five communities are described twice, once for Assam and once for Meghalaya, leaving us with 27 distinct communities with a population of 3.06 million around the year 1981.[4] This compares to a total population of so-called scheduled tribes in the two states of about 3.3 million in 1981.[5] Hence our sample covers the vast majority of these two states' population belonging to traditional societies.

We follow Gneezy et al. (2009) and Andersen et al. (2013) and focus on lineage and residency norms as determinants of women's status in society. Lineage has two not necessarily congruent aspects, kinship and inheritance. Cultural anthropologists specify kinship as how an individual is related to another set of individuals in a society and

[2]To ensure that the groups we are considering largely follow traditional norms, we focus on communities listed as "scheduled tribes" under the Indian Constitution. While the constitution itself does not define characteristics of these groups, the criteria followed for specification of a community as scheduled tribes are "primitive traits, distinctive culture, geographical isolation, shyness of contact with the community at large, and backwardness" (Government of India, 1955).

[3]There is a large number of recent papers in economics using Murdock's Atlas. They all focus on Africa (Alesina et al., 2016, 2013; Michalopoulos et al., 2016). For India, in contrast, the coverage of Murdock's Atlas is far less complete than the *People of India*. Murdock lists less than 50 societies, while People of India contains 4635.

[4]For each of the five communities that are portrayed twice, once in the Assam and once in the Meghalaya volume of PoI, we only consider the set of norms of the more populous of the two subpopulations.

[5]The precise population figure for scheduled tribes in the two states is not available from India's 1981 census because affiliation to scheduled tribes was not recorded for Assam due to political factors. We arrive at 3.3 million by adding to the 1981 census figure of 1.08 in Meghalaya the geometric mean of 1.60 and 2.87 million, the scheduled tribe population figures for Assam according to the 1971 and 1991 censuses.

what their social duties and obligations are. Inheritance norms specify how material possessions are transferred from one generation to the next (Murdock, 1949). For each of the 27 communities, all three norms are reliably discussed in PoI. Table 1 summarizes these norms and how we coded them as pro-male (-1), neutral (0) or pro-female (1). Regarding post-marital residence, a wife tends to benefit from residing with her rather than with the groom's parents. Regarding lineage, female inheritance as well as kinship affiliations that are based on the mother have been found to strengthen women's societal position (Chakraborty and Kim, 2010; Dyson and Moore, 1983).

Figure 1 depicts the distribution of our patriarchy index, which we calculate for each community as the sum of the values assigned for each of the three social norms. The left panel is a histogram of the number of communities for each value of the index. It shows that the bulk of communities in the study area is patrilocal and patrilineal with values of -3 and -2 (20 of 27 communities). The Karbi, portrayed as patriarchic by Andersen et al. (2013) indeed have a value of -3 on our scale. On the other hand, there are four matrilineal/matrilocal societies, a well-known peculiarity of India's northeast, one of them the Khasi. There are only two communities with balanced norms manifested by an index value of zero. The right panel is a histogram of the populations belonging to each of the seven realizations. It demonstrates that the matrilineal/matrilocal groups are on average more populous than the patriarchic communities. Consistent with the left panel, the population share of balanced societies is only about seven percent.

With the objective to identify a society with balanced norms, we now examine the two groups with an index value of zero, the Rabha and Dimasa of Assam, in more detail. The Rabha practice matrilineal descent, equigeniture and patrilocal post-marital residence, which implies values of one for descent, zero for inheritance and minus one for residency. In contrast, with duolineal kinship, a mixture of duolineal inheritance and equigeniture, as well as neolocality, the Dimasa have a neutral value of zero for all three norms. In sum, the Dimasa are the only society with gender-balanced norms in all three dimensions. We hence choose to include in our experimental sample the Dimasa in addition to the patriarchic Karbi and the matrilineal/matrilocal Khasi.

2.2 The Dimasa, Karbi and Khasi societies

As shown in the previous section, the Karbi and Khasi, previously studied by Andersen et al. (2013), represent extremes on the patriarchy-matriarchy spectrum according to the metric that we have posited. Since the objective of our study is to compare intermediate social norms to the two extremes, we choose to revisit the Karbi and Khasi. In addition, we include in our experimental sample the Dimasa, who come closest to gender-balanced norms among the 27 traditional societies groups that we have coded.

According to various sources, these three communities are quite similar in numerous characteristics. First, all three are ethnically Mongoloids (Kumar et al., 2004). They are also genetically relatively close. Walter et al. (1987) analyse 15 communities of Assam including the Karbi and Kachari, of whom the Dimasa are a subgroup, for Gm and Km allotypes and find the Karbi and Kachari to be very similar. We also located two studies including the three ethnicities, both of which point out similar genetic characteristics of their blood (Das and Deka, 1985; Sikdar, 2016). Second, they live in close geographic proximity in similar agro-climatic environments. The three villages in which we have carried out the experiments are located at an altitude of around 900 meters above sea level in the hills between central Assam and Meghalaya within a 100 kilometer radius. Third, all three communities pursue similar economic activities for subsistence. According to Singh (1998), all are primarily engaged in agriculture. This is also confirmed by our exit survey, according to which close to 90 percent of respondents' principal activity is farming (see Table 3).

The Khasi are distinct from the Karbi and Dimasa in two respects. First, the Khasi speak an Austro-Asiatic language while the Karbi and Dimasa each have a language that belongs to the Tibeto-Burman group (Kumar et al., 2004). Second, even though spatially very close to Assam's Karbi and Dimasa, they settle in the state of Meghalaya. In sum our impression is that the Karbi and Dimasa are very similar, in all five dimensions just discussed. The Khasi are similar to Karbi and Dimasa regarding ethnicity, genetics, environment and mode of subsistence, but somewhat differentiated regarding language and political regime.

The three communities differ vastly in their social organization. The social norms of the matrilineal/matrilocal Khasi and patriarchic Karbi are described in detail in Andersen et al. (2008b, 2013), Gneezy et al. (2009), Banerjee et al. (2015) and Mukherjee (2018). Table 2 summarizes the three norms of these two communities contributing to our patriarchy index.

To the best of our knowledge, the Dimasa have not yet been the subject of any study in economics. Therefore, we discuss their norms in some detail now. The Dimasa have a double descent system, where the simultaneous existence of both male and female clans is the outstanding characteristic (Bordoloi, 1984). A son belongs to his father's clan and a daughter to her mother's clan. Among the Dimasa, there are 42 patri-clans (*sengphong*) and 40 matri-clans (*jaddi* or *juluk*), which strictly observe clan exogamy in their arranged, monogamous marriages (Ghosh, 1965b). The inheritance norm is peculiar and has elements of a duolineal system as well as equigeniture (Singh et al., 1994; Ghosh, 1965a). Male property, which comprises real estate, agricultural assets and cattle, is equally inherited by the sons. For female property, comprising clothes, jewelry and looms, there is female equigeniture (Danda, 1978). Finally, household assets such as

cooking utensils and dishes count as common property and are inherited equally by sons and daughters. The rule regarding post-marital residence is neolocality, where the couple founds a new home after residing with the bride's family till the birth of the first child (Singh, 1998).

The lineage and residency norms we have elaborated on allow to capture women's economic and bargaining position in the marriage in a systematic way. The ordinal classification of the three societies as patriarchic, balanced and close-to-matriarchic is also confirmed by circumstantial remarks in the respective chapters of *People of India*, which for the Karbi say "the status of woman is held to be a little lower than that of man" and "a male child is preferred", while among the Bhoi Khasi "women enjoy a relatively high social position. The birth of a female child is hailed with great joy." For the Dimasa, the respective chapter points out that "the position of women in the society is almost at par with men" and makes no statement on gender preferences for children.

3 Experimental design and procedure

Guided by local government officials' advice, whom we requested to name villages that are safe and conveniently located while hosting sufficient numbers of our target population, we identified two Karbi and six Dimasa villages in Assam and one Khasi village in Meghalaya.[6] The experiments with the Karbi and the Dimasa were conducted in the town of Manja in Assam's Karbi-Anglong district. The experiment with the Khasi took place in the town of Nongpho in Meghalaya's Ri-Bhoi District, on the border of Assam.

We choose to carry out the experiments with representative samples of parents of school-aged children for two reasons. First, they are prime-aged adults standing in the phase of their lives where they are economically most productive (Fulford, 2014). Therefore the economic behaviour of this segment of the population is of particular importance for the economy as a whole. Second, the focus on this group simplified representative sampling as we could conveniently draw up lists of the universe of such individuals with the help of school headmasters and village officers. With the help of these officials and assistants, we first listed all parents of school-aged children in each village by sex. The subjects were then randomly drawn from these lists, 32 men and 32 women in each village. We visited each subject in his/her home to convey the invitation. This included information about the participation fee of Indian rupees 100, and the place and time of the experiment. Each subject was requested to report at a specified time at the ex-

[6]For the two communities in Assam, the Karbi and Dimasa, we collaborated with the administration of the Lumbajong development block in Manja and selected two Karbi and six Dimasa villages close to the town of Manja in that block. For the Khasi in Meghalaya, we collaborated with the administration of Ri-Bhoi district in Nongpho and selected a village in the Umling development block, which surrounds the town of Nongpho. The different numbers of villages for the three communities result from the villages' different sizes close to our two operating bases Manja and Nongpho.

perimental site, the village school or a public meeting hall, and we arranged individual transport for each subject. There was no single case of no-show; all subjects that we had invited participated in the experiments. We are hence confident that our experimental results are fully representative of the target populations.

We closely followed the procedures laid out in Gneezy et al. (2009), with the risk task followed by the competitive choice and ball-tossing task. In the risk task, a subject chooses the amount to invest in a lottery out of an endowment of Indian rupees 50. The lottery outcome is determined by tossing of a fair coin with payoffs of zero and three times the stake chosen by the subject, respectively. In the competition task, the subject throws a tennis ball into a bucket placed 10 feet away five times. Beforehand she chooses whether her monetary reward for successful tosses shall depend only on her performance at a rate of Rs. 10 per successful toss or, in addition, on winning against an anonymous competitor. For a competition's winner, the reward per successful toss under the competitive scheme is three times as large as under the non-competitive one. In case of a tie the payoff under the competitive scheme is equal to the one under the non-competitive regime.

To rule out experimenter gender effects, in each session both a male and a female facilitator was present. The outcome of the risk task was not revealed to the subject until he/she had made a choice regarding competition and completed the ball-tossing task. The experiments were carried out in concurrent parallel sessions. To calculate subject A's payoff who has chosen to compete in the competition task, her/his performance is assessed relative to that of subject B concurrently performing the ball-tossing task in the room next door, of whose identity and choice A is not aware.

After accomplishing the experimental tasks, each subject was privately communicated the outcome and payoffs of the risk and ball-tossing tasks and taken to another location to respond to an exit survey, followed by payments in cash. On average subjects earned Rs. 285, with a minimum of Rs. 210 and a maximum of Rs. 430. Throughout the experiment, the subjects were not informed about the choices of any other subject. The detailed experimental instructions and the exit survey questionnaire are contained in the appendix of this paper.

4 Data analysis

4.1 Participant's characteristics

We present, by community, the participant characteristics from our exit survey, which include gender, age, marital status, relation to the head of the household, years of education, a rough estimate of monthly income and economic activities, in Table 3. The

average subject is between 35 and 42 years old. The Khasi are five and seven years older on average than their Dimasa and Karbi counterparts, respectively, because of later marriage and child-bearing ages. There are less than a handful of female household heads among the Khasi and Karbi. Average educational attainments are low, with averages between five and six and a half years. Interestingly, gender differences in education precisely reflect the relative status of the sexes hypothesized by us: women have 2.2 years more than men among the Khasi and 2.2 years less among the Karbi while there is only a small difference of 0.7 years in favor of men among the Dimasa. According to the income figure, the Khasi subjects appear to be slightly wealthier than the others, but given the large variation within each community these differences are not statistically significant at conventional levels. The primary economic activity is farming, which is pursued by close to 90 percent of both men and women. In line with our objective to achieve homogeneity across the communities represented in our subject pool, these figures demonstrate that our subjects are quite similar regarding observable characteristics, perhaps with the exception of schooling. To account for such observable differences, we also conduct regression analyses with control variables.

4.2 Experimental outcomes

We provide summaries of the competitiveness experiment's outcomes in Table 4 and Panel A of Figure 2. Among the patriarchic Karbi, almost 70 percent of men but only 41 percent of women choose to compete. This difference is significant at the 95 level. While, with an incidence of 44 percent, women are slightly more competitive among the duolineal Dimasa, not more than 53 percent of Dimasa men choose to compete. Finally, only 44 percent of Khasi men compete, which compares to 50 percent of women. The figures for the Khasi are well in line with the ones obtained by Gneezy et al. (2009) with 39 and 54 percent, and Andersen et al. (2013) with 41 and 50 percent among adolescents. Choices among the Karbi are also at least qualitatively consistent with the latter authors' study, who report 67 and 19 percent among adolescents. The figures from our experiments imply that the incidence of competitiveness increases monotonically with the extent of patriarchy for men, while the opposite holds for women. In sum, across the three communities, these raw data support our initial hypothesis that more patriarchic elements in a society's norms exacerbate gender differences in competitiveness.

An obvious concern is whether these differences in behavior could be due to heterogeneous gender differences in risk preferences across the three communities. Panel B of Figure 2 graphs the amount bet in our risk experiment by community and sex (see Table 4 for the means). According to these data, women bet 10 to 25 percent less than men. The gender difference in the amount bet varies little across the societies, however, and in fact slightly decreases with the extent of patriarchy. If competitive choices were solely

driven by risk preferences, these risk-bearing patterns would predict a negative correlation between patriarchy and the gender difference in competitiveness – given that payoffs under the competitive regime are riskier.

Another concern is that there are gender differences in inherent skills regarding the ball-tossing task and that subjects factor this into their decisions. Panel C of Figure 2 graphs the success rates in the competition experiment by community and sex (see Table 4 for the means). There are significant differences in ability across the communities, mostly however for men. Both Khasi and Dimasa men hit almost twice as often as their Karbi counterparts. Men in the two less patriarchic societies are also significantly better throwers than their women counterparts, especially among the duolineal Dimasa, where the gender difference is 44 percent (significant at 99 percent). Interestingly, there is no such gender difference among the patriarchic Karbi. If competitive choices were solely driven by expected payoffs and each subject were informed about her own skill as well as the skill distribution in her community, these patterns would predict a negative correlation between patriarchy and the gender difference in competitiveness.

Previous authors on gender differences in competitiveness have maintained that women's lower inclination to compete generally leads to worse economic outcomes for them (Gneezy et al., 2003). We make an attempt at assessing this possibility with our data. In contrast to Anderson et al. (2013), who conduct simulations with their data, we calculate analytically for each society a subject's expected payoff as a function of his/her own successes (six different outcomes) and the choice (compete or not compete) in the competition task. The expectation is taken over the empirical distribution of successes of all the respective society's subjects. Conditional on the subject's own successes, we then determine whether the expected payoff given the subject's actual decision is not smaller than his/her expected payoff with the alternative choice. We call the former case an interim optimal decision. By construction, both compete and not compete are optimal choices for subjects with zero successes. Among Dimasas and Khasis, not compete is the unique optimal choice for subjects with one success and compete for two or more successes. For Karbi subjects the unique optimal choice is to compete even with only one success. This difference across the communities derives from the low aggregate success rate of Karbis relative to the other two communities (see Panel 3 of Figure 2). We further define incidences of over and under-entry into competition by coding the former (latter) variable as one if a subject chooses compete (not compete) and this decision is not interim optimal, and zero otherwise.

Panel D of Figure 2 graphs the interim optimality of decisions in the ball-tossing experiment by community and sex (see Table 4 for the means). Consistent with our previous findings on competition and success rates, Karbi women take suboptimal decisions 30 percent more often than men. Consistent with the hypothesis that patriarchy

makes women take poor decisions by competing too little, panels E and F show that this disadvantage is entirely driven by under-entry. The difference of 19 percentage points is borderline significant with a p-value of 0.10 and similar to the 26 percentage points obtained by Andersen et al. (2013) among Karbi adolescents. In contrast, Dimasa and Khasi women's choices are more often interim optimal than the choices of their male counterparts. Moreover, in both societies, the stereotype of too little entry by women is reversed as under-entry is more frequent among men while women over-enter competition slightly more often than men.

4.3 Regression analysis

We test the relationship between the social norms ruling men and women's status in society and competitiveness with more statistical rigor through a regression analysis. This also allows us to control for various observable characteristics and ascertain that they do not drive the differences across societies we have manifested in the previous section. We estimate linear probability models where the choice to compete is the dependent variable. The results are set out in Table 5. Because of the sometimes relatively small samples, we report bootstrapped standard errors. Columns 7 through 9 show that the gender difference in competitiveness is statistically significant at the 95 percent level for the Khasi, but not for the Dimasa and Karbi.

Columns 1 through 6 contain estimations for the pooled sample. The patriarchic Karbi are the reference group throughout and the constant in the odd columns, which are without controls, give the mean of Karbi men. Our interest here is in the *Female* interaction terms. In column 1 we parametrize each community separately. The estimate in the line *Khasi – Female Interaction* shows that the difference in competitiveness between women and men is greater, by 34 percentage points, among the Khasi than among the Karbi in a statistically significant fashion, while the corresponding double difference for the Dimasa and Karbi is not large enough to be statistically significant. The addition of controls does not affect any of the point estimates of interest in a mentionable fashion; on the other hand the precision of the estimates slightly deteriorates because of a loss of degrees of freedom.

In column 3 we test whether the gender difference in competitiveness is greater in the patriarchic than in the other two societies. Toward this, we pool the Dimasa and Khasi and contrast them with the Karbi. The *Female* term shows that the difference between men and women is 28 percentage points and significant among the Karbi, while the sum of the interaction and the *Female* term, merely 0.01, gives the corresponding difference for the other two communities. The double difference of 0.27 is significant at the 90 percent level.

In column 5 we test whether the gender difference increases monotonically with patri-

archy. Toward this, we assign a patriarchy rank to each society, zero to the Karbi, one to the Dimasa, and two to the Khasi. The magnitude of the interaction term indicates that the gender difference in competitiveness decreases by 17 percentage points on average when moving one rank up on that scale. Moreover, the interaction term is statistically significant at or at a level close to 95 percent, depending on whether controls are included or not. This confirms our initial hypothesis that the gender difference in competitiveness increases with the extent of patriarchy.

We now turn to analyzing in more detail gender differences in the optimality of decisions. Toward this, Table 6 is structured like Table 5 with results for the dichotomous dependent variable *Decision interim optimal*. Column 2 shows that women make worse decisions than men only among the patriarchic Karbi, significantly so when controls are included, while the corresponding differences have the opposite sign and a similar magnitude for the less patriarchic communities. Accordingly, columns 3 and 4 show that the difference between men and women is significantly smaller, and in fact negative, among the two less patriarchic communities in comparison to the Karbi. Columns 5 and 6 indicate that the relationship between the extent of patriarchy and optimality of decisions is not monotonic – unlike for competitiveness.

Taken together, the results in Tables 5 and 6 suggest that gender-balanced norms suffice to prevent women from being economically disadvantaged due to their behavior in comparison to men. The pattern of the optimality results indeed implies that women perform best relative to men in a society with gender-balanced norms, better than in either of the two extreme societies.

5 Conclusion

We report an experiment to test whether patriarchic social norms make women shy away from competing. Our main contribution is that we conduct this experiment not only in societies with extreme social norms which put one of the sexes at an obvious advantage, but also in a traditional society with gender-balanced norms, where both sexes have similarly important rights and entitlements. The second innovation of our research design is that we have located this latter community through a systematic tabulation of social norms among the universe of traditional societies that populate the western part of India's panhandle drawing on an extremely rich but thus-far untapped anthropological atlas. This systematic tabulation of societies also allows us to make a strong case that confounding factors in the form of differences in characteristics other than social norms, such as language and subsistence mode, are minor in our experimental sample. On the other hand, a limitation of our design owed to logistic constraints is the relatively small sample size and the resulting limited power that allows to detect only major differences

in outcomes across the different forms of social organization.

Across the three societies in our experimental sample, we find a monotonic relationship between the extent of patriarchy and the gender difference in competitiveness. In contrast, the relationship between the extent of patriarchy and the gender difference in the optimality of choices is U-shaped, whereby women's advantage over men is greatest in the gender-balanced community. While the traditional communities in our study sample are different from modern societies in several regards, we think that some of our results might be transferable, in particular that greater patriarchy makes women less willing to compete and, perhaps most importantly, that women profit most from being in a balanced setting.

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Table 1. Coding of Social Norms Relevant for Women's Status

Community	State	Post-marital Residency	Inheritance	Descent	Patriarchy Index
Boro	Meghalaya	-1	0	-1	-2
Chakma	Assam	-1	-1	-1	-3
Garo	Meghalaya	1	1	1	3
Hajong	Meghalaya	-1	-1	-1	-3
Hmar	Assam	-1	-1	-1	-3
Jaintia	Meghalaya	1	1	1	3
Kachari Mech	Assam	-1	-1	-1	-3
Kachari Barman	Assam	-1	0	-1	-2
Kachari Boro	Assam	-1	-1	-1	-3
Kachari Dimasa	Assam	0	0	0	0
Kachari Hojai	Assam	-1	0	-1	-2
Kachari Sonowal	Assam	-1	-1	-1	-3
Karbi/Mikir	Assam	-1	-1	-1	-3
Khasi	Meghalaya	1	1	1	3
Koch	Meghalaya	1	1	-1	1
Kuki	Assam	-1	-1	-1	-3
Lalung	Meghalaya	1	1	1	3
Mishing	Assam	-1	-1	0	-2
Mizo Biate	Meghalaya	-1	-1	-1	-3
Naga Kabui (Rongmei)	Assam	-1	-1	-1	-3
Naga Konyak	Assam	-1	-1	-1	-3
Naga Rengma	Assam	-1	-1	-1	-3
Naga Sema	Assam	-1	-1	-1	-3
Naga Zeimei (Zeliang)	Assam	-1	0	-1	-2
Rabha	Assam	-1	0	1	0
Riang	Assam	-1	-1	-1	-3
Singpho	Assam	-1	-1	-1	-3

Source: People of India (1994) and authors calculations. For post-marital residence a society is coded +1 , 0 and -1 if matrilocality, neolocality, and patrilocality is followed, respectively. For inheritance a society is coded +1, 0, and -1 if female inheritance, Duolineal inheritance and equigeniture equigeniture, and male inheritance is followed, respectively. For descent norms a society is coded +1, 0, and -1 if matrilineality, duolineality, and patrilineality is followed, respectively.

Table 2. Social Norms in the Dimasa, Khasi and Karbi Societies

Social Norms	Khasi	Dimasa	Karbi
Post-marital residency	Matrilocal	Neolocal	Patrilocal
Descent	Matrilineal	Duolineal	Patrilineal
Inheritance	Female ultimogeniture	Duolineal inheritance and equigeniture	Male Primogeniture

Source: People of India (1994)

Table 3. Participants' characteristics

	Khasi Mean (Std. Dev)			Dimasa Mean (Std. Dev)			Karbi Mean (Std. Dev)		
	Pooled	Women	Men	Pooled	Women	Men	Pooled	Women	Men
Age	42.1	39.6	44.6	36.9	33.4	40.5	34.8	33.4	36.2
	10.3	8.1	11.6	7.6	6.4	7.1	8.3	6.8	9.5
Education	5.3	6.4	4.2	6.5	6.2	6.9	5.4	4.3	6.5
	5.2	5.4	4.9	4.0	4.2	3.9	3.9	3.7	3.8
Spouse's education	4.1	5.1	3.2	6.5	7.2	5.8	5.9	6.8	5.0
	5.0	5.4	4.4	4.1	3.8	4.4	3.5	3.3	3.5
Monthly income	7.3	6.4	8.1	5.4	5.3	5.5	5.5	6.1	5.0
(in '000 Rupees)	10.8	10.9	10.9	3.6	3.1	4.0	4.9	6.3	3.0
Marital status									
Married (monogamy) (%)	98.4	96.9	100	100	100	100	95	94	97
Married (polygyny) (%)	0	0	0	0	0	0	1.6	0	3.1
Widow(er) (%)	1.6	3.1	0	0	0	0	1.6	3.1	0
Divorced (%)	0	0	0	0	0	0	1.6	3.1	0
Relation to head of household									
HHH(%)	51.6	3.1	100	50.0	0	100	53.1	6.3	100
Spouse (%)	48.4	96.9	0	50.0	100	0	46.9	93.8	0
Principal occupation									
Farmer(%)	89.0	90.6	87.5	81.3	75.0	87.5	90.7	84.4	96.8
Teacher(%)	4.7	6.3	3.1	0	0	0	0	0	0
Service(%)	1.6	0	3.1	3.1	6.3	0	0	3.1	3.1
Trading(%)	1.6	0	3.1	3.1	3.1	3.1	3.1	0	0
Unemployed(%)	1.6	0	3.1	1.6	3.1	0	0	0	0
Other(%)	0	0	0	10.9	12.5	9.4	6.2	12.5	0
Observations	64	32	32	64	32	32	64	32	32

Notes: Age denotes chronological age in years as on 1st January 2019; Education denotes years of schooling; Spouse's education denotes years of schooling of the spouse; Income denotes monthly average income in thousands of rupees; Marital status denotes whether the participant is married(monogamous), married (polygynous), widowed, or divorced; Activity denotes the primary earning activities that the participant reports; Relation to head of household denotes whether the participant is household head (HHH) or spouse.

Table 4. Participants' choices

	Khasi Mean (Std. Dev)			Dimasa Mean (Std. Dev)			Karbi Mean (Std. Dev)		
	Pooled	Women	Men	Pooled	Women	Men	Pooled	Women	Men
Experiment summary: competition									
Compete	0.47	0.50	0.44	0.48	0.44	0.53	0.55	0.41	0.69
	0.50	0.51	0.50	0.50	0.50	0.51	0.50	0.50	0.47
Success	2.09	1.84	2.34	1.95	1.53	2.38	1.25	1.25	1.25
	1.20	1.14	1.23	1.27	0.95	1.41	1.11	1.16	1.08
Earnings	26.56	22.50	30.63	29.84	22.50	37.19	19.84	15.00	24.69
	30.46	25.14	34.91	32.24	28.85	34.19	27.86	17.41	35.01
Observations	64	32	32	64	32	32	64	32	32
Those who chose to compete									
Success	1.80	1.44	2.21	1.94	2.00	1.88	1.29	1.08	1.41
	1.13	1.03	1.12	1.09	0.88	1.27	1.05	0.76	1.18
Won-loss-tie	9-15-6	3-7-6	6-8-0	14-10-7	6-5-3	8-5-4	13-12-10	4-4-5	9-8-5
Earnings	30.00	22.50	38.57	40.65	36.43	44.12	26.29	16.92	31.82
	42.67	34.35	50.51	41.63	38.95	44.59	34.99	22.13	40.19
Earnings if choice reversed	12.00	8.13	16.43	21.29	16.43	25.29	13.43	6.15	17.73
	34.08	26.39	41.81	32.84	32.49	33.56	26.45	18.50	29.75
Those who chose not to compete									
Success	2.35	2.25	2.44	1.21	1.37	0.9	1.97	1.17	2.93
	1.23	1.13	1.34	1.21	1.38	0.74	1.42	0.86	1.39
Won-loss-tie	13-7-14	5-4-7	8-3-7	13-17-3	4-13-1	9-4-2	8-9-12	5-7-7	3-2-5
Earnings	23.53	22.50	24.44	19.70	11.67	29.33	12.07	13.68	9.00
	12.28	11.25	13.38	14.25	8.57	13.87	12.07	13.83	7.38
Interim optimality of choices									
Over-entry	0.17	0.19	0.16	0.13	0.16	0.09	0.00	0.00	0.00
	0.38	0.40	0.37	0.33	0.37	0.30	0.00	0.00	0.00
Under-entry	0.41	0.38	0.44	0.28	0.19	0.38	0.31	0.41	0.22
	0.50	0.49	0.50	0.45	0.40	0.49	0.47	0.50	0.42
Decision optimal	0.42	0.44	0.41	0.59	0.66	0.53	0.69	0.59	0.78
	0.50	0.50	0.50	0.50	0.48	0.51	0.47	0.50	0.42
Experiment summary: risk									
Amount bet	21.56	18.75	12.94	19.06	17.5	20.63	26.56	25.31	27.81
	12.63	11.85	12.94	8.11	8.03	8.01	8.21	6.21	9.75
Observations	64	32	32	64	32	32	64	32	32

Notes: Compete denotes whether the individual opted to compete in the experiment; **success** denotes the number of successful attempts in the experiment (out of 5 balls thrown); **earnings** denotes the rupees earned during the ball-throwing competition experiment where the rupees=successes multiplied by 10 if the participant chose not to compete,= successes multiplied by 30 if the participant chose to compete and won, =successes multiplied by 10 if the participant chose to compete and tied, and =0 if the participant chose to compete and lost; earnings if choice is reversed denotes the rupees foregone because participants chose not to compete.

Table 5. Regression results: Competition choice

Variables	Pooled Compete	Pooled Compete	Pooled Compete	Pooled Compete	Pooled Compete	Pooled Compete	Karbi Compete	Dimasa Compete	Khasi Compete
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dimasa	-0.16	-0.15	___	___	___	___	___	___	___
	(0.12)	(0.13)							
Khasi	-0.25**	-0.20	___	___	___	___	___	___	___
	(0.12)	(0.13)							
Khasi or Dimasa (Dummy)	___	___	-0.20*	-0.18	___	___	___	___	___
			(0.10)	(0.11)					
Matriarchy rank	___	___	___	___	-0.13**	-0.10	___	___	___
					(0.06)	(0.07)			
Female	-0.28**	-0.29**	-0.28**	-0.29**	-0.28**	-0.28**	-0.28**	-0.09	0.06
	(0.12)	(0.13)	(0.12)	(0.13)	(0.11)	(0.12)	(0.12)	(0.13)	(0.13)
Dimasa – Female Interaction	0.19	0.19	___	___	___	___	___	___	___
	(0.18)	(0.18)							
Khasi – Female Interaction	0.34**	0.33*	___	___	___	___	___	___	___
	(0.18)	(0.19)							
Khasi or Dimasa – Female Interaction	___	___	0.27*	0.26*	___	___	___	___	___
			(0.15)	(0.16)					
Matriarchy rank – Female Interaction	___	___	___	___	0.17**	0.16*	___	___	___
					(0.09)	(0.09)			
Constant	0.69***	-5.71	0.69***	-4.69	0.68***	-5.61	0.69***	0.53***	0.44***
	(0.08)	(9.57)	(0.08)	(9.09)	(0.08)	(9.38)	(0.08)	(0.09)	(0.09)
Controls	No	Yes	No	Yes	No	Yes	No	No	No
Observations	192	190	192	190	192	190	64	64	64
R^2	0.035	0.047	0.031	0.044	0.035	0.046	0.080	0.009	0.004

Notes: The dependent variable is "compete" and it takes on a value of 1 if the participant opted to compete and 0 otherwise. Standard errors are given in parentheses. Estimates are partial derivatives at the sample means from linear probability model. Controls include all the variables defined in Table 3. Bootstrap standard errors based on 100,000 repetitions in parentheses.*** p<0.01, ** p<0.05, * p<0.1

Table 6. Regression results: Optimality of decision to compete

	Pooled Decision optimal	Pooled Decision optimal	Pooled Decision optimal	Pooled Decision optimal	Pooled Decision optimal	Pooled Decision optimal	Karbi Decision optimal	Dimasa Decision optimal	Khasi Decision optimal
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dimasa	-0.25**	-0.23*	___	___	___	___	___	___	___
	(0.12)	(0.12)							
Khasi	-0.38***	-0.38***	___	___	___	___	___	___	___
	(0.12)	(0.12)							
Khasi or Dimasa (Dummy)	___	___	-0.31***	-0.29***	___	___	___	___	___
			(0.10)	(0.10)					
Matriarchy rank	___	___	___	___	-0.19***	-0.19***	___	___	___
					(0.06)	(0.06)			
Female	-0.19	-0.23*	-0.19	-0.23**	-0.12	-0.17	-0.19	0.13	0.03
	(0.11)	(0.12)	(0.11)	(0.12)	(0.11)	(0.11)	(0.11)	(0.12)	(0.12)
Dimasa – Female Interaction	0.31*	0.31*	___	___	___	___	___	___	___
	(0.17)	(0.17)							
Khasi – Female Interaction	0.22	0.25	___	___	___	___	___	___	___
	(0.17)	(0.18)							
Khasi or Dimasa– Female Interaction	___	___	0.27*	0.27*	___	___	___	___	___
			(0.14)	(0.15)					
Matriarchy rank– Female Interaction	___	___	___	___	0.11	0.13	___	___	___
					(0.09)	(0.09)			
Constant	0.78***	-5.81	0.78***	-10.16	0.76***	-7.33	0.78***	0.53***	0.41***
	(0.07)	(9.04)	(0.07)	(8.76)	(0.07)	(8.88)	(0.07)	(0.09)	(0.09)
Controls	No	Yes	No	Yes	No	Yes	No	No	No
Observations	192	190	192	190	192	190	64	64	64
R^2	0.067	0.088	0.045	0.067	0.056	0.079	0.041	0.016	0.001

Notes: The dependent variable "Decision optimal" is derived from the successes of the agent where choosing to compete or not is ideal that maximizes the agent's payoff. Controls include all the variables defined in Table 3. Standard errors obtained from a bootstrap with 100,000 repetitions.*** p<0.01, ** p<0.05, * p<0.1.

Figure 1. Distribution of the patriarchy index across 27 societies

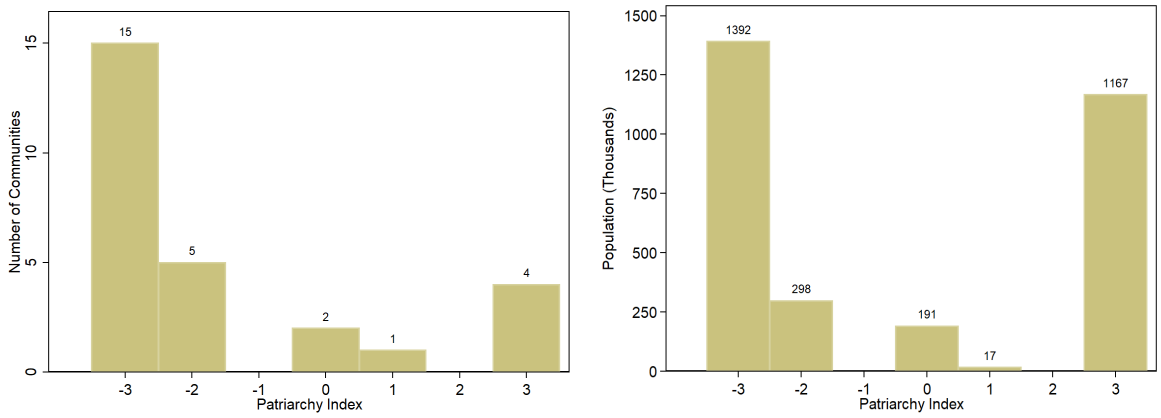
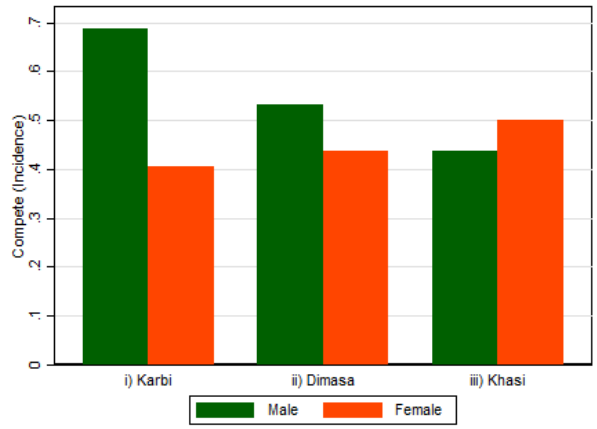
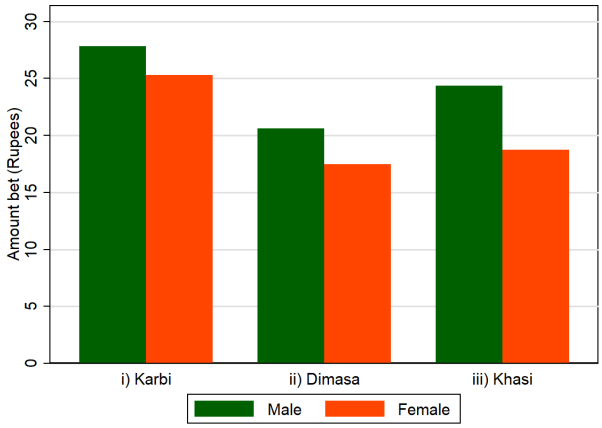


Figure 2. Experimental results

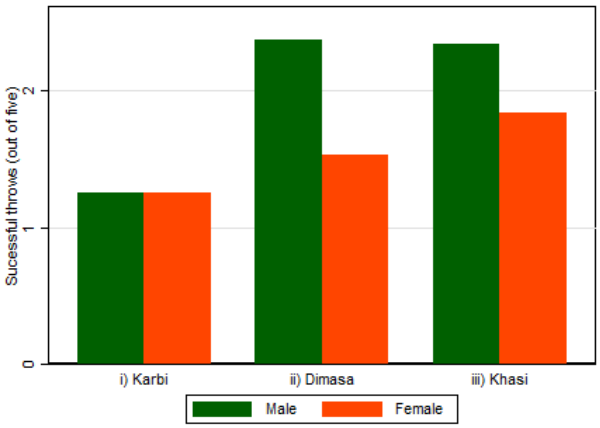
Panel A. Competitiveness (rate)



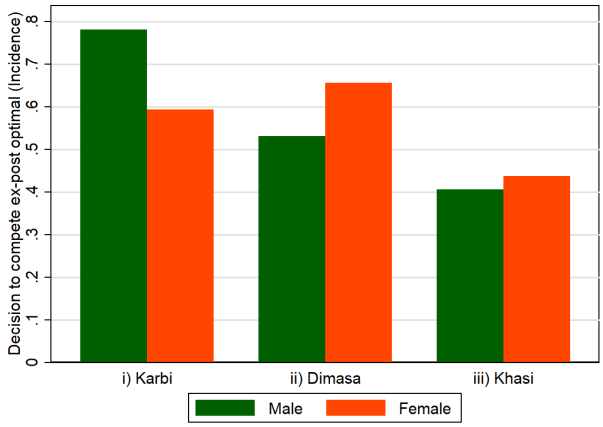
Panel B. Risk taking (avg. bet of Rs. 50)



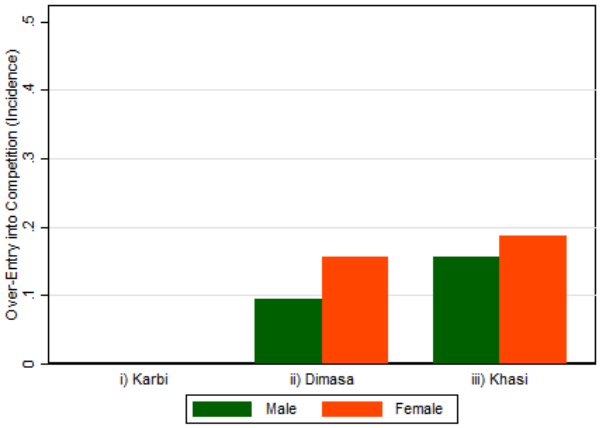
Panel C. Successes in tossing (hits in five tries)



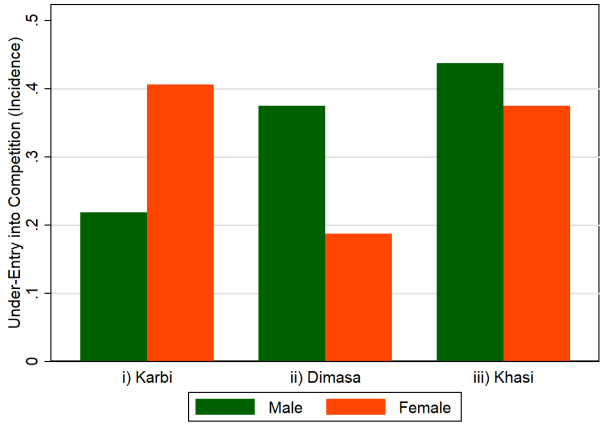
Panel D. Interim optimality of choices (rate)



Panel E. Over-entry into competition (rate)



Panel F. Under-entry into competition (rate)



APPENDIX

EXPERIMENTAL DESIGN

Welcome to this study of decision-making. The experiment will take about 10 minutes. The instructions are simple, and if you follow them carefully, you can earn a considerable amount of money. All the money you earn is yours to keep and will be paid to you, in cash, immediately after the experiment ends. In addition to any earnings you might have in this task, you will be paid 100 rupees to participate.

I

Next, you will receive 50 rupees. You are asked to choose the portion of this amount (between 0 and 50) that you wish to invest in a risky option. The rest of the money will be accumulated in your total balance.

The risky investment: there is an equal chance that the investment will fail or succeed. If the investment fails, you lose the amount you invested. If the investment succeeds, you receive 3 times the amount invested.

How do we determine if you win? After you have chosen how much you wish to invest, you will toss a coin to determine whether you win or lose. If the coin comes up heads, you win 3 times the amount you chose to invest. If the coin comes up tails, you lose the amount invested.

Examples

1. If you choose to invest nothing, you will get the 50 rupees for sure. That is, the coin flip would not affect your profits.
2. If you choose to invest all of the 50 rupees, then if the coin comes up heads, you win 150 rupees, and if the coin comes up tails, you win nothing and end up with 0.
3. If you choose to invest 30, then if the coin comes up heads, you win 110 (20 + 3 x 30), and if the coin lands on tails, you win 20.

Do you have any questions?

Ask them how much they would like to invest.

(*Record the outcome of the lottery and calculate the amount*)

(Do not tell the outcome of the lottery)

III

The task that we ask you to perform today is tossing this ball into this bucket from this line. (Show them the ball, bucket, and line.) You will have 5 tries.

We now ask you to choose one of two options according to which you will be paid in the experiment.

There are two payment options:

Option 1: If you choose this option,you will get 10rupees for each time you get the ball in the bucket in your 5 tries. So if you succeed 1 time, then you will get 10 rupees. If you succeed 2 times, then you will get 20 rupees. If you succeed 3 times, you will get 30 rupees, and so on.

Option 2: If you choose this option, you will receive a reward only if you succeed more times than the person who is playing in the next room. If you succeed more than this

person, you will be paid 30 rupees for every time you succeed. So if you succeed 1 time, then you will get 30 rupees. If you succeed 2 times, then you will get 60 rupees. If you succeed 3 times, you will get 90 rupees and so on. But you will only receive a reward if you are better than the person in the next room. If you both succeed the same number of times, you will both get 10 rupees for each success. If you succeed the less number of times, you will get nothing.

We now ask you to choose how you want to be paid: according to Option 1 or Option 2.

Record their choice: Option 1 or Option 2.

Now you may play.

Allow the participant to toss the balls and record the result on the survey sheet. You can record the result of each toss with a check mark (√) and X (check mark (√) for success and X for failure). At the end of the 5 tosses, write the total number of successes on the survey sheet and the money value of each toss (based on his/her choice). Also write down whether his/her succeeded more than his/her opponent with win (W) or lose (L) or tie (T).

(*Compare* and r*ecord the money earned*)

(*Conduct the exit survey privately*)

Now, you can ask questions or clarifications before the experiment starts. But you cannot consult anybody during the experiment.

You do not need to write the total payment on the card. Tell the participant he/she must go to the person who will fill out an exit survey. Once he/she has filled out this survey, he/she should take the card and the survey to the "cashier" and he/she will receive payment. If they ask you what to do: Tell them that you cannot give them advice about what to choose and offer to read the script to them again.

***

EXIT SURVEY

IDN° TRIBE-VILL-SEG-SEX-SESSION- SUBJECT N° : KH/K | A/DI | 1..9 | 1..9 | M/F | 1..3 | 1... | 64

1.Mobile number? (| | | | | | | | | |)

village

nearest post office

2.Gender? Sex: M F

3.Relation to HHH(mark X): HHH | Fa-Mo | Servant | Spouse | Bro-Sis | No Rel. | Son-Dau | Foster | Other

4.Your edu years? Your Edu: 0..17

5.Spouse's Edu? Sp.Edu: 0..17

6.Children(aged > 6 yrs) by sex? BOYS: 0...9 GIRLS: 0...9

Family structure? 1 Joint 0 Nuclear

8.Handedness?(obs.): R L

9.Has bank a/c? Y/N

10. Birth yr: yyyy

11. Monthly Hh Rs (k)? INCOME: Rs

13a.Job/Earn: 0...5 Rs

13b.Job/Earn: 0...5 Rs

13c.Job/Earn: 0...5 Rs

12. Own land?Measure land: Y/N Bigha/Katha

13a.wage freq. hh.lb. monthly: D W M F Rs

13b.wage freq. hh.lb. monthly: D W M F Rs

13c.wage freq. hh.lb. monthly: D W M F Rs

14. Ask clan affiliations? **CLAN**

15. Ask sub-clan affiliations? **SUBCLAN**

16. Marital status? 0 Married(mono) 1 Married(poly) 2 Consanguineous 3 Divorced 4 Widow(er) 5 Unmarried

17.Religious affiliation? 0 Hindu 1 Christ. 3 Tribal 2 Islam

Codes for occupations: 0 Farmer 1 Teacher 2 service 3 Unemployed 4 Trading 5 Other.

EXPERIMENTAL PAYOFF

18LOTTERY:SAFE+BET=Rs50					19. BALL THROWING COMPETITION											20. TOTAL PAYOFF
safe	bet	W/L	Money		0	NOT COMPETE				1	COMPETE				compare	
Rs	Rs	toss			x	x	x	x	x	x	x	x	x	x	W/L/T	
Rs	Rs	W/L	Min=Rs 0 Max=Rs 150	+	MONEY:10x					MONEY:30x					Min=Rs0 Max=Rs150	+Rs.100= Min=Rs 100 Max=Rs400

Your participation in this study is purely voluntary and you will remain anonymous throughout the study.Results may include summary data, but you will never be identified. By continuing, you consent to the publication of study results.

Date: Last Name, First Name _____ Signature_____

***