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ABSTRACT

Can Gender Differences in Distributional Preferences Explain Gender Gaps in Competition?

We design an experiment to examine whether egalitarian preferences, and in particular, behindness aversion as well as preference for favorable inequality affect competitive choices differently among males and females. We find that selection into competitive environments is: (a) negatively related to egalitarian preferences, with smaller negative impacts of being egalitarian on females' choice of the tournament wage scheme, and (b) negatively associated with behindness aversion and positively related to preference for favorable inequality, with significant gender differences in the impact of these distributional preferences. Once we allow for the impact of distributional preferences, behavioral, personality, and socioeconomic characteristics to vary by gender, the pure gender effect is explained away. We find that gender gaps in distributional preferences along with selected personality traits are the most relevant explanations for gender differences in willingness to compete. This is an important result as these characteristics are per se malleable and amenable to policy interventions.

JEL Classification: C91, D03, D63, J16

Keywords: competitiveness, distributional preferences, gender differences

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1. Introduction

Winning a competition has obvious economic benefits. However, competition is inherently inequality inducing, creating a divided society of winners and losers (Frank, 1996). Consequently, a distaste for inequality might encourage individuals to stay away from competitive environments, apprehensive of the disutility from an unequal outcome. Fehr and Schmidt (1999) point out however that individuals might have different preferences towards advantageous and disadvantageous inequalities. Consequently, attitudinal differences towards advantageous and disadvantageous inequalities can influence choices differently (Beranek, Cubitt, Gächter, 2015; Teyssier, 2008).

The relationship between competitiveness and distributional preferences assume further importance in retrospect with the evidence from the experimental literature. First, experimental results consistently find females to be less inclined to compete than males (Niederle and Vesterlund, 2007; Flory, Leibbrandt and List, 2015; Buser, Niederle and Oosterbeek, 2014). Second, the literature generally finds women to be more egalitarian than men (Andreoni and Vesterlund, 2001; Dufwenberg and Muren, 2006; Engel, 2011; Sharma, 2015).

While the existing literature has largely focused on examining gender gaps in competitiveness, controlling for variations in characteristics such as risk preferences, confidence, personality traits, family background characteristics, and session composition, the connection between gender gaps in distributional preferences explaining gender differences in competitiveness has not been studied extensively. Relatively few papers explore distributional preferences as plausible mechanisms for explaining gender differences in competitiveness. Balafoutas, Kerschbamer and Sutter (2012) classify a small sample of Austrian university subjects into inequality averters, efficiency seekers, inequality lovers, and spiteful agents and find that spiteful and inequality-averse subjects avoid tournaments when given a choice. Additionally, upon controlling for these distributional preferences, risk attitudes, overconfidence and past performance, the gender difference in competitive behavior disappears. Kamas and Preston (2015) explore behavior in a battery of economic games as a function of distributional preferences measured using a three-person dictator game with US university students. They examine the choice among three compensation schemes (egalitarian, piece rate, and competitive payments) as a function of their social categorizations as self-interested, inequity averting, or efficiency maximizing decision-

makers.[1] They find women to be no more likely to choose the piece rate scheme over the competitive scheme; women appear to be significantly more likely to choose the equal pay over competitive pay than men, but that gender difference is explained away upon adding controls for confidence.[2]

In this paper, we contribute to this relatively small literature on distributional preferences and competitiveness by focusing on the following three issues: first, we are interested in understanding the relationship between distributional preferences and competitive choices. To that end we categorize distributional preferences into preference for favorable inequality and aversion to unfavorable inequality (or behindness aversion). Note that an observed distaste for competition need not necessarily stem from distaste towards unequal outcomes; instead it can also be due to a lack of confidence and/or risk aversion (Bartling et al., 2009). We hypothesize that after controlling for confidence, risk preferences and other observable characteristics, a preference for favorable inequality should positively affect willingness to compete; behindness aversion in contrast, should affect competitive choices negatively. That is, subjects who prefer to be ahead of others would self select into competition that allows them the opportunity to get ahead. In contrast, a subject who does not like to be left behind would avoid competitive environments that can lead to such an outcome.

Second, we find that the existing literature consistently fails to account for the effects of family background, behavior, and personality on competition to vary by gender. Typically, the binary variable for gender in regressions reflects the male-female gap in competitiveness after controlling for other characteristics. But such regressions assume that the impact of these right hand side characteristics (distributional preferences, family background, and personality) on competition remain identical for males and females, which is not necessarily realistic. It is very important to control for this heterogeneity, especially in the presence of multi-dimensional gender inequalities prevailing in many developing countries. Especially in India, which constitutes the setting of our study, there is consistent evidence of skewed sex ratios disfavoring females at birth. Even among surviving children, females are more likely to be neglected in health and education related

[1] Their compensation choices have an interesting design in that they introduce externality effects of subject choices for other members in a four-person group. Hence subject choices do not capture competitiveness in isolation, as in Niederle and Vesterlund (2007) where the decision-maker's choices do not have payoff implications for other members in the session.

[2] Bartling, Fehr, Marechal and Schunk (2009) find a negative relationship between preferences for egalitarianism and competitiveness. Moreover, subjects that are averse to advantageous inequality or being ahead are significantly less likely to select into competition. However, as their small sample consists of only women, they are unable to comment on gender differences.

investments (e.g., Jayachandran, 2015). Further, high levels of gender inequality may cause males and females to internalize societal norms and expectations differently. This may lead women to believe that competitiveness is an undesirable trait, or that their decision to compete will not be positively rewarded by society (Andersen, Ertac, Gneezy, List and Maximiano, 2013; Barry, 2016). In such a situation, failing to control for gender differences in characteristics makes it difficult to determine whether the coefficient estimate on the gender dummy captures intrinsic gender-driven gaps in competitiveness, or nurture-based differential investments that lead to male-female gaps in competitiveness. To account for the impact of the RHS characteristics to vary by gender, we interact the female dummy with distributional preferences and the full vector of controls that have been introduced in the previous literature to explain gender differences in competitive choices.

Third, we measure and explore the role of personality traits (Big Five and Locus of Control) as potential determinants of competitive choices. To the best of our knowledge, other studies have not explored the importance of locus of control as a determinant of competitive preferences.

Using a sample of approximately 2000 subjects at colleges in University of Delhi in India, we observe at first blush a significantly negative relationship between egalitarian distributional preferences and willingness to compete. Upon disentangling these egalitarian distributional choices into preference for favorable inequality and behindness aversion, we find that the choice to compete is negatively affected by behindness aversion and preference for favorable inequality positively determines the choice of the tournament wage scheme. We also find the impact of these distributional preferences to vary substantially by gender. Females who have preference for favorable inequality are almost 10 percentage points less likely to compete than males who have a preference for favorable inequality; behindness averse females are 13 percentage points more likely to compete than behindness averse males. Once we account for gender differences in a rich set of behavioral, family background, and personality characteristics, the gender dummy loses significance. We follow up with standardized regressions to assess the relative importance of various factors in explaining gender gaps in competitiveness, and find that gender differences in distributional preferences and Big Five measures of conscientiousness and emotional stability have the largest significant effects. Our results suggest that observed gender difference in competitiveness is not particularly about gender in itself, but is driven by behavior and personality traits that are developed through one's lifetime. This is an important result as these characteristics are argued to be malleable and hence amenable to policy interventions.

2. Experiment Design

Our study design consisted of two parts: in the first part, subjects participated in a series of incentivized tasks, and in the second part, they completed a survey.[3] Each subject participated in all tasks and no feedback was provided between tasks. The first task measured subjects' competitiveness, confidence, and ability. In this task, the subjects had to participate in a real effort task that involved adding up four two-digit numbers (adapted from Niederle and Vesterlund, 2007). After a 30-seconds practice round, participants were asked to predict their performance in the 90-seconds actual task in advance, and also choose between a piece-rate and tournament compensation scheme. Under the piece-rate scheme, Rs. 10 was paid for every correctly solved problem. Under the tournament scheme, Rs. 20 was paid for every correct answer if the subject out-performed a randomly selected student of the university who had solved the questions earlier.[4] Note that our competition task isolates subjects from strategic competition such that a subject's tournament entry decision does not depend on their expectations of entry choices of other members. Hence, the choice of tournament compensation can be interpreted as an absolute measure of competitiveness. We define *competitiveness* as a dummy that takes a value 1 if the subject chose the tournament compensation scheme and 0 if the subject chose the piece-rate compensation scheme. We define *confidence* as a dummy that takes a value 1 if the subject believes ex-ante that her performance in the actual task will exceed those of others in the university, 0 otherwise. We define task-related *ability* as the number of correct answers in the practice task.

In the second task, distributional preferences were measured using a framework adapted from Fehr, Bernhard and Rockenbach (2008) that asks subjects to state their preferences using a series of four binary distributional choices that would affect their and an anonymous participant's earnings. To rule out any order effects, we randomized the sequence in which these distributional choices were presented across sessions. As can be seen in Table 1, in all four choices, option A is an equal distribution, and option B is an unequal distribution. In row 1, a subject chooses between an allocation (200, 200) and (200, 120), and choosing the equal option is consistent with *prosocial* behavior since the subject can increase her partner's payoff in a costless manner. In row 2, choosing (200, 200) over (320, 80) indicates *costly prosocial* behavior on the part of the subject since she incurs a pecuniary cost on herself. In row 3, choosing (200, 200) over (200, 360) reflects *envious*

[3] Instructions are available from authors upon request.

[4] We implemented a pilot version of this game where forty students from the university had participated. We use the performance of these students for comparison in the tournament wage scheme.

behavior by the subject. Similar to Bartling et al. (2009) and Bauer, Chytilova and Pertola-Gebicka (2014), we supplement the framework by including row 4 where choosing (200, 200) over (220, 360) indicates the subject's willingness to incur pecuniary costs to ensure that her outcome is not relatively unfavorable, reflecting *costly envy*. We define *egalitarian* as a dummy that takes a value 1 if the subject chooses the equal division (option A) in each row, 0 otherwise. Further, we evaluate whether preference for favorable inequality influences competitive choices differently than an aversion for unfavorable inequality and we hypothesize the following: a person with a preference for favorable inequality is always envious, and would never like to be prosocial as defined in our distribution game. So, we define subjects exhibiting a preference for *favorable inequality* if they choose the equal distribution in both the envy and costly envy rows and choose the unequal distribution in both the prosocial and costly prosocial rows. We also posit that a subject averse to disadvantageous inequality is always envious but there are no restrictions on their prosocial behavior. Consequently, we define a subject as *behindness averse* if she chooses the equal distribution in both the envy and costly envy games, and there are no restrictions on choices in prosocial and costly prosocial rows. Note that our characterization of the two sides of inequality aversion are slightly different than the way they have been characterized previously using this distribution game.[5]

[Table 1 here]

To measure risk preferences, we used the investment game of Gneezy and Potters (1997). Subjects allocated a portion of their endowment (Rs. 150) to a risky lottery and set aside the remainder. If they won the lottery based on a roll of a dice, the invested amount was tripled and they also got any amount they set aside. If they lost the lottery, they only received the amount that was set aside. We define *risk preference* as the proportion allocated to the risky lottery in the investment game where relatively higher invested amounts indicate relatively lower degrees of risk aversion.

In the second part of the study, we implemented a socioeconomic survey that collected details on family background characteristics and personality traits. To measure 'fluid intelligence', i.e., the ability to solve novel problems, we implemented a 10-item version of the Raven's progression matrices test, which is considered a good measure of nonverbal cognitive skill. To measure personality traits, we administered the Big Five inventory (Gosling et al., 2003). The traits

[5] Using the same distributional game, Bartling et al. (2009) disentangle egalitarian preferences into aversion to advantageous inequality (aheadness aversion) and aversion to disadvantageous inequality (behindness aversion).

in the Big Five are defined as follows: *Openness to experience* is the tendency to be open to new aesthetic, cultural or intellectual experiences. *Conscientiousness* refers to a tendency to be organized, responsible, and hard working. *Extraversion* relates to an outward orientation rather than being reserved. *Agreeableness* is related to the tendency to act in a cooperative and unselfish manner. *Emotional stability (opposite of Neuroticism*) is predictability and consistency in emotional reactions with absence of rapid mood changes. We also administered the Locus of Control questionnaire (Rotter, 1966) which ascertains the extent to which individuals believe they can control events affecting them. Those believing that life's outcomes are due to their own efforts have a higher score on the locus of control (i.e., an internal locus of control), while those believing that outcomes are due to external factors (such as luck) have a lower score on the locus of control measure (i.e., an external locus of control). We standardize all personality traits using the mean and the standard deviation of the respective trait variable in the sample.

We conducted our study among a large sample of undergraduate students enrolled across 15 colleges in University of Delhi, India. Each subject participated only once in the study. Overall, we conducted 60 sessions with approximately 2000 subjects, resulting in around 34 subjects per session. Each session lasted about 75 minutes. All subjects received a show-up fee of Rs. 150. The average additional payment was Rs. 230.

3. Results

3.1 Summary Statistics

Results from our incentivized games indicate that male subjects are 15 percentage points more likely to choose the tournament compensation compared to females (p-value = 0). In our distributional preference task, only 15 percent of the subjects always chose the equal outcome and there is no significant difference in the proportion of male and female subjects choosing the equal outcome (p-value = 0.67). A higher proportion of subjects appear to be behindness averse (62 percent), and a significantly higher proportion of females appear behindness averse compared to males (p-value=0). Figure 1 describes the results.

[Figure 1 here]

A significantly (p-value = 0) higher proportion of non-egalitarian subjects (33 percent) chose to compete compared to egalitarian subjects (20.9 percent). Further, 33 percent of subjects

preferring favorable inequality, and 28 percent of behindness averse subjects chose the tournament compensation. Subjects classified as behindness averse are significantly less likely to choose the competitive wage scheme (p-value=0). There is no significant difference in the choice of the tournament wage scheme between those who prefer favorable inequality and those who do not (p-value = 0.34). See Figure 2 below.

[Figure 2 here]

In Figure 2 we also present disaggregated results by gender. We find that there is no statistically significant difference between egalitarian males and females' choices of the tournament wage scheme (p-value = 0.34). Further, males exhibiting a preference for favorable inequality as well as behindness aversion choose the tournament wage scheme more often than females characterized by the same distributional preferences. This difference is statistically significant at the 1 percent level.

We report summary statistics in Table 2. Our sample has almost equal representation of males and females. Fifty-eight percent of subjects belong to families with a high income (defined as those with monthly income of at least Rs. 50,000) and 53 percent of our subjects have highly educated parents where both the mother and father have completed at least a college degree. Female subjects are significantly more likely to have well educated parents as well as belong to families with more income (p-value = 0).

[Table 2 here]

The average score on the Raven's test is 6.50, and females have a significantly higher score than males (p-value = 0). Using our measures of confidence, we find 33 percent of students appear confident. Males appear significantly more confident than females (p-value = 0). Females in our sample are significantly (p-value = 0) more risk-averse than males as typically exhibited in the investment task (Charness and Gneezy, 2012). The summary statistics on personality traits indicate females score significantly higher on traits of extraversion, agreeableness, and conscientiousness and significantly lower on emotional stability and locus of control (all p-values < 0.05). This is in line with the literature (Feingold, 1994; Costa, Terracciano and McCrae, 2001).

3.2. Regression Analysis

To be consistent with the previous literature, we first estimate the following linear probability model:

$$\text{Compete}_i = \beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Favorable inequality}_i + \beta_3 \text{Behindness aversion}_i + \sum_{j=4}^{N} \beta_j X_{ij} + \varepsilon_i \qquad (1)$$

where, compete takes a value 1 if the individual chooses the tournament wage scheme, 0 if piece rate. Female takes a value 1 if subject is female, 0 if male. Favorable inequality is a dummy that takes a value 1 if the subject choose the equal distribution in both the envy and costly envy rows and choose the unequal distribution in both the prosocial and costly prosocial rows, 0 otherwise. Behindness aversion is a dummy that takes a value 1 if the subject chooses the equal distribution in both the envy and costly envy games, 0 otherwise. Vector X includes the full set of socioeconomic characteristics, behavioral, and personality traits that influence entry into competition and have been summarized in Table 2. Note that the above specification can only control for variation in the X's to obtain estimates on the female dummy which indicates the conditional gender gap in competitiveness. However, as mentioned previously, in this paper we are interested in determining whether gender differences in distributional preferences, namely egalitarian choices, preference for favorable inequality, and dispreference for unfavorable inequality/behindness aversion can explain gender gaps in entry into tournament compensation scheme, ceteris paribus. Consequently, we estimate the following modified regression model where we control for both variations in X as well as gender differences in the variation of X's to identify the sources of gender differences in competitiveness:

$$\text{Compete}_i = \beta_0 + \beta_1 \text{Female}_i + \beta_2 \text{Favorable inequality}_i + \beta_3 \text{Behindness aversion}_i + \sum_{j=4}^{N} \beta_j X_{ij} + \delta_1 (\text{Female} * \text{Favorable inequality})_i + \delta_2 (\text{Female} * \text{Behindness aversion})_i + \sum_{j=3}^{N} \delta_j (\text{Female} * X)_{ij} + \varepsilon_i \qquad (2)$$

We use the linear probability model instead of the probit fixed effect estimators since the latter suffers from the incidental parameter problem (Greene, 2004).[6] We also control for

[6] However, our results are also robust to estimations using probit models.

session and gender-session fixed effects which allow us to: (a) account for all session and gender-session level unobservables and (b) address cluster related unobservables in standard errors since common session-level unobservables are also cluster effects (Wooldridge, 2003). Note that the gender-session level dummies also control for differences in gender composition across sessions.

[Table 3 here]

Regression results are reported in Table 3. In the first specification, we estimate equation (1), where we control for female dummy, confidence, risk preferences, task-related ability, general cognitive ability (Raven's test score), standardized measures of Big Five and Locus of Control personality traits, family income, and parental education. We find that females are less likely to choose the tournament wage scheme, and that being egalitarian is negatively associated with competitiveness. In Column 2, we disaggregate distributional preferences as preferences over favorable and unfavorable inequalities instead of distributional preferences for egalitarianism. As hypothesized, our results indicate an asymmetric effect in that the subjects who prefer favorable inequality are 5 percentage points more likely to choose the tournament wage scheme, whereas subjects with behindness aversion are 6 percentage points less likely to select into the tournament wage scheme. The difference in the magnitude of these effects is statistically significant (p-value = 0.00). We find that subjects' confidence positively influences selection into tournaments and risk attitudes also influence entry in the expected direction, i.e., subjects with lower risk aversion enter tournaments more often. This is an intuitively obvious result since opting into the tournament scheme exposes the decision-maker to the possibility of zero payoffs. Measures of task-related or general ability and socioeconomic characteristics seem to have negligible and insignificant effects on entry into competitive situations in our context.

Our results on the personality traits indicate that subjects scoring higher on the Big Five trait of openness to experience, and those with a greater or more internalized locus of control are more likely to enter into the tournament wage scheme. This suggests that subjects who believe that they are in charge of their own actions and fate, rather than those who believe that some outside force mediates their life, are more willing to compete. In a related context, Mueller and Thomas (2000) discuss previous research on the importance of an internal locus of control as an important factor for entrepreneurship, over and above other factors such as innovativeness and risk-taking propensity. To the best of our knowledge, we are not aware of any other studies that have explored the

importance of locus of control as a determinant of competitive preferences. In Columns 1 - 2 of Table 3, we find personality traits to be jointly significant.[7]

From the results in Columns 1 and 2 in Table 3, we observe that even with the inclusion of a large set of covariates over and above those identified in the previous literature, the coefficient on the female dummy remains highly significant: we find females to be 13.5 percentage points less likely to compete than males.[8] Consequently, our results based on the predominantly used empirical specification in the literature suggest that the lower willingness to compete among our female subjects is likely intrinsic or innate. However, as explained earlier, these specifications do not allow for the impact of our right hand side (RHS) characteristics to vary by gender that could also explain differences in willingness to compete between males and females. Such heterogeneous impacts assume considerable importance in the context of a developing country where differential investments in females begin early on and returns to same level of endowments typically vary between genders.

We estimate equation (2) in Columns 3 and 4 where we control for the gender differential effects by interacting the female dummy with all the RHS characteristics. The first point to note here is that the female dummy no longer remains a significant predictor of selection into the tournament wage scheme. In fact, our results suggest that once we account for the impact of our RHS characteristics to vary by gender there is no intrinsic significant difference between males and females. In Column 3, we find that females with a preference for being egalitarian are 11 percentage points more likely to compete than egalitarian males. In Column 4, when we categorize distributional choices into preference for favorable inequality and behindness aversion, we find that females who prefer favorable inequality are 9 percentage points less likely to choose the tournament wage scheme compared to males who prefer favorable inequality. In contrast, behindness averse females are 13 percentage points more likely to choose the tournament wage scheme compared to males with behindness averse preferences.

Our specifications in Columns 3 and 4 allow for the effects of all right-hand side characteristics on competitiveness to vary by gender. We also find the effects of Big Five traits of

[7] We also examine raw correlation coefficients between the different socioeconomic characteristics, behavioral characteristics, and personality traits included in the regression analysis. The highest correlation between any pair of right hand side variables is 0.41 ruling out concerns related to multicollinearity.

[8] The results remain mixed on this issue. While Datta Gupta, Poulsen and Villeval (2013) and Niederle and Vesterlund (2007) find gender gaps in competitiveness to persist even upon inclusion of a host of controls, Balafoutas et al. (2012) and Kamas and Preston (2015) find the gender gap to disappear. It is important to point out here that these papers do not use the same set of right hand side characteristics.

conscientiousness and emotional stability on competition to vary by gender. In Column 4, in comparison to males, conscientious females are 5 percentage points more likely to enter the tournament wage scheme. However, in comparison to males, emotionally stable females are 4 percentage points less likely to select the tournament wage scheme. In contrast, the other interaction terms are not statistically significant.

[Table 4 here]

Our results above leads us to comment on and understand further the relative contributions of the different interaction terms in explaining gender gaps in competitiveness as we control for an exhaustive set of controls in comparison to previous literature. To do so, we standardize the full vector of right hand side characteristics with respect to sample means and standard deviations. In Table 4, we estimate regressions like those in Columns 3 and 4 in Table 3. The coefficients now correspond to standardized effect sizes and can be interpreted as relative importance of one factor vis-à-vis others. In Columns 1 and 2 of Table 4, assessing the coefficients on the gender-interacted variables, we see that the most economically and statistically significant effects explaining gender gaps in entry into competitive situations are gender differences in distributional preferences (egalitarian preferences, preference for favorable inequality, and behindness aversion), conscientiousness, and emotional stability. Gender gaps in other family background and other behavioral and personality factors are not statistically significant and have smaller magnitudes. This indicates that observed gender difference in competitiveness is not about something intrinsic to gender in itself but instead driven primarily by male-female differences in behavior and personality that are potentially malleable, and developed through one's life.

4. Conclusion

We ran an experiment to analyze the relationship between distributional preferences and competitiveness in India with over 2000 college students. Our objective was twofold: the first was to examine if a preference for favorable inequality and behindness aversion affects selection into competitive environment; second was to test whether gender differences in such distributional preferences explain gender gaps in competitiveness, after allowing for the effects of all traditional controls to also vary by gender. The latter point is of particular interest in a developing country setting where in the presence of differential treatment of girls compared to boys, one may expect the numerous characteristics that affect willingness to compete to also vary by gender.

Overall, we find that upon estimating a standard specification as in the existing literature, albeit with a rich set of controls, females are less likely to enter competitive situations than males. We find that selection into competitive environments is negatively related to egalitarian preferences, with smaller negative impacts of being egalitarian on females' choice of the tournament wage scheme. However, once we control for the gender differential impacts, the female dummy does not remain significant anymore. Once we classify subjects according to preference for favorable inequality and behindness aversion we find that females with a preference for favorable inequality are 9 percentage points less likely to select into competitive environment compared to males with the same distributional attitudes. In contrast, compared to behindness averse males, behindness averse females are 13 percentage points more likely to enter the tournament wage scheme. Upon examining relative contributions of the various gender-interacted terms that explain gender gaps in competitive behavior, we find the gender differences in distributional preferences and personality traits relating to conscientiousness and emotional stability to be the most economically relevant predictors.

Growing evidence suggests that preferences and personality traits are malleable through life's course, especially in one's early years (Borghans, Duckworth, Heckman and ter Weel, 2008; Almlund, Duckworth, Heckman and Kautz, 2011). Our results indicate that distributional preferences and personality are key factors that account for the gender gaps in competitiveness. This is an important result as these characterestics are suggested to be malleable and consequently, are amenable to policy interventions.

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Figures and Tables

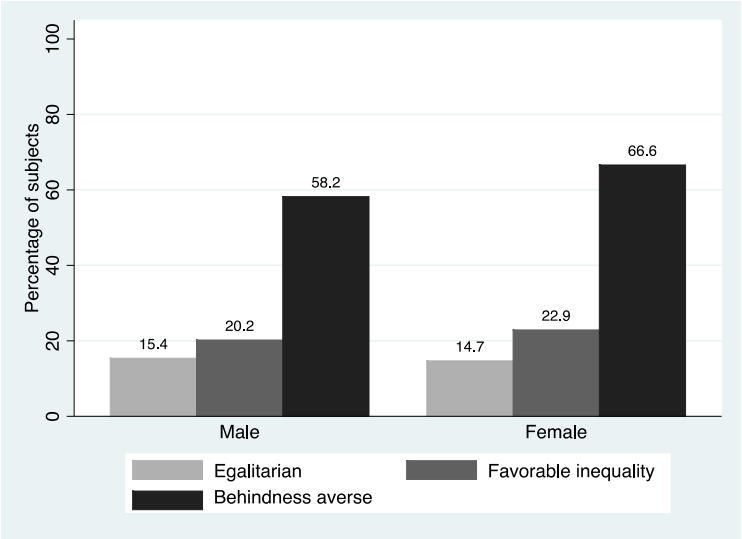

Figure 1: Distributional Preferences, by Gender

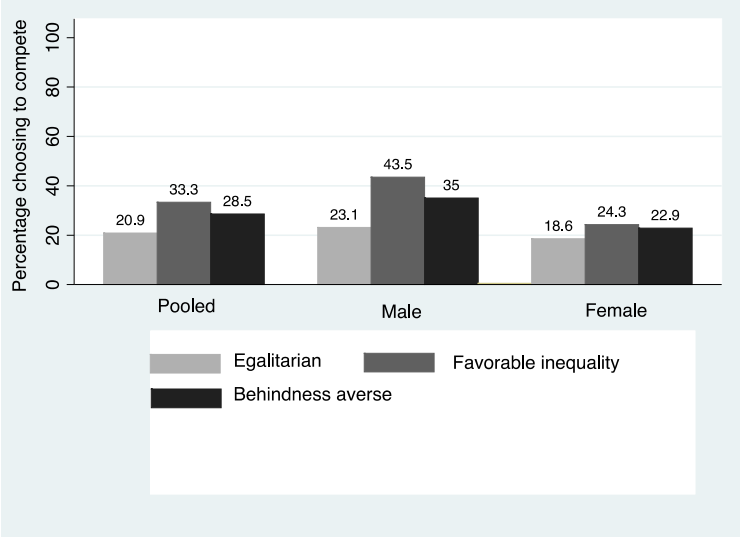

Figure 2: Willingness to Compete based on Distributional Preferences

Table 1: Distribution game

	Option A		Option B
Row 1	You get Rs. 200; and Other person gets Rs. 200.	OR	You get Rs. 200; and Other person gets Rs. 120.
Row 2	You get Rs. 200; and Other person gets Rs. 200.	OR	You get Rs. 320; and Other person gets Rs. 80.
Row 3	You get Rs. 200; Other person gets Rs. 200.	OR	You get Rs. 200; and Other person gets Rs. 360.
Row 4	You get Rs. 200; Other person gets Rs. 200.	OR	You get Rs. 220; and Other person gets Rs. 380.

Table 2: Summary statistics

Variable	(1) Pooled	(2) Male	(3) Female	(4)=(2)-(3) Difference p-values
Female	0.498			
	(0.50)			
Competitiveness	0.31	0.39	0.24	0.00
	(0.46)	(0.48)	(0.42)	
Egalitarian	0.15	0.154	0.147	0.67
	(0.36)	(0.36)	(0.35)	
Favorable Inequality	0.21	0.20	0.23	0.15
	(0.41)	(0.40)	(0.42)	
Behindness averse	0.62	0.58	0.66	0.00
	(0.48)	(0.49)	(0.47)	
Risk preference (% invested)	46.70	49.66	43.76	0.00
	(18.81)	(21.17)	(15.56)	
Ability	2.33	2.31	2.36	0.23
	(0.88)	(0.89)	(0.88)	
Confidence	0.31	0.36	0.27	0.00
	(0.46)	(0.48)	(0.44)	
Raven's test score	6.50	6.37	6.63	0.01
	(2.26)	(2.36)	(2.15)	
Parents' education	0.53	0.43	0.63	0.00
	(0.50)	(0.49)	(0.48)	
Family income	0.58	0.54	0.63	0.00
	(0.49)	(0.50)	(0.48)	
Openness to experience	5.34	5.32	5.37	0.33
	(1.13)	(1.14)	(1.12)	
Conscientiousness	5.28	5.21	5.35	0.01
	(1.26)	(1.26)	(1.24)	
Emotional stability	4.55	4.69	4.41	0.00
	(1.33)	(1.29)	(1.35)	
Agreeableness	5.11	4.92	5.30	0.00
	(1.15)	(1.17)	(1.11)	
Extraversion	4.61	4.49	4.73	0.00
	(1.38)	(1.33)	(1.41)	
Locus of control	7.28	7.37	7.18	0.04
	(1.96)	(1.95)	(1.97)	
Sample size	1907	955	952	

Notes: This table reports means with standard deviations in parentheses. p-values based on a two-sided t-test reported in Column 4. For openness to experience, conscientiousness, emotional stability, agreeableness and extraversion, the maximum score is 7. For locus of control, the maximum score is 13. For Raven's test, the maximum score is 10. 'Family income' takes a value 1 if monthly income is at least Rs. 50,000. 'Parents' education' takes a value 1 where both the mother and father have completed at least a college degree.

Table 3: Gender differences in the determinants of willingness to compete

	(1) Compete	(2) Compete	(3) Compete	(4) Compete
Female	-0.140***	-0.135***	-0.093	-0.117
	(0.022)	(0.022)	(0.109)	(0.111)
Egalitarian	-0.099***		-0.167***	
	(0.027)		(0.043)	
Female*Egalitarian			0.116**	
			(0.056)	
Favorable inequality		0.055**		0.109**
		(0.028)		(0.044)
Behindness averse		-0.062***		-0.130***
		(0.024)		(0.035)
Female*favorable inequality				-0.095*
				(0.057)
Female*behindness averse				0.130***
				(0.048)
Risk preference	0.001**	0.001**	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Confidence	0.087***	0.086***	0.071**	0.076**
	(0.024)	(0.024)	(0.034)	(0.034)
Ability	0.017	0.017	0.026	0.026
	(0.012)	(0.012)	(0.019)	(0.019)
Raven's test score	0.005	0.004	0.018	0.016
	(0.011)	(0.011)	(0.016)	(0.016)
Extraversion	0.011	0.010	0.012	0.012
	(0.011)	(0.011)	(0.017)	(0.016)
Agreeableness	-0.006	-0.006	-0.016	-0.014
	(0.011)	(0.011)	(0.016)	(0.016)
Conscientiousness	-0.005	-0.005	-0.024	-0.027
	(0.011)	(0.011)	(0.017)	(0.017)
Emotional stability	0.009	0.010	0.033**	0.032*
	(0.011)	(0.011)	(0.017)	(0.017)
Openness to experience	0.022**	0.022**	0.026	0.024
	(0.011)	(0.011)	(0.016)	(0.016)
Locus of control	0.020**	0.020*	0.025	0.025
	(0.010)	(0.010)	(0.016)	(0.016)
Family income	0.028	0.029	0.006	0.005
	(0.023)	(0.023)	(0.035)	(0.035)
Parents' education	0.021	0.021	0.008	0.007
	(0.024)	(0.024)	(0.037)	(0.037)
Female*risk preference			0.001	0.001
			(0.001)	(0.001)
Female*confidence			0.024	0.018
			(0.048)	(0.048)
Female*ability			-0.017	-0.017
			(0.024)	(0.024)
Female*raven's test score			-0.029	-0.027
			(0.023)	(0.023)
Female*extraversion			0.006	0.007
			(0.022)	(0.022)
Female*agreeableness to experience			0.025	0.023
			(0.022)	(0.022)
Female*conscientiousness			0.045**	0.047**
			(0.022)	(0.022)
Female*emotional stability			-0.045**	-0.044**
			(0.022)	(0.022)

Female*openness to experience			-0.012 (0.022)	-0.009 (0.022)
Female*locus of control			-0.012 (0.021)	-0.012 (0.021)
Female*family income			0.026 (0.047)	0.027 (0.047)
Female*parents' education			0.021 (0.048)	0.022 (0.049)
Constant	-0.051 (0.055)	-0.053 (0.056)	-0.071 (0.088)	-0.064 (0.088)
Egalitarian + female*egalitarian			-0.05 (0.04)	
Favorable inequality + female*favorable inequality				0.013 (0.035)
Behindness aversion + female*behindness aversion				0.0002 (0.031)
Session fixed-effects	Yes	Yes	Yes	Yes
Session-gender fixed-effects	NA	NA	Yes	Yes
Joint F test on the personality traits	2.07 (0.05)	2.06 (0.05)	1.61 (0.08)	1.61 (0.08)
Observations	1,907	1,907	1,907	1,907
R-squared	0.128	0.126	0.178	0.178

Notes: *** p<0.01, ** p<0.05 and * p<0.10. Robust standard errors in parentheses. See notes section of Table 2 for variable definitions.

Table 4: Gender differences in willingness to compete: Results from standardized regressions

	(1) Compete	(2) Compete
Female	-0.046	-0.059
	(0.054)	(0.055)
Egalitarian	-0.060***	
	(0.015)	
Female*egalitarian	0.030**	
	(0.015)	
Favorable inequality		0.045**
		(0.018)
Behindness aversion		-0.063***
		(0.017)
Female*favorable inequality		-0.030*
		(0.018)
Female*behindess aversion		0.061***
		(0.022)
Risk preference	0.018	0.018
	(0.014)	(0.014)
Confidence	0.033**	0.036**
	(0.016)	(0.016)
Ability	0.024	0.023
	(0.017)	(0.017)
Raven's test score	0.018	0.016
	(0.016)	(0.016)
Extraversion	0.012	0.012
	(0.017)	(0.016)
Agreeableness	-0.016	-0.014
	(0.016)	(0.016)
Conscientiousness	-0.024	-0.027
	(0.017)	(0.017)
Emotional stability	0.033**	0.032*
	(0.017)	(0.017)
Openness to experience	0.026	0.024
	(0.016)	(0.016)
Locus of control	0.025	0.025
	(0.016)	(0.016)
Family income	0.003	0.002
	(0.017)	(0.017)
Parents' education	0.004	0.003
	(0.019)	(0.019)
Female*risk preference	0.028	0.028
	(0.030)	(0.030)
Female*confidence	0.008	0.006
	(0.016)	(0.016)
Female*ability	-0.022	-0.022
	(0.032)	(0.032)
Female*raven's test score	-0.019	-0.018
	(0.015)	(0.015)
Female*extraversion	0.005	0.005
	(0.016)	(0.016)
Female*agreeableness	0.017	0.016
	(0.015)	(0.015)
Female*conscientiousness	0.031**	0.032**
	(0.015)	(0.015)
Female*emotional stability	-0.032**	-0.031**
	(0.015)	(0.015)
Female*openness to experience	-0.008	-0.006

	(0.015)	(0.015)
Female*locus of control	-0.008	-0.008
	(0.015)	(0.015)
Female*family income	0.012	0.013
	(0.022)	(0.022)
Female*parents' education	0.010	0.010
	(0.022)	(0.022)
Constant	0.314***	0.314***
	(0.010)	(0.010)
Egalitarian + female*egalitarian	-0.03**	
	(0.01)	
Favorable inequality + female*favorable inequality		0.014
		(0.011)
Behindness aversion + female*behindness aversion		-0.0018
		(0.015)
Session fixed-effects	Yes	Yes
Session-gender fixed-effects	Yes	Yes
Joint F test on the personality traits	1.61	1.61
	(0.08)	(0.08)
Observations	1,907	1,907
R-squared	0.178	0.178

Notes: *** p<0.01, ** p<0.05 and * p<0.10. Robust standard errors in parentheses. See notes section of Table 2 for variable definitions.