Is Female Competitiveness in the Labor and Marriage Markets Influenced by Gender Identity?

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Women have been robustly found to be less competitive than men in the West. This lower competitiveness has been used as a potential explanation for the gender gap in salaries. However, women's competitiveness may not be expressed only in their own labor market performance. Rather, it could also be expressed in the labor market performance of their spouse. We surveyed top graduate business students in China for their gender identity (GI) and subjective expectations about their own and future spouse's salary, work hours, and fertility. We use an all-pay auction experiment to derive a measure of competitiveness from the revealed psychological value of winning. Whereas men's expectation of their own salary, but not their expected spouse's increases on their own competitiveness, women's expectation of their spouse's salary, but not their own, increases on their own competitiveness. Women's GI interacts with their competitiveness; competitive women with stronger GI have even higher spousal salary expectations. Women's own work hours decrease on expected fertility only when they have strong GI. Our results suggest women's labor and marriage market competitiveness may be influenced by their GI.

Keywords: gender differences, social norms, gender identity, competitiveness, earnings, subjective expectations

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1 Introduction

There is accumulating evidence that marriage and childbirth are contributing factors to the persistent gender gap in labor market outcomes. Women tend to decrease their labor supply after childbirth, especially when they have a high-earning spouse (Bertrand, Goldin, & Katz, 2010). There is theoretical and empirical basis for the finding that women's labor market participation decreases on their spouse's salary. The decrease in participation can be due to women's tendency to specialize in household production. By contrast and due to specialization in the labor market, men's labor supply reacts little to their partner's earnings (Blau & Kahn, 2007). Prior literature suggest childbirth, which may increase specialization of women in household production, as the main factor in the gender gap in wages (Kleven, Landais, & Søgaard, 2019).

A growing literature points to gender identity (GI) and social norms as important factors explaining this gender gap. Couples avoid the situation where the wife earns more than the husband (Bertrand, Kamenica, & Pan, 2015), and couples forgo tax incentives to preserve traditional allocation of household production (Ichino, Olsson, Petrongolo, & Thoursie, 2019). Mothers from a relatively traditional family background incur greater child penalties (Kleven et al., 2019). Single women "act wife", suppress their labor market competitiveness, and conform to female gender norms to be more attractive to high-potential income men (Bursztyn, Fujiwara, & Pallais, 2017). Women's promotion to top job causes an increase in divorce, particularly among traditional gender norm couples (Folke & Rickne, 2020).

A further contributing factor to the gender wage gap is women's apparent aversion to competition (Niederle & Vesterlund, 2007). Moreover, a number of studies suggest that female GI may influence their competitiveness. Women tend to be more competitive in female oriented tasks (Dreber, von Essen, & Ranehill, 2014), against each other than with men (Booth & Nolen, 2012), when competing for their children (Cassar, Wordofa, & Zhang, 2016), and when primed with professional identity rather than with family and gender identity (Cadsby, Servátka, & Song, 2013). There is also evidence that inhouse female HR managers tend to discriminate against attractive female job seekers in Israel (Ruffle & Shtudiner, 2015). Women search competitively for high-income men in China (Ong, Yang, & Zhang, 2020).

In this paper, we interpret GI as a "preference" to specialize along with the traditional gender roles in marriage, as in "GI norms have been fully internalized and are part of one's self-conception, and hence directly shape one's preferences" (Bertrand, 2020). We consider the possibility that

female competitiveness may be influenced by GI. In particular, women's competitiveness may manifest in the marriage market in terms of matching with a spouse whose shared income may be sufficient compensation for the women's expected loss from the specialization in household production after marriage and childbirth, rather than solely directed towards the labor market. We measure expectations about own and spouse's salary, labor market participation, and fertility intent (Wiswall & Zafar, 2020), as well as competitiveness (Chen, Ong, & Sheremeta, 2015), risk preferences (Eckel & Grossman, 2008), and GI of students at a top Chinese graduate business school prior to marriage and entry into the labor market. These data allow us to analyze the expected tradeoffs young professionals anticipate making between career and family and relate these tradeoffs to competitiveness and GI. Our results can provide a potential mechanism for prior findings of gender differences in these tradeoffs.

We confirm Wiswall & Zafar's (2020) finding that women anticipate a higher-earning spouse and men anticipate a lower-earning spouse. However, we uniquely find the spousal income and hours gap increases on both the men's and women's competitiveness and GI. Men's expectations of their own salary, but not their expected spouse's salary increase on their own competitiveness. Women's expectation of their spouse's salary, but not their own salary increases on their own competitiveness. Women's GI interacts with their competitiveness; competitive women with high GI have even higher spousal salary expectations. Furthermore, competitiveness decreases own working hours for high GI women, but increases hours for low GI women. Consistent with Kleven et al. (2019), women's expected fertility decreases own working hours, particularly for high GI women. Consistent with Bertrand et al. (2010), we show that women decrease their own hours with spousal salary when they have high fertility expectations, but increase their own hours when they do not expect to have children. Furthermore, we show that GI has a similar moderating effect where higher spousal salary decreases own hours for high GI women but increases own hours low GI women. The interactions of children and GI with spousal salary independently affect women's own work hours. Our results suggest that GI is an important determinant of the cross elasticity of female labor supply with respect to husband's salary even after accounting for the effects of children.

Our results offer support for an alternative explanation of women's apparent lack of competitiveness in labor market experiments. Men's competitiveness is directed towards own labor market success, regardless of their GI. High GI women's competitiveness is directed towards

their spouse's labor market success, which is a substitute for their own. Our results offer an expectations/preference basis for finding that women search competitively for high-income men who can compensate them for their lost income from specialization in household production. Hence, "acting wife" (Bursztyn et al., 2017) may be equilibrium and not merely "acting" for all women. Rather, high GI women may plan to decrease labor market participation conditional on a spouse who can compensate for the opportunity cost of marriage.

2 Experimental design

The experiment was conducted at Peking University HSBC Business School (PHBS), a top graduate university in China. The experiment was separated into a competitiveness and a subjective expectations survey part. The competitiveness experiment was conducted in three waves, in the summer and fall of 2017 and the summer of 2018, and a total of 262 subjects (116 male and 146 female) participated. The subjective expectations survey was conducted in the summer of 2018, and a total of 92 subjects (38 male and 54 female) participated in the survey.

Both the competitiveness experiment and the subjective expectations survey were run online using oTree (Daniel L. Chen, Schonger, & Wickens, 2016). Before sending out email invitations, students were block-randomized by gender, major, and grad-year into different treatments. The email invitations included only the links to their respective treatments, which expired in five days in the first batch, and then, in three days for the subsequent batches because we found no response after three days. At the end of the experiment, subjects were asked to submit their WeChat (a widely used payment peer-to-peer system) account information to receive their earnings. The instructions were in Chinese (the English version of the text is available in Appendix C: Instructions).

2.1. Competitiveness experiment

The competitiveness experiment follows Chen et al. (2015) which measures the psychological value of winning (i.e., willingness to pay to win) using a one-shot pairwise all-pay auction. They use a closed-form solution to show that the value of winning increases on bids and that risk aversion is controlled for a priori when the opponent's gender is fixed. Hence, a measure of the value of winning using pairwise all-pay auction is not subject to measurement error issues raised in Gillen et al. (2019) about Niederle & Vesterlund (2007) design's identification of gender

differences in competitiveness. This paper extends Chen et al. (2015) by adding a measure of risk aversion to empirically control for the effects of risk aversion on bids and by removing the bidding cap that was placed at the value of the prize.

The experiment proceeded in three parts: one-shot two-player common known value all-pay auction following Chen et al. (2015), risk elicitation following Eckel and Grossman (2008), and a survey of demographic variables. At the beginning of each part, subjects were given the instructions for that part. The payment process was explained on the first page of the experiment. Subjects were informed that there will be three parts and that they would be paid only for one of Part 1 and Part 2, determined based on a dice roll, in addition to the Part 3 payment, fixed at 3 CNY (See Appendix C: Instructions). The total average earning was 22.87 CNY[1].

Subjects were first put into a pairwise common value all-pay auction. The endowment was 15 CNY, and the prize was 10 CNY. In this auction, only the highest bidder wins the prize but both bidders must pay their bids regardless of the outcome. Subjects could bid from zero up to the endowment of 15 CNY in increments of 0.5 CNY. The payoffs were hence $(15 - bid + 10)$ if the subject wins and $(15 - bid)$ if the subject loses. In the case of a tie, a winner was chosen at random. Bidding zero ensured a payoff of 15. The gender of the opponent was revealed as a treatment, and depending on the treatment, at the top of the instructions, it stated: "Your opponent is a Male (Female) student". Subjects could submit their bids by choosing a bid from a drop-down menu. Subjects bid only once and did not receive any information about their bidding results.

In Part 2 of the experiment, we elicited subjects' risk preferences and their beliefs about the opponent's risk preferences following Eckel and Grossman (2008). Subjects were presented with five different gambles and were asked to choose which gamble they wish to play. All of the five gambles had a 50 percent chance of two possible outcomes. The gamble choice increased in its degree of risk tolerance as measured by the standard deviation in expected payoffs. The expected payoff for the whole game was 20 CNY. Subjects were told that their lottery will be determined by a software dice throw at the end of the experiment (See Appendix C: Instructions). After having chosen their own gamble, subjects were directed to the belief elicitation page where they were asked to guess the gamble that would have been chosen by the opponent whom they bid against in the auction part. The gender of the opponent was restated in the same way as the bidding page.

[1] The average hourly wage for a teaching assistantship at PHBS is 15 CNY.

Subjects were told that they would receive 1 CNY for correctly guessing the opponent's gamble choice.

Lastly, in Part 3, we surveyed demographic variables such as gender, major, and Big Five personality traits. We used a 44-item Big Five Inventory (John, Donahue, & Kentle, 1991; John, Naumann, & Soto, 2008). Subjects received 3 CNY for completing the survey.

Once the experiment server closed, subjects were contacted by the experimenter privately through WeChat. Subject payoffs were determined by rolling a dice twice using WeChat's dice function. The first dice roll determined their lottery outcomes for the risk elicitation stage. The second dice roll determined whether they would be paid for Part 1 or Part 2. Total earnings were then calculated by adding the Part 3 payoff to the chosen part. The Part 1 (Part 2) payoff was chosen for 42% (58%) of the subjects. The total average earning was 22.87 CNY, where 1 USD~7CNY.

2.2. Subjective expectations survey

Our subjective expectations survey follows Wiswall and Zafar (2020). We first collected basic demographic information about the subjects including gender, major, home provinces, and relationship status. Then, we asked questions about future labor market outcomes conditioned on three particular future points in time: at age 25 (likely to be immediately after graduation for our sample), 30, and 35. For each age reference, we asked their probability of marriage, expected earnings, expected working hours, and their potential spouse's expected earnings and working hours.

Then, following Wiswall and Zafar (2020), we elicited beliefs about future fertility using the following question: "What do you believe is the percent chance of the following: a) You having no children; b) You having one child; c) You having two or more children by the time you are X years old?" This question was asked for all three ages: age 25, 30, and 35. Subjects were told that the probabilities must add up to 100.

Next, we introduced hypothetical treatments with an exogenous increase in salaries. Based on subjects' initial responses from the previous section, we increase their own and spousal salary expectations by 15% at age 30 for females and 35 for males and ask again what their expected own

and spousal working hours would be at those ages[2]. The order of the hypothetical treatments, whether the increase in own salary or spousal salary appeared first, was randomized across the subjects.

Lastly, we elicited subjects' gender identity (GI) by adopting a question from CGSS (Chinese General Social Survey) and measured their attitude towards the traditional gender norm. We asked, "Do you agree that a man should put career first and a woman should put family first?". Subjects answered using a five-point Likert-scale ranging from "Strongly disagree" to "Strongly agree". A score of 1 was assigned to the strongest disagreement and 5 was assigned to the strongest agreement; hence, a high GI score reflects more traditional beliefs. Subjects received 5 CNY for completing the survey, privately through WeChat.

2.3. Sample selection

A total of 92 subjects (38 male and 54 female) participated in the subjective expectations survey. Of these, we drop 4 (2 male and 2 female) respondents for the following reasons: a male subject submitted a non-existent student ID, a male subject submitted 1 million for spousal salaries and zero for own salaries, a female subject submitted one number for all questions, and a female subject participated in the survey twice but submitted the same responses to all questions, so we drop one set of her responses.

Next, we flag respondents that did not pass our consistency check. In the fertility expectations elicitation, we instructed subjects that the probabilities must add up to 100 for each of the three age points. Nonetheless, we did not impose a programmed restriction on the online survey and subjects could still proceed to the next part even if the probabilities did not add up to 100. We implemented this design to identify subjects who may be inattentive or submitting random numbers. We flag 9 respondents (7 male and 2 female) that report expectations that do not add up to 100. We further flag 9 respondents (4 male and 5 female) that do not report a monotonically increasing expected number of children in the three age points.

Excluding the 18 (11 male and 7 female) flagged respondents, our preferred sample for the subjective expectation survey consists of 70 subjects (25 male and 45 female). We proceed with this sample for our main results, but report the analyses using the whole sample in Appendix D

[2] We varied treatments in this part where the hypothetical treatment was based on age 33 for half of our female and male subjects. We interpolate their expected earnings for age 33 using responses from ages 30 and 35.

and point to the differences in regression results in the paper where applicable. To minimize the likelihood of outliers driving our results, we winsorize own and spousal salary expectations and own and spousal work hour expectations at the 5th and 95th percentile by gender and by the three age points of 25, 30, and 35.

Of our preferred sample, we are able to link the subjective expectations survey data to the competitiveness experimental data for 62 subjects (22 male and 40 female). The mean age of these subjects is 24 for males and females. None of our subjects are married. Using expectations at the three different age points of 25, 30, and 35, we construct a balanced longitudinal panel with a total of 186 (66 male and 120 female) observations. In the following sections, using this sample, we first report the descriptive statistics and the analysis of the means. In Section 4, we report regression results that test whether student expectations systematically vary with our measures of competitiveness and risk preferences. Due to our limited sample size for men, our paper mainly focuses on women's behaviors. Though of limited power, we report the corresponding analyses for men in Appendix B, which we plan to extend in a companion paper.

2.4. Alumni survey

To understand the actual labor market and marriage market outcomes of our students, prior to conducting the subjective expectations survey, we conducted an alumni survey in the spring of 2018. The alumni survey were sent out by the alumni relations office via WeChat, and was run online using oTree (Daniel L. Chen et al., 2016). The survey collected demographic information of the former PHBS students including their gender, grad-year, majors, ages, home provinces, and marital status. We also asked their own and spousal (if applicable) labor market information including current salary and work hours, as well as fertility information. The alumni subjects were paid 12 CNY for completing the survey, privately through WeChat.

A total of 89 subjects (27 male 62 female) participated. Subjects were on average 3.66 years out of PHBS, and were on average 29 years old. In the following sections, along with the expectations data of our current students, we also report the actual outcomes of our alumni students as a benchmark. The complete descriptive statistics of the alumni survey is reported in Table C1 of Appendix C.

3 Descriptive statistics

The descriptive statistics of key variables by gender are shown in Table 1. The last column reports the significance level of the MWW test for differences in responses by gender. The survey was conducted in Chinese and earnings were elicited in CNY, but we report the US dollar conversion for ease of interpretation and use those values for analysis. We describe the data starting with own and spousal salary expectations, followed by own and spousal labor supply expectations, fertility expectations, gender identity score, and the experimental measures of competitiveness and risk aversion.

[Insert Table 1]

3.1.Own and spousal salary expectations

Confirming previous studies (Reuben et al., 2017; Wiswall & Zafar, 2020), we find that on average, women expect to earn 10% less than men ($72.31k vs. $80.68k), and this difference is driven by women's lower expectations in later ages. Women expect to earn $38.81k, $71.81k, and $106.31k at ages 25, 30, and 35, and men expect to earn $35.45k, $80.45k, and $126.14k respectively[3]. These expectations are well aligned with the actual outcomes of the alumni. The mean age of female alumni is 28.73, and their average earnings is $53.05k. The mean age of male alumni is 29.19, and their average earnings is $82.56k.

Compared to men, women expect to earn 8.8% more right after graduation, 11.1% less at age 30, and 14.5% less at age 35. These differences are not statistically significant with the MWW test. The little gender difference in own salary expectations that we find may be explained by several factors. Compared to prior studies that survey the undergraduate population across different majors, our sample consists only of business and finance majors at a highly selective graduate school. In addition, our Chinese female students who select for this career path may be considerably more career-driven than the general population of undergraduates. We also cannot rule out noise due to the small sample size for men.

Compared to the beliefs about own salary, we observe greater and significant gender difference in students' beliefs about their potential spouse's earnings. On average, female students expect

[3] The average salary in Beijing was $20k in 2018.

their husband to earn $96.54k while male students expect their wives to earn $50.30k. The gender gap in spousal earnings also increases with age; women expect their husband to earn $49.42k, $95.06k, and $145.12k at ages 25, 30, and 35 while men expect their wives to earn $27.48k, $51.48k, and $71.93k. These differences are significant at 1%. These expectations are well aligned with the actual outcomes of the alumni. The mean age of married female alumni is 30, and their spouse's salary is $77.35k. The mean age of married male alumni is 31, and their spouse's salary is $60.21k.

Confirming Wiswall and Zafar (2020), we find that females expect their husband to earn more than themselves and men expect their wives to earn less than themselves. Figure 1 depicts the distribution of expected relative earnings for all age points, separated by gender. We compute the relative earnings as the wife's earnings over the household income, calculated as the sum of husband's and wife's earnings. We replicate the findings of Bertrand et al. (2015) and find a sharp drop to the right ½ of the expected household income. Only one female subject expects to earn more than her husband, and no male subject expects to earn less than his wife. The average expected relative salary is 0.44 for women and 0.41 for men. The average actual relative salary is 0.45 for female alumni and 0.30 for male alumni. The lower result of our male alumni is likely driven by selection effect. The average salary of the 7 married male alumni is $145.92k, which is significantly above student expectations.

Female students' expectation of spousal income gap is relatively constant throughout their lifecycle where they expect their husbands to earn 32.8%, 28.4%, and 29.5% more than themselves in ages 25, 30, and 35. On the other hand, male students expect the spousal income gap to increase significantly with age and expect to earn 29.5%, 57.5%, and 81.1% more than their wives. Gender identity norms that husbands should earn more than wives alone cannot explain this increasing expected spousal income gap since a positive difference would have sufficed to be consistent with the traditional allocation of household income. Furthermore, while women's spousal salary expectations exceed our male students' own salary expectations only at age 25, men's spousal salary expectations are significantly below our female students' own salary expectations at all ages. These differences hence reveal students' marital preferences where male students expect to marry less career-driven women than the female students who are in the same school, a result also suggested in Wiswall and Zafar (2020). This result suggests why professionally driven women may "act wife" in front of their male peers; they plan to decrease their labor market participation

should they match with a male peer who whose salary can compensate them for their labor market opportunity costs.

3.2. Own and spousal working hours expectations

On average, women expect to work 4.5% shorter hours than men (52.88 vs. 55.59 hours per week), but these differences are not statistically significant. Women expect to work 54.08 hours at age 25 and decrease their hours to 51.52 by age 35. Men expect to work 58.05 hours at age 25 and decrease their hours to 52.95 by age 35. The expectations for working hours is less consistent with the actual outcomes compared to expected salaries. The average actual working hours is 47.90 for single female alumni with a mean age of 28, and 44.56 for married female alumni with mean age of 30. The average actual working hours is 49.5 for single male alumni with mean age of 28, and 63.57 for married alumni with mean age of 31. However, it is possible that our alumni survey result suffers from a downward bias since those who have relatively more free time are more likely to respond to our survey.

Similar to salary expectations, we find significant gender differences in expectations about spousal working hours. Women on average expect their spouse to work 56.55 hours, but men expect their wives to work 46.06 hours, and the gender difference is significant at 1% at all age points. These are aligned with the actual working hours of spouses. Average spousal working hours is 54.1 for female alumni and 44.28 for male alumni.

Figure 2 depicts the distribution of expected relative working hours separated by gender. We compute the relative hours as the wife's working hours over the household working hours, calculated as the sum of husband's and wife's working hours. Similar to the expected relative salary, we find a sharp drop to the right of ½ of the expected household working hours. 6 women expect to work more than their potential husbands at age 25, but no woman expects to work more than her husband at ages 30 and 35. No man expects to work less than their wife across any age.

While female students' expectations about spouses' working hours are not significantly different from the male students' own expected working hours, men do expect a large difference and that difference is statistically significant at the 1% level. Our male students expect their wives to work no longer than 50 hours per week at all ages. While 11% of men expect their spouse to work less than 40 hours a week, only 1.6% of women expect to work such hours. Again, these results suggest that our male students expect to marry women who are less career-driven than their female peers.

3.3. Fertility expectations

To elicit beliefs about future fertility, we follow Wiswall and Zafar (2020) and ask the following questions: "What do you believe is the percent chance of the following: a) You having no children; b) You having one child; c) You having three or more children?" Students were instructed that these probabilities should sum up to 100. This question was asked for the three future ages of 25, 30, and 35. From the answer to this question, we construct each respondent's expected number of children[4]. Men and women have similar beliefs about future fertility. The expected number of children for women is 0.02, 0.64, and 1.05 for ages 25, 30, and 35, and 0.00, 0.72, and 1.13 for men[5]. The gender differences are not statistically significant. The average number of children is 0.5 for our female alumni and 0.42 for male alumni. These outcomes are somewhat lower than expectations, but the reported number of children may also suffer from a downward bias since those who have less children and have relatively more free time are more likely to respond to our survey.

3.4. Gender identity (GI)

We elicit subject's attitude towards GI norms by asking a question "Do you agree that a man should put career first and a woman should put family first?". Subjects responded using a five-point Likert-scale ranging from "Strongly disagree" to "Strongly agree". A score of 1 was assigned to the strongest disagreement and 5 was assigned to the strongest agreement; hence, a high GI score reflects more traditional beliefs.

We find a significant gender difference in student's beliefs about gender norms. The mean GI for women is 2.20 and 3.18 for men, and this difference is significant at the 1% level, showing that our male students hold more traditional values than female students. Figure 3 shows the distribution of student responses separated by gender. No man or woman respond that they "Strongly agree" with the statement. Our female student's responses are roughly uniformly distributed while men's views are skewed towards the more traditional view.

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[4] Expected number of children is defined as $E(children) = 0 * pr(nochildren) + 1 * pr(1child) + 2 * pr(2\ or\ more\ children)$.

[5] There were 18 (11 male and 7 female) subjects who did not pass our consistency check in fertility expectations. For these subjects, the expected number of children for women is 1.07, 1.04, and 1.28 at ages 25, 30, and 35, and 1.45, 1.58, and 1.56 for men.

Due to the possible regional variation in beliefs driving the GI norms (for example, the northern region of China is considered to be more traditional compared to the coastal regions), we also test the gender difference in GI using regression analysis and controlling for home provinces in Table B2 in Appendix B. The coefficient on the female dummy increases from -0.981 to -1.243 when controlling for home provinces, showing that home provinces do affect beliefs and that our male students are significantly more traditional than female students. The large gender difference in GI may reflect self-selection of our sample, as our female graduate students are likely to be less traditional than the general population. However, despite being in a highly career-driven elite business school, 40% of female students do not disagree with the statement, and 86% of male students do not disagree with the statement.

3.5.Experimental measures

In our experiment, we elicited competitiveness as measured by the level of bids following Chen et al. (2015) and risk preferences following Eckel and Grossman (2008). The average bid for females is 5.88 and 6.75 for males, and this difference is not statistically significant. However, based on the experimental design with varying gender of the opponent as a treatment, the gender difference in competitiveness needs to be tested using a regression analysis controlling for the gender of the opponent. We report these results in Table B3 in Appendix B and show that there are no gender differences in competitiveness in our sample. The average gamble choice that reflects risk preferences is 2.77 for females 2.55 for males, and this difference is not statistically significant. This result is aligned with recent studies suggesting that there is little evidence of gender differences in risk preferences (Filippin & Crosetto, 2016; Nelson, 2016).

4 Results

In this section, we test whether students' expectations about own and potential spouse's salaries and work hours are systematically correlated with their competitiveness, risk preferences, and gender identity. We also examine how the expected number of children affects expectations. Using the constructed balanced longitudinal panel with three age points, we run random effects OLS regressions with standard errors clustered at the individual level. For all our analyses, we include fixed effect controls for treatments (the gender of the opponent), ages (25, 30, and 35) as well as majors and home provinces. We conduct the analyses separated by gender, but our results do not

change when we aggregate the data and use gender interactions. Due to the small sample size for men, our paper focuses on the behaviors of women and report additional analyses for men in Appendix A.

4.1. Own salary expectations

Table 2 reports the regression results for own salary expectations on bid, risk, and GI. Columns 1a-3a report the results for females and columns 1b-3b report the results for males. Our results show that bid is significantly correlated with own salary expectations for men, but not for women. The positive and significant coefficient on bid of 2.069 in column 2b shows that 1 CNY increase in bid increases men's salary expectations by \$2.069k. Based on the average salary expectation of \$80.68k, this is a 2.56% increase. We test for the possibility that our men's result is driven by a spurious correlation of the small sample by employing a non-parametric Kendall's rank correlation test and reject the independence between bid and own salary for men (p-value = 0.078). We confirm Reuben et al. (2017) and show that the experimental measure of risk preference does not predict own salary expectations. GI is also not correlated with own salary.

[Insert Table 2]

4.2. Spousal salary expectations

Table 3 reports the regression results for spousal salary expectations on bid, own salary, and GI. Columns 1a-3a report the results for women, and columns 1b-3b reports the results for men. Our results for spousal salary expectations are in stark contrast with the results for own salary expectations found in Section 4.1. We find that bid increases spousal salary only for women, but not for men. The positive and significant coefficient on bid of 2.860 in column 3a shows that 1 CNY increase in bid increases women's spousal salary expectations by \$2.860k. Based on the average spousal salary of \$96.54k, this is an increase of 2.96%. This effect size is comparable to that of bid on own salary expectations for men (2.56%). On the other hand, men's competitiveness does not directly affect spousal salary expectations, but only through own salary expectations.

As expected, spousal salary expectations are positively and significantly correlated with own salary expectations. However, the size of the coefficient varies by gender. In column 3a, the coefficient of own salary is 1.687 for women, suggesting that women expect their spouse to earn

more than themselves; a $1k increase in own salary increases women's spousal salary expectations by $1.687k. In contrast, column 3b shows that the coefficient is 0.320 for men, suggesting that men expect their spouse to earn less than themselves; a $1k increase in own salary increases men's spousal salary expectations by $0.320k[6].

We find that GI is significantly correlated with spousal salary expectations for women. Column 3 shows that women with high GI expect higher earnings spouses. Compared to women with a low GI score of 1, traditional women with a GI score of 4 expect their spouse to earn $28.08k more. In Table 4, we further examine the determinants of women's spousal salary expectations by adding interactions between bid, GI, and own salary. Due to the small sample size and the resulting multicollinearity problems, we are unable to report rigorous regression results for men. We report the corresponding men's results in Table B1 in Appendix A.

[Insert Table 3]

In column 2 of Table 4, we find a significant and positive interaction effect between bid and GI. This result shows that bid increases spousal salary, but especially more for women with high GI. For women with a low GI score of 1, 1 CNY increase in bid increases spousal salary by $0.357k, while for women with a high GI score of 4, bid increases spousal salary by $5.696k. These results suggest that women's competitiveness may be manifested in the marriage market in terms of matching with a more competitive high-income husband, especially for women who hold traditional beliefs.

In columns 3 and 4, we further include interactions for bid and GI with own salary. We find positive and significant effects, which show that bid and GI increase the spousal income gap. These results suggest that competitive women and high GI women not only expect their spouse to earn more but also to earn more than themselves, exhibiting strong reference-dependent preferences for mate income. Correspondingly, the coefficient on own salary decreases to 1.071 in column 4 as we control for these interactions.

[Insert Table 4]

[6] Although not reported here, risk preferences do not affect spousal salary expectations for both genders.

4.3. Own working hours

Next, we examine whether competitiveness and GI affect women's expectations of own working hours. In Table 5, we find evidence that GI moderates the effect of competitiveness on women's labor supply. While in column 1 we do not find a significant effect of bid, when interacted with GI, we find high significance and contrasting effects of bid on own working hours depending on the level of GI. For women with a low GI score of 1, 1 CNY increase in bid increases own working hours by 1.017 hours. However, for women with a high GI score of 4, 1 CNY increase in bid decreases working hours by 0.802 hours. These results suggest that for high GI women, their competitiveness may indeed decrease labor market supply.

In Table 5 columns 3 and 4, we also include the expected number of children and their interaction with GI. Similarly, we find that the effect of expected fertility is determined by women's GI. For low GI (score of 1) women, having one child decreases her working hours only by -0.131 hours, but for high GI women (score of 4), having one child decreases her working hours by 5.807 hours. At the mean working hour of 52.875, this amounts to a reduction of 10.96%. Our results of heterogeneity in the effect of children are consistent with Kleven et al. (2019) which finds that the negative effect of children on women's labor market outcomes is especially large for those with traditional backgrounds. Our results suggest that female students, ex-ante to labor market participation and childbirth, based on their beliefs of GI, expect such outcomes.

[Insert Table 5]

Table 6 examines the effect of spouse's salary on women's own expected working hours. We find a heterogenous effect of spousal salary on women's hours based on expected fertility and GI. As shown in column 2, the interaction between the expected number of children and spousal salary is negative and significant while the coefficient on spousal salary is positive and significant. This result shows that spousal salary increases own working hours for women who do not expect children, while spousal salary decreases own working hours for women with high fertility expectations. These results are consistent with Bertrand et al. (2010) who show that high earning spouse's salary is a substitute for women's own labor supply only when they have children. In contrast, for women without children, spousal salary is a complement, suggesting a positive assortative mating based on preferences for work. In column 3, we further show that GI is also a

significant moderating factor which determine the effect of spousal salary on women's own hours; spousal salary decreases hours for high GI women but increases hours for low GI women. Furthermore, in column 4 we show that the two interaction effects of children and GI are independently significant, showing that GI is an important determinant of the cross elasticity of female labor supply with respect to husband's salary above and beyond the effects of children.

[Insert Table 6]

4.4. Hypothetical treatments

This section reports the results from the hypothetical treatment. In this part of the survey, we increased own and spouse's salary expectations by 15% based on the subject's initial responses and asked again what their expected own and spouse's working hours would be given the new hypothetical salaries. Table 7 reports the regression results using the change in own working hours induced by the hypothetical increase in spousal salary as the dependent variable. The regression results in columns 1 and 2 show that across females, the effect of a hypothetical increase in spousal salary is larger and negative for females with high fertility expectations. These results further confirm the findings in Bertrand et al. (2010) by showing the significant substitution effect of spousal salary on own hours for women who have children. Exploiting the exogenous hypothetical salary increase and the within-subject responses of own hours, we rule out the possible reverse causality effect of spousal income and children on women's working hours.

[Insert Table 7]

5 Discussion and conclusion

We find that women's expected spouses' salary does increase with the all-pay auction measure of competitiveness, but their own expected salary does not. Women's GI increases the expected spouses' salary and the spousal income gap, especially for high bidders. GI has a moderating effect on working hours, where low GI women working hours increase with their bids while high GI women's working hours decreases with their bids. The effect of children on labor supply is negative only for high GI women. Spousal salary is a substitute for women's own working hours, especially for those with high GI and high fertility expectations. Our results suggest that GI is

potentially an indicator of willingness to specialize in household production along the traditional gender roles.

We show that many of the stylized facts of spousal income and labor participation gap are anticipated by women prior to marriage and entry into the labor market. Such expectations may influence assortative matching by income and labor market participation. Even at a top business school, only a fraction of the top-earning men may be able to meet the salary expectations of the bottom fraction of women, if the women have a high GI. The challenge of meeting such expectations may motivate for conspicuous consumption and other stereotypical male behavior. Despite having an exceptional educational background and being in a highly career-driven path, women expect their own labor market participation to decrease with their husband's income especially when they have high fertility intent and high GI. Furthermore, we show that competitiveness and GI independently affect women's labor market and marriage market intent above and beyond their expectations about fertility. We contribute to the literature on gender differences by showing that accounting for GI and the domains of competition may be important in measuring competitiveness across the genders.

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7 Tables and figures

FIGURE 1. RELATIVE SALARY EXPECTATIONS

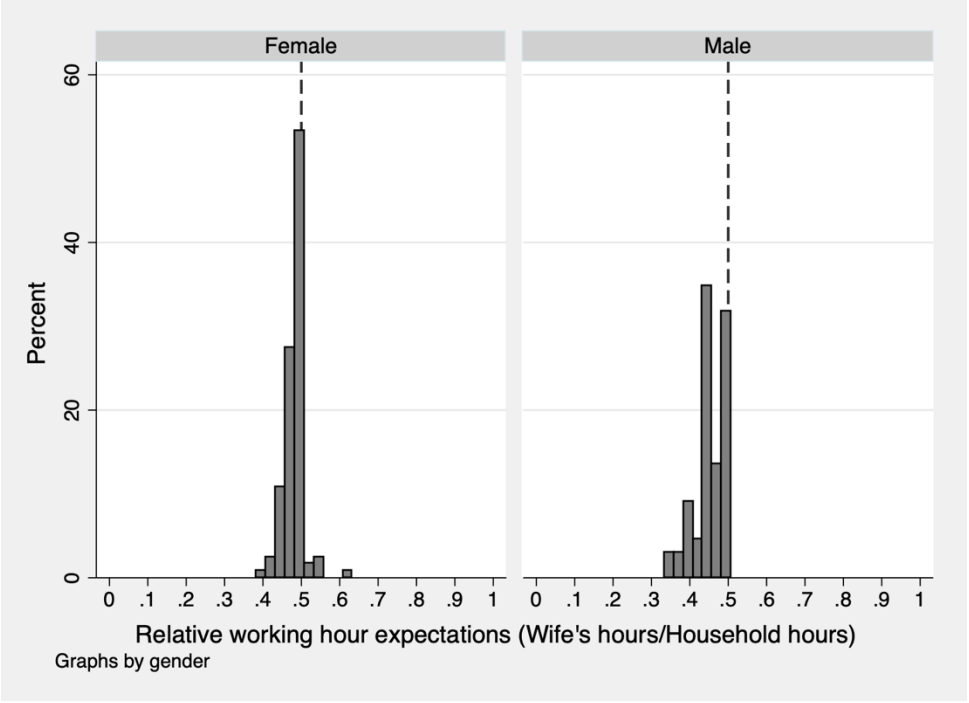

FIGURE 2. RELATIVE WORKING HOUR EXPECTATIONS

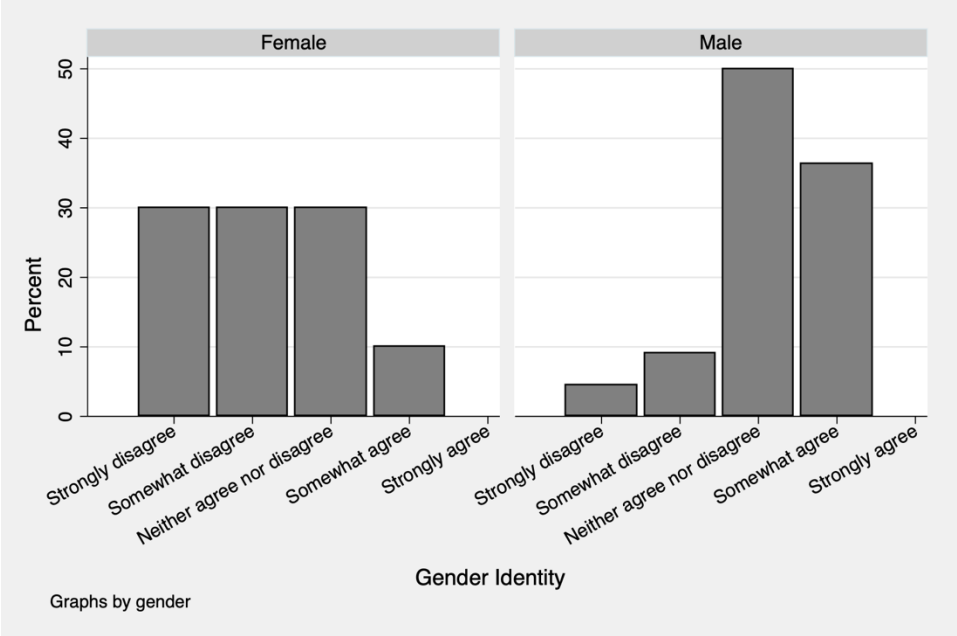

FIGURE 3. RESPONSES FOR GENDER IDENTITY

TABLE 1: SUMMARY STATISTICS

	Female			Men			MWW-test
	Obs.	Mean	S.d.	Obs.	Mean	S.d.	p-value
Own salary average (1k USD)	120	72.31	49.63	66	80.68	59.73	0.506
Own salary 25 (1k USD)	40	38.81	19.85	22	35.45	15.62	0.732
Own salary 30 (1k USD)	40	71.81	35.54	22	80.45	39.63	0.359
Own salary 35 (1k USD)	40	106.31	59.34	22	126.14	70.15	0.213
Spouse salary average (1k USD)	120	96.54	83.50	66	50.30	30.04	0.000
Spouse salary 25 (1k USD)	40	49.42	27.07	22	27.48	8.92	0.000
Spouse salary 30 (1k USD)	40	95.06	64.08	22	51.48	20.61	0.000
Spouse salary 35 (1k USD)	40	145.12	108.33	22	71.93	35.38	0.001
Relative salary average	120	0.44	0.06	66	0.41	0.07	0.002
Relative salary 25	40	0.44	0.06	22	0.45	0.04	0.946
Relative salary 30	40	0.44	0.06	22	0.40	0.07	0.017
Relative salary 35	40	0.44	0.06	22	0.38	0.09	0.004
Own hour average (hours per week)	120	52.88	10.21	66	55.59	13.71	0.260
Own hour 25 (hours per week)	40	54.08	10.21	22	58.05	13.91	0.293
Own hour 30 (hours per week)	40	53.02	9.70	22	55.77	13.06	0.461
Own hour 35 (hours per week)	40	51.52	10.79	22	52.95	14.28	0.886
Spouse hour average (hours per week)	120	56.55	11.92	66	46.06	10.17	0.000
Spouse hour 25 (hours per week)	40	56.85	11.37	22	47.27	9.22	0.001
Spouse hour 30 (hours per week)	40	57.15	11.81	22	46.14	10.34	0.000
Spouse hour 35 (hours per week)	40	55.65	12.79	22	44.77	11.18	0.001
Expected number of children average	120	0.57	0.56	66	0.62	0.63	0.774
Expected number of children 25	40	0.02	0.06	22	0.00	0.00	0.282
Expected number of children 30	40	0.64	0.46	22	0.72	0.52	0.576
Expected number of children 35	40	1.05	0.45	22	1.13	0.53	0.716
Gender Identity	40	2.20	0.99	22	3.18	0.80	0.000
Bid	40	5.88	5.79	22	6.57	5.94	0.373
Risk aversion	40	2.77	1.25	22	2.55	1.10	0.549

TABLE 2: REGRESSION OF OWN SALARY EXPECTATIONS ON BID, RISK, AND GI

	Own salary					
	Female			Male		
	(1a)	(2a)	(3a)	(1b)	(2b)	(3b)
Bid	0.0788	-0.142	0.109	2.153***	2.069***	2.201***
	(1.144)	(1.150)	(1.188)	(0.438)	(0.517)	(0.453)
Risk		7.300			1.679	
		(5.741)			(3.864)	
GI			-1.784			2.896
			(6.424)			(6.111)
Constant	43.21*	25.76	46.61*	56.84***	52.88***	46.15**
	(24.97)	(27.56)	(28.02)	(14.93)	(15.11)	(23.22)
Observations	120	120	120	66	66	66
R-squared	0.547	0.557	0.547	0.795	0.795	0.795
Number of subjects	40	40	40	22	22	22
Additional controls						
Treatment	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 3: REGRESSION OF SPOUSAL SALARY EXPECTATIONS ON BID, OWN SALARY, AND GI

	Spousal salary					
	Female			Male		
	(1a)	(2a)	(3a)	(1b)	(2b)	(3b)
Bid	3.150	3.017***	2.860***	1.377***	0.690	0.580
	(2.278)	(0.922)	(0.835)	(0.503)	(0.447)	(0.418)
Own salary		1.685***	1.687***		0.319***	0.320***
		(0.182)	(0.179)		(0.112)	(0.113)
GI			9.361*			-6.445
			(5.249)			(4.428)
Constant	38.62	-34.18	-52.14**	6.805*	2.521	56.93***
	(47.39)	(21.97)	(25.04)	(4.106)	(23.12)	(18.84)
Observations	120	120	120	66	66	66
R-squared	0.446	0.904	0.909	0.772	0.855	0.856
Number of subjects	40	40	40	22	22	22
Additional controls						
Treatment	Yes	Yes	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 4: REGRESSION OF WOMEN'S SPOUSAL SALARY EXPECTATIONS ON INTERACTIONS OF BID, GI, AND OWN SALARY

	Spousal salary			
	(1)	(2)	(3)	(4)
Bid	2.860***	-1.422	-3.894**	-2.797
	(0.835)	(1.685)	(1.876)	(1.857)
Own salary	1.687***	1.694***	1.407***	1.071***
	(0.179)	(0.172)	(0.191)	(0.258)
Gender Identity	9.361*	2.178	3.521	-5.596
	(5.249)	(5.284)	(5.119)	(5.482)
GI x Bid		1.780**	1.597**	1.234**
		(0.705)	(0.667)	(0.586)
Bid x Own salary			0.0360**	0.0325**
			(0.0162)	(0.0153)
GI x Own salary				0.156*
				(0.0931)
Constant	-52.14**	-37.69	-22.69	-1.722
	(25.04)	(24.68)	(26.94)	(24.80)
Observations	120	120	120	120
R-squared	0.909	0.916	0.930	0.939
Number of subjects	40	40	40	40
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes

TABLE 5: REGRESSION OF WOMEN'S OWN WORKING HOURS ON BID, GI, AND EXPECTED NUMBER OF CHILDREN

	Own hours			
	(1)	(2)	(3)	(4)
Bid	0.165	1.625***	1.672***	1.706***
	(0.257)	(0.626)	(0.582)	(0.636)
Gender Identity	-2.590	-0.137	0.446	1.593
	(1.778)	(1.507)	(1.470)	(1.634)
GI x Bid		-0.607***	-0.627***	-0.649***
		(0.231)	(0.214)	(0.233)
Children			-2.776	1.760
			(2.202)	(3.158)
GI x Children				-1.892**
				(0.920)
Constant	75.42***	70.38***	69.78***	66.56***
	(5.206)	(5.154)	(5.284)	(5.694)
Observations	120	120	120	120
R-squared	0.542	0.597	0.608	0.616
Number of subjects	40	40	40	40
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes

TABLE 6: REGRESSION OF WOMEN'S OWN WORKING HOURS ON BID, GI, CHILDREN, AND SPOUSAL SALARY

	Own hour			
	(1)	(2)	(3)	(4)
Bid	1.707***	1.441***	1.272**	1.096**
	(0.642)	(0.547)	(0.531)	(0.545)
Gender Identity	1.589	1.162	2.430	1.977
	(1.642)	(1.673)	(1.758)	(1.774)
GI x Bid	-0.648***	-0.566***	-0.462**	-0.413**
	(0.237)	(0.201)	(0.194)	(0.197)
Children	1.765	6.197	-1.303	2.767
	(3.175)	(3.807)	(3.462)	(3.973)
GI x Children	-1.887**	-1.830**	-0.225	-0.357
	(0.914)	(0.931)	(1.123)	(1.243)
Spousal salary	-0.000862	0.0398**	0.0812***	0.106**
	(0.00869)	(0.0170)	(0.0297)	(0.0427)
Children x Spousal salary		-0.0401***		-0.0335**
		(0.0137)		(0.0146)
GI x Spousal salary			-0.0315***	-0.0281**
			(0.0106)	(0.0121)
Constant	66.60***	66.76***	62.89***	63.42***
	(5.729)	(5.846)	(5.731)	(5.855)
Observations	120	120	120	120
R-squared	0.615	0.644	0.661	0.673
Number of subjects	40	40	40	40
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes

TABLE 7: REGRESSION OF CHANGE IN WOMEN'S OWN HOURS IN RESPONSE TO 15% INCREASE IN SPOUSE SALARY ON CHILDREN AND GI

	Change in own hour		
	(1)	(2)	(3)
Children	-4.284**	-5.007**	-2.501
	(2.000)	(2.127)	(4.622)
GI x Children			-1.253
			(2.046)
Change in spouse hour	0.255*	0.250*	0.221
	(0.146)	(0.147)	(0.156)
Constant	2.358	0.689	-1.142
	(1.580)	(2.299)	(3.786)
Observations	40	40	40
R-squared	0.217	0.239	0.248
Additional controls			
Age FE	Yes	Yes	Yes
Treatment	Yes	Yes	Yes

Appendix A: Corresponding results for men

TABLE A1: REGRESSION OF MEN'S SPOUSAL SALARY EXPECTATIONS ON INTERACTIONS OF BID, GI, AND OWN SALARY

	Spousal salary			
	(1)	(2)	(3)	(4)
Bid	0.307	4.147**	2.854	0.727
	(0.653)	(1.678)	(2.501)	(1.652)
Own salary	0.311***	0.299***	0.203***	0.825***
	(0.107)	(0.109)	(0.0770)	(0.271)
GI	-6.829	4.572	4.844	15.53***
	(5.899)	(5.374)	(4.519)	(5.929)
GI x Bid		-1.066**	-1.019*	-0.253
		(0.463)	(0.607)	(0.434)
Bid x Own salary			0.0135	0.00669
			(0.0102)	(0.00987)
GI x Own salary				-0.189***
				(0.0664)
Constant	48.38*	5.079	11.75	-19.79
	(26.07)	(18.96)	(19.42)	(20.98)
Observations	66	66	66	66
R-squared	0.843	0.853	0.869	0.910
Number of subjects	22	22	22	22
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	No	No	No	No
Home provinces	Yes	Yes	Yes	Yes

TABLE A2: REGRESSION OF MEN'S OWN HOURS ON WORKING HOURS ON BID, GI, AND EXPECTED NUMBER OF CHILDREN

	Own hour			
	(1)	(2)	(3)	(4)
Bid	-0.397	-3.029**	-2.965*	-3.239**
	(0.346)	(1.509)	(1.621)	(1.568)
GI	-13.12**	-20.84**	-19.49*	-20.60*
	(6.479)	(10.55)	(11.50)	(11.27)
GI x Bid		0.735*	0.704*	0.795**
		(0.379)	(0.407)	(0.400)
Children			2.349	4.104
			(3.145)	(11.81)
GI x Children				-1.423
				(3.491)
Constant	101.1***	130.7***	127.9***	130.1***
	(18.50)	(35.91)	(38.77)	(37.70)
Observations	66	66	66	66
R-squared	0.713	0.736	0.732	0.738
Number of subjects	22	22	22	22
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	No	No	No	No
Home provinces	Yes	Yes	Yes	Yes

TABLE A3: REGRESSION OF MEN'S OWN WORKING HOURS ON BID, GI, CHILDREN, AND SPOUSAL SALARY

	(1) Own hour	(2) Own hour	(3) Own hour	(4) Own hour
Bid	-3.126*	-3.116*	-3.275*	-3.314*
	(1.652)	(1.667)	(1.720)	(1.746)
Gender Identity	-20.09*	-20.41*	-21.44*	-22.38*
	(11.73)	(11.81)	(12.32)	(12.57)
GI x Bid	0.769*	0.776*	0.804*	0.826*
	(0.410)	(0.420)	(0.427)	(0.442)
Children	5.248	0.573	11.80	7.248
	(16.07)	(18.67)	(21.76)	(21.75)
GI x Children	-1.770	-1.473	-3.714	-3.958
	(4.844)	(4.910)	(6.610)	(6.325)
Spousal salary	-0.0239	-0.0842	-0.153	-0.286
	(0.134)	(0.131)	(0.252)	(0.279)
Children x Spousal salary		0.0646		0.0945
		(0.111)		(0.120)
GI x Spousal salary			0.0477	0.0643
			(0.0667)	(0.0710)
Constant	129.2***	132.0***	133.1***	138.6***
	(38.36)	(39.08)	(40.24)	(41.93)
Observations	66	66	66	66
R-squared	0.738	0.740	0.741	0.744
Number of subjects	22	22	22	22
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	No	No	No	No
Home provinces	Yes	Yes	Yes	Yes

TABLE A4: REGRESSION OF CHANGE IN MEN'S OWN HOURS IN RESPONSE TO 15% INCREASE IN SPOUSE SALARY ON CHILDREN AND GI

	Change in own hour		
	(1)	(2)	(3)
Children	-3.378	-3.744	-3.328
	(2.225)	(2.306)	(12.65)
GI x Children			-0.128
			(3.820)
Change in spouse hour	0.433*	0.435*	0.437*
	(0.221)	(0.224)	(0.238)
Constant	6.310*	2.903	2.626
	(2.991)	(5.444)	(10.000)
Observations	22	22	22
R-squared	0.362	0.384	0.384
Additional controls			
Age FE	Yes	Yes	Yes
Treatment	Yes	Yes	Yes

Appendix B: Additional tables

TABLE B1: ALUMNI SURVEY SUMMARY STATISTICS

	Female			Male			MWW-test
	Obs.	Mean	S.d.	Obs.	Mean	S.d.	p-value
Age	62	28.73	2.07	27	29.19	2.43	0.499
Years out	61	3.77	1.94	26	3.58	2.14	0.569
Married	62	0.48	0.50	27	0.26	0.45	0.049
Employed full-time	62	1.00	0.00	27	1.00	0.00	
Salary (1k USD)	62	53.05	36.70	27	82.56	58.67	0.018
Own hour	62	46.29	7.13	27	53.15	13.24	0.028
Spouse age	30	30.77	3.21	7	30.86	2.12	0.876
Spouse employed full-time	30	0.97	0.18	7	1.00	0.00	0.629
Spouse salary (1k USD)	30	77.35	40.24	7	60.21	15.50	0.470
Spouse hour	30	54.10	11.89	7	44.29	4.50	0.036
Relative salary	30	0.45	0.13	7	0.30	0.10	0.012
Children	30	0.50	0.63	7	0.43	0.53	0.877

TABLE B2: GENDER DIFFERENCE IN GI

	GI		
	(1)	(2)	(3)
Female	-0.982***	-1.244***	-1.252***
	(0.246)	(0.258)	(0.264)
Constant	3.182***	2.744***	3.229***
	(0.198)	(0.603)	(0.710)
Observations	62	62	62
R-squared	0.209	0.628	0.646
Additional controls			
Home provinces	No	Yes	Yes
Major	No	No	Yes

TABLE B3: GENDER DIFFERENCE IN COMPETITIVENESS

	Bid				
	(1)	(2)	(3)	(4)	(5)
Female	-0.693	-0.685	-0.700	-1.045	-0.371
	(1.551)	(1.563)	(1.583)	(1.532)	(2.047)
Constant	6.568***	6.363***	6.191***	5.679**	-2.822
	(1.246)	(1.498)	(2.291)	(2.684)	(6.440)
Observations	62	62	62	62	62
R-squared	0.003	0.004	0.005	0.124	0.359
Additional controls					
Treatment	No	Yes	Yes	Yes	Yes
Risk	No	No	Yes	Yes	Yes
Major	No	No	No	Yes	Yes
Home provinces	No	No	No	No	Yes

TABLE B4: REGRESSION OF WOMEN'S SPOUSAL HOURS ON WORKING HOURS ON BID, GI, AND EXPECTED NUMBER OF CHILDREN

	Spouse hour			
	(1)	(2)	(3)	(4)
Bid	0.397**	0.852*	0.824	0.805
	(0.186)	(0.516)	(0.537)	(0.528)
Own hour	0.714***	0.694***	0.703***	0.709***
	(0.117)	(0.121)	(0.123)	(0.123)
GI	-0.564	0.143	-0.0244	-0.320
	(1.315)	(1.440)	(1.487)	(1.563)
GI x Bid		-0.188	-0.177	-0.167
		(0.205)	(0.211)	(0.207)
Children			0.804	-0.320
			(1.164)	(2.559)
GI x Children				0.480
				(0.872)
Constant	19.69*	19.63*	19.21*	19.60*
	(10.42)	(10.60)	(10.54)	(10.62)
Observations	120	120	120	120
R-squared	0.818	0.818	0.820	0.820
Number of subjects	40	40	40	40
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes

TABLE B5: REGRESSION OF WOMEN'S SPOUSAL WORKING HOURS ON BID, GI, CHILDREN, AND OWN SALARY

	Spouse hour			
	(1)	(2)	(3)	(4)
Bid	0.808	0.841	0.857	0.878
	(0.521)	(0.521)	(0.546)	(0.542)
Own hour	0.701***	0.699***	0.711***	0.706***
	(0.127)	(0.135)	(0.136)	(0.141)
GI	-0.295	-0.265	-0.548	-0.515
	(1.573)	(1.580)	(1.659)	(1.667)
GI x Bid	-0.168	-0.180	-0.193	-0.200
	(0.206)	(0.207)	(0.215)	(0.215)
Children	-0.265	-0.840	0.456	0.109
	(2.587)	(3.164)	(2.954)	(3.575)
GI x Children	0.442	0.449	0.0281	0.0492
	(0.889)	(0.887)	(1.014)	(1.023)
Own salary	0.00717	0.000396	-0.0157	-0.0183
	(0.0143)	(0.0234)	(0.0358)	(0.0399)
Children x Own salary		0.00638		0.00341
		(0.0198)		(0.0206)
GI x Own salary			0.00974	0.00924
			(0.0127)	(0.0128)
Constant	19.78*	20.03*	19.70*	20.06*
	(10.77)	(11.08)	(10.93)	(11.16)
Observations	120	120	120	120
R-squared	0.821	0.819	0.821	0.820
Number of subjects	40	40	40	40
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	Yes	Yes	Yes	Yes
Home provinces	Yes	Yes	Yes	Yes

TABLE B6: REGRESSION OF MEN'S SPOUSAL HOURS ON WORKING HOURS ON BID, GI, AND EXPECTED NUMBER OF CHILDREN

	Spouse hour			
	(1)	(2)	(3)	(4)
Bid	0.431***	0.956	0.980	0.520
	(0.163)	(0.685)	(0.644)	(0.746)
Own hour	0.326***	0.380***	0.394***	0.380***
	(0.0855)	(0.0923)	(0.0922)	(0.0769)
GI	-10.84***	-8.658**	-8.769**	-7.774**
	(3.167)	(3.927)	(3.844)	(3.814)
GI x Bid		-0.141	-0.142	-0.0191
		(0.178)	(0.167)	(0.193)
Children			-0.710	9.508
			(1.614)	(6.493)
GI x Children				-3.074
				(1.881)
Constant	52.40***	41.31**	40.29**	39.37**
	(13.58)	(17.51)	(17.00)	(15.40)
Observations	66	66	66	66
R-squared	0.880	0.883	0.884	0.898
Number of subjects	22	22	22	22
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	No	No	No	No
Home provinces	Yes	Yes	Yes	Yes

TABLE B7: REGRESSION OF WOMEN'S SPOUSAL WORKING HOURS ON BID, GI, CHILDREN, AND OWN SALARY

	Spouse hour			
	(1)	(2)	(3)	(4)
Bid	0.533	0.535	0.504	0.505
	(0.739)	(0.745)	(0.771)	(0.774)
Own hour	0.380***	0.379***	0.381***	0.381***
	(0.0789)	(0.0833)	(0.0792)	(0.0834)
GI	-7.706**	-7.703**	-7.581**	-7.581**
	(3.759)	(3.800)	(3.762)	(3.809)
GI x Bid	-0.0218	-0.0220	-0.0127	-0.0129
	(0.189)	(0.191)	(0.204)	(0.205)
Children	9.551	9.481	8.051	8.035
	(6.511)	(7.062)	(13.08)	(13.48)
GI x Children	-3.084	-3.083	-2.648	-2.651
	(1.897)	(1.919)	(3.797)	(3.816)
Own salary	-0.00172	-0.00281	0.0165	0.0160
	(0.0214)	(0.0501)	(0.120)	(0.127)
Children x Own salary		0.000770		0.000295
		(0.0311)		(0.0311)
GI x Own salary			-0.00580	-0.00576
			(0.0384)	(0.0385)
Constant	39.19***	39.24**	38.67**	38.69**
	(15.05)	(15.50)	(15.16)	(15.60)
Observations	66	66	66	66
R-squared	0.898	0.898	0.898	0.898
Number of subjects	22	22	22	22
Additional controls				
Treatment	Yes	Yes	Yes	Yes
Age FE	Yes	Yes	Yes	Yes
Major	No	No	No	No
Home provinces	Yes	Yes	Yes	Yes

TABLE B8: REGRESSION OF CHANGE IN WOMEN'S SPOUSE HOURS IN RESPONSE TO 15% INCREASE IN OWN SALARY ON CHILDREN AND GI

	Change in spouse hour		
	(1)	(2)	(3)
Children	2.153	1.977	1.201
	(1.327)	(1.412)	(2.829)
GI x Children			0.421
			(1.325)
Change in own hour	0.327***	0.331***	0.342***
	(0.109)	(0.111)	(0.118)
Constant	0.323	-0.126	0.463
	(1.037)	(1.532)	(2.418)
Observations	40	40	40
R-squared	0.247	0.251	0.253
Additional controls			
Age FE	Yes	Yes	Yes
Treatment	Yes	Yes	Yes

TABLE B9: REGRESSION OF CHANGE IN MEN'S SPOUSE HOURS IN RESPONSE TO 15% INCREASE IN OWN SALARY ON CHILDREN AND GI

	Change in spouse hour		
	(1)	(2)	(3)
Children	1.638	2.050	4.008
	(1.215)	(1.216)	(6.567)
GI x Children			-0.604
			(1.987)
Change in own hour	0.275***	0.291***	0.285***
	(0.0744)	(0.0732)	(0.0775)
Constant	-3.308*	-0.000607	-1.346
	(1.571)	(2.788)	(5.278)
Observations	22	22	22
R-squared	0.534	0.586	0.589
Additional controls			
Age FE	Yes	Yes	Yes
Treatment	Yes	Yes	Yes

Appendix C-1: Instructions for competitiveness experiment

Introduction

You are asked to participate in a study of economic decision making. The study will take approximately 20 minutes to complete. This study is comprised of three parts to be described at the appropriate time. Your earnings for the study will be determined by the decisions you and the other Players make in each part. How your compensation will be determined is explained below. You will be paid in private at the end of the session.

One of Part 1 or Part 2 will be selected at random for payment, which will be added to your earnings from Part 3. Your earnings from Part 1 and Part 2 are uncertain, and your earnings from Part 3 are fixed at 5 RMB. In total, you can earn up to 54 RMB. At the end of the study, you will be asked to submit your WeChat ID in order to receive your earnings.

If you have any questions, please contact the experimenter.

Contact Information
Wechat ID: experimentPHBS
Email: experimentphbs@phbs.pku.edu.cn

Part 1: Instructions

Your opponent is a **Male** student

◎ You are randomly paired with your opponent, who is also a subject in this experiment.

◎ You can find the gender of your opponent above.

◎ There will be an auction between the two of you.

◎ Each of you is endowed with 15 RMB.

◎ When the auction begins, you will use the 15 RMB we gave you to bid in the auction.

◎ The prize of the auction is 10 RMB.

◎ Both you and your opponent can only bid once in the auction.

- Please note that if your opponent chooses a lower bid than you do, you are the winner in the auction and earn the extra 10 RMB which is the prize of the auction. Your opponent earns no extra money since he/she loses, but he/she still has to pay his/her bid.
- By the same reasoning, if your opponent chooses a higher bid than you do, he/she will be the winner and earns the extra 10 RMB. But both of you have to pay your own bid.
- If the two of you choose the same bid, one of you will be randomly selected as the winner.
- If both of you bid zero, then none of you earns any additional payment.

◎ In other words, your payoff will be the following:

- If you win: 15 RMB - your bid + 10 RMB
- If you lose: 15 RMB - your bid

Part 1: Test of Understanding

Following are 6 multiple-choice questions designed to check your understanding of the instructions. You will receive 2 RMB for answering all questions correctly.

1. Assume that you bid 8 and you win. How much will you receive?
   - 7
   - 15
   - 10
   - 17
2. Assume that you bid 6 and you lose. How much will you receive?
   - 1
   - 6
   - 9
   - 15
3. Assume that you bid 10 and you tie. How much will you receive?
   - You receive 15 with 50% chance and you receive 5 with 50% chance
   - You receive 10 with 50% chance and you receive 0 with 50% chance
   - 15
   - 5
4. Assume that you bid 15 and you win. How much will you receive?
   - 0
   - 15
   - 10
   - 8
5. Assume that you bid 15 and you tie. How much will you receive?
   - You receive 25 with 50% chance and you receive 10 with 50% chance
   - You receive 10 with 50% chance and you receive 0 with 50% chance
   - 0
   - 10
6. Assume that you bid 0. How much will you receive?
   - 0
   - 15
   - 10
   - 8

Part 1: Bid

Your opponent is a **Male** student

Please now decide your bid:

[Drop down menu: 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15]

Part 2: Gamble Selection

In this part of the study you will select from among five different gambles the one gamble you would like to play. The five different gambles are listed on your **GAMBLE SELECTION SHEET**. You must select only one of these gambles.

Each gamble has two possible outcomes (Event A or Event B) with the indicated probabilities of occurring. Your compensation for this part of the study will be determined by: 1) which of the five gambles you select; and 2) which of the two possible events occur.

For example: If you select gamble 4 and Event A occurs, you will earn 40 RMB. If Event B occurs, you will earn 4 RMB.

For every gamble, each event has a 50% chance of occurring.

At the end of the study, you will roll a six-sided die using WeChat to determine which event will occur. If you roll a 1, 2, or 3, Event A will occur. If you roll a 4, 5, or 6, Event B will occur.

There will be a separate roll of the die for each player.

Please select your gamble

GAMBLE SELECTION SHEET				
Gamble	**Event**	**Payoff**	**Probabilities**	**Your Selection**
1	A	16 RMB	50%	○
	B	16 RMB	50%	
2	A	24 RMB	50%	○
	B	12 RMB	50%	
3	A	32 RMB	50%	○
	B	8 RMB	50%	
4	A	40 RMB	50%	○
	B	4 RMB	50%	
5	A	48 RMB	50%	○
	B	0 RMB	50%	

Part 2: Gamble Prediction

Your opponent is a **Male** student

For this part of the study you will select which of the five gambles you predict your opponent from Part 1 has selected for himself/herself and mark your prediction on your **GAMBLE PREDICTION SHEET**. You can find your opponent above. For a correct match between the opponent's actual choice and your predicted choice for the opponent, you will receive a bonus of 1 RMB.

For example:

If your opponent selected gamble 2 for him/herself and you predicted that he/she would select gamble 5, you will receive no additional payment.

If your opponent selected gamble 4 for him/herself and you predicted that he/she would select gamble 4, you will receive a bonus of 1 RMB.

Please select your gamble

GAMBLE SELECTION SHEET				
Gamble	**Event**	**Payoff**	**Probabilities**	**Your Selection**
1	A	16 RMB	50%	○
	B	16 RMB	50%	
2	A	24 RMB	50%	○
	B	12 RMB	50%	
3	A	32 RMB	50%	○
	B	8 RMB	50%	
4	A	40 RMB	50%	○
	B	4 RMB	50%	
5	A	48 RMB	50%	○
	B	0 RMB	50%	

Part 3

We are interested in whether there is a correlation between participant's behavior in economic decision making and some socio-demographic factors. This information will be strictly confidential and will be reported in such a way that no one will be able to relate said information to you individually. You will receive 3 RMB for answering all questions

How I am in general

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

I am someone who…

1. Is talkative
    Disagree strongly
    Disagree a little
    Neither agree nor disagree
    Agree a little
    Agree strongly
2. Tends to find fault with others
3. Does a through job
4. Is depressed, blue
5. Is original, comes up with new ideas
6. Is reserved
7. Is helpful and unselfish with others
8. Can be somewhat careless
9. Is relaxed, handles stress well.
10. Is curious about many different things
11. Is full of energy
12. Starts quarrels with others
13. Is a reliable worker
14. Can be tense
15. Is ingenious, a deep thinker
16. Generates a lot of enthusiasm
17. Has a forgiving nature
18. Tends to be disorganized
19. Worries a lot
20. Has an active imagination
21. Tends to be quiet
22. Is generally trusting
23. Tends to be lazy
24. Is emotionally stable, not easily upset
25. Is inventive
26. Has an assertive personality
27. Can be cold and aloof
28. Perseveres until the task is finished
29. Can be moody
30. Values artistic, aesthetic experiences
31. Is sometimes shy, inhibited
32. Is considerate and kind to almost everyone
33. Does things efficiently
34. Remains calm in tense situations
35. Prefers work that is routine
36. Is outgoing, sociable
37. Is sometimes rude to others
38. Makes plans and follows through with them
39. Gets nervous easily
40. Likes to reflect, play with ideas
41. Has few artistic interests
42. Likes to cooperate with others
43. Is easily distracted
44. Is sophisticated in art, music, or literature

Payment information

Please provide your WeChat ID in order to receive your earnings.

WeChat ID:

Contact Information

WeChat ID: ExperimentPHBS

Email: experimentphbs@phbs.pku.edu.cn

Appendix C-2: Instructions for subjective expectations survey

Introduction

We are conducting a research study about student's expectations about future employment and marriage.

We invite your participation in this brief (5 - 10 minute) survey. You will be compensated 5 RMB for completing the survey. At the end of the survey, you will be asked to submit your WeChat ID in order to receive your payment.

Your responses will be confidential and any identifying information will not be posted online or shared with any individuals outside the research team. The results of this study may be used in reports, presentations, or publications but your identification will not be used. All results will be shared only in aggregate/anonymous form.

Only PHBS students are invited to this study. In order to ensure that you are a student, please submit your PHBS Student ID. This information will NOT be used for any other purposes.

Please submit your Student ID to continue:

If you have any questions, please contact the experimenter.

Contact Information:
Wechat ID: experimentPHBS
Email: experimentphbs@phbs.pku.edu.cn

Survey

You will receive 5 RMB for answering all questions. Your answers will be strictly confidential and shared only in aggregate/anonymous form.

What year will you graduate?
[2018, 2019, 2020]

What is your major?
[Economics, Finance, Quantitative Finance, Management]

What is your gender?
[Male, Female]

What year were you born?

Do you hold Chinese citizenship?
[Yes, No]

Are you recognized as an official Chinese ethnic minority?
[Yes, No]

Where is your home province?
[Anhui Beijing Chongqing Fujian Gansu Guangdong Guangxi Guizhou Hainan Hebei Heilongjiang Henan Hubei Hunan Jiangsu Jiangxi Jilin Liaoning Neimenggu Ningxia Qianghai Shaanxi Shanxi Shandong Shanghai Sichuan Tianjin Tibet Xinjiang Yunnan Zhejiang Other]

What is the highest degree that you expect to earn?
[Masters, MBA, Ph.D., J.D., M.D., If other, please specify]

Which of the following applies to you?
[I am currently married, I am currently in a relationship, None of the above]

What is your height?
Cm

Survey

What is the expected age difference between you and your spouse?
[You expect to be ____ years older than your spouse,
You expect to be the same age as your spouse,
You expect to be ____years younger than your spouse]

What is the highest degree that you expect your spouse to earn?
[Masters, MBA, Ph.D., J.D., M.D., If other, please specify]

How tall do you expect your spouse to be?
cm

What do you believe is the percentage chance that you will be married by age 25?
How many hours a week do you expect to work?
How much do you expect to earn per year?
How many hours a week do you expect your spouse to work?
How much do you expect your spouse to earn per year?

What do you believe is the percentage chance that you will be married by age 30?
How many hours a week do you expect to work?
How much do you expect to earn per year?
How many hours a week do you expect your spouse to work?
How much do you expect your spouse to earn per year?

What do you believe is the percentage chance that you will be married by age 35?
How many hours a week do you expect to work?
How much do you expect to earn per year?
How many hours a week do you expect your spouse to work?
How much do you expect your spouse to earn per year?

Survey

What do you believe is the percent chance of the following by the time you are 25 years old?
Note: Your answers should sum to 100.

	Percentage chance
You having no children:	0 %
You having one child:	0 %
You having two or more children:	%

What do you believe is the percent chance of the following by the time you are 30 years old?
Note: Your answers should sum to 100.

	Percentage chance
You having no children:	0 %
You having one child:	0 %
You having two or more children:	%

What do you believe is the percent chance of the following by the time you are 35 years old?
Note: Your answers should sum to 100.

	Percentage chance
You having no children:	0 %
You having one child:	0 %
You having two or more children:	%

Survey

Suppose you are 35 years old, and you are making 920,000 yuan per year.
How many hours a week do you expect to work?
How many hours a week do you expect your spouse to work?

Suppose you are 35 years old, and your spouse is making 920,000 yuan per year.
How many hours a week do you expect to work?
How many hours a week do you expect your spouse to work?

Survey

Do you agree that a man should put career first and a woman should put family first?
[Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree]

Payment information

Thank you for completing the survey. Please provide your WeChat ID in order to receive your earnings.

WeChat ID:

If you have any questions concerning the research study, please contact the research team at
WeChat ID: ExperimentPHBS
Email: ExperimentPHBS@sz.pku.edu.cn