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ABSTRACT

Competitive Preferences among Asians in the U.S.*

The median income of Asian households is the highest of all racial/ethnic groups in the U.S. In a laboratory experiment, we examine whether Asians are more willing to compete and have greater competitive preferences than non-Asians. Both with and without controls for performance, performance improvement, and confidence, we find that Asians have significantly greater competitive preferences than non-Asians.

JEL Classification: J15, L0

Keywords: race/ethnicity, Asian, identity, norm, competitive preferences, willingness to compete

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1. Introduction

Even as government guarantees against gender discrimination and female educational attainment have increased (Goldin, Katz, & Kuziemko, 2006), men remain overrepresented in highly competitive jobs. For example, Fortune (2020) reports that the number of male CEOs at Fortune 500 companies hit an all-time low of 92.6 percent in 2020. Laboratory experiments have demonstrated that men are significantly more willing to compete—and have greater competitive preferences—than women in stereotypically male tasks (Niederle & Vesterlund (NV), 2011).[1] While other factors—like childbirth, maternity leave, and the consequent beliefs about labor-force attachment—play a role, it has been argued that gender-variant competitive preferences help explain the disparity.

This raises an interesting question: Are greater competitive preferences related to greater labor market success in general? Since the U.S. Census Bureau started to track Asians as a separate group in the mid-1980s, their median household income has been greater than any other racial/ethnic group. For example, in 2019, median household income for Asians was $98,150, compared to $76,057 for non-Hispanic Whites and $68,703 for all races (U.S. Census Bureau, 2020). Thus, it seems warranted to examine Asians' willingness to compete and competitive preferences.

Prior studies have examined cross-cultural differences in preferences and beliefs. Most relevant to our paper is Benjamin, Choi, & Strickland (2010), which experimentally examines the relationship between the salience of social identity and preferences in the U.S. The authors find that Asian-American (non-immigrant Blacks) subjects exhibit more patience when ethnic (racial) identity is primed; neither groups' risk preferences are effected by identity priming. Researchers have also examined differences in overconfidence between East Asian and Western populations with mixed results (e.g., Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Muthukrishna, Henrich, Toyokawa, Hamamura, Kameda, & Heine, 2018; Yates, Lee, & Bush, 1997). Lastly, in the competitive-preferences literature, Carlsson, Lampia, Martinssona, & Yangb (2020) replicate the main findings of NV 2007 using adult Han Chinese in a lab-in-the-field experiment; and Siddique & Vlassopoulos (2020) find that, despite no differences in objective performance, members of a socioeconomically disadvantaged ethnic minority in Bangladesh are more willing to compete when fewer members of the advantaged ethnic majority are in the group of potential competitors.

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[1] NV (2007) inspired a series of laboratory experiments to test the robustness and limits of their seminal finding. For example, researchers have: (a) manipulated subjects' beliefs by providing subjects with feedback regarding their relative performance (e.g., Cason, Masters, & Sheremeta, 2010; Wozniak, Harbaugh & Mayr, 2014); (b) used tasks that are not stereotypically-male (e.g., Grosse & Riener, 2010; Halladay, 2017; Ifcher & Zarghamee, 2016b; Kamas & Preston, 2009; Wozniak et al., 2014); (c) explicitly controlled for risk preferences (e.g., Cason et. al., 2010; Wozniak et al., 2014); (d) employed proportional winner-take-all payments (e.g., Cason et. al., 2010); and (e) developed continuous willingness-to-compete measures (Ifcher & Zarghamee, 2016a; Saccardo, Pietrasz, & Gneezy, 2018). While this body of research has illustrated circumstances under which the gender gap obser ved in NV (2007) does not hold, the main finding (that men are significantly more willing than women to compete in stereotypically-male tasks) has been replicated repeatedly (see NV (2011) for a thorough review of the literature).

Using data from a U.S. laboratory experiment, we examine whether Asians are more willing to compete and have greater competitive preferences than non-Asians. We first replicate NV's main results: we find a gender gap in both willingness to compete and competitive preferences. Next, we show that Asians are significantly more willing to compete than non-Asians. This "Asian gap" might be due to the fact that, compared to non-Asians, Asians perform better on the experimental task and rate their relative performance higher. Estimating the Asian gap in competitive preferences as the residual gap in willingness to compete, controlling for performance, performance improvement, and confidence, we find that Asians have significantly greater competitive preferences than non-Asians. To confirm that this difference is likely driven by the "thrill or fear of performing in a competition (NV, 2007, p. 1069)," we show that the Asian gap does not persist in retrospective decisions nor in decisions made on behalf of others—both contexts in which this motivation is absent.

2. Experimental design

Before presenting the experimental design, it should be noted that the data for this experiment comes from Ifcher & Zarghamee (IZ) (2020).[2] While analyzing the data from IZ (2020), we found a noteworthy and novel pattern: greater willingness to compete and competitive preferences for Asians than non-Asians.[3] As this was not part of our original research plan, nor directly relevant to our original research question, we decided to present the results in a separate, short paper. As the experiment was not designed to examine an Asian gap, we did not inquire about subject's citizenship, nor nationality. Thus, we are unable to determine if Asian subjects are Asian American or foreign nationals.[4]

Below we discuss the experimental design briefly, excluding many details regarding experimental components that relate to nomination and are not relevant to this paper. For a complete description of the experiment, see IZ (2020); Appendix A presents the complete experimental protocol.

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[2] The focus of IZ (2020) was to examine whether nominations close the gender gap in competition. For example, are male nominators more willing than female nominators to enter nominees into competitions? Are male nominees more likely to be entered into competitions than female nominees? IZ (2020) finds that men's and women's willingness to enter their nominees into competitions are statistically indistinguishable from each other and from women's willingness to enter themselves into competitions. Also, male and female nominees are statistically indistinguishably likely to be entered into competitions.

[3] We identify Asian subjects based on the following item in the end-of-session questionnaire: "What race/ethnicity do you identify yourself as (check all that apply)." Possible responses were "American Indian or Alaska Native," "Asian," "Black or African American," "Hispanic (having origins in Mexico, Central, or South America)," "Native Hawaiian or Other Pacific Islander," "White," or "Not Listed."

[4] In prior studies conducted at the same labs as in IZ (2020) in spring 2016 at Columbia University (CU) and spring 2017 at Santa Clara University (SCU), we asked subjects to report their race and whether they are U.S. citizens or permanent residents. At CU, 46% of all subjects identified as Asian, and 43% of Asian subjects identified as U.S. citizens or permanent residents. At SCU, 31% of all subjects identified as Asian, and 86% of Asian subjects identified as U.S. citizens or permanent residents. For comparison in IZ (2020), 37% of CU subjects and 32% of SCU subjects identified as Asian.

We conducted a laboratory experiment with 324 subjects at Columbia University (CU) and Santa Clara University (SCU) in the fall of 2019. At CU, 104 subjects (38 Asian and 66 non-Asian) were recruited using ORSEE (Online Recruitment System for Economic Experiments). At SCU, 220 subjects (71 Asian and 149 non-Asian) were recruited by sending an email to all undergraduate students inviting them to participate; the CU and SCU proportions of Asian subjects are statistically indistinguishable (Pearson chi2(1) = 0.58, p = 0.448); the CU and SCU gender distributions are also statistically indistinguishable (Pearson chi2(2) = 2.34, p = 0.310).

The experiment was administered using oTree (Chen, Schonger, & Wicken, 2016). Experimental sessions lasted approximately 60 minutes, with an average payment of $14, and a minimum (maximum) payment of $6 ($51).[5] There were 18 sessions (8 at CU and 10 at SCU); the smallest session had 8 subjects and the largest had 32.

After subjects checked-in,[6] provided informed consent, received a random seat-assignment, and read the instructions, the session proceeded as outline in sections 2.1 to 2.6.

2.1. Initial summation tasks (tasks 1 & 2)

As in NV (2007), subjects had five minutes to perform summations; each summation was of five randomly chosen, two-digit numbers displayed horizontally across a computer screen. Subjects were given a pen and scrap paper but were not allowed to use calculators. After five minutes, subjects could no longer submit additional answers and were told how many summations they solved correctly.

Before completing each task, subjects received detailed instructions regarding the task and payment scheme. The task-1 payment scheme was a $0.50 piece-rate payment per problem solved correctly. The task-2 payment scheme was a $2.00 tournament payment. Specifically, as in Baldiga & Coffman (2016), subjects were informed that they would receive either: (i) $2.00 per problem solved correctly if they solved more problems correctly than 75 percent of the participants in the session, or (ii) $0.00 per problem solved correctly otherwise.

2.2. Willingness to compete (tasks 3A & 4A)

In task 3A, subjects chose whether they wanted to apply a $0.50 piece-rate or $2.00 tournament payment scheme to their performance on a prospective summation task. The instructions explicitly stated that if subjects chose the $2.00 tournament payment scheme, then their task-3A performance would be compared to the task-2 performance of other subjects in the session.

[5] These payment summaries are based on a subset of the experimental sessions. Paper records for the remaining sessions are inaccessible due to COVID-19 pandemic restrictions at CU and SCU. We do not expect the payment summaries to change much once we are able to access the complete records.

[6] If subjects showed up but could not be seated because they were late or the number of subjects was not divisible by four, then they were given a $5 show-up fee and rescheduled for a subsequent session.

In task 4A, subjects chose retrospectively the payment scheme ($0.50 piece-rate or $2.00 tournament) they wanted to apply to their task-1 performance (which if they chose the tournament would be compared to the task-1 performance of all other participants in the session). Subjects were reminded how many questions they solved correctly in task 1

2.3. Beliefs regarding own relative performance in tasks 1 & 2

Subjects were asked to rate their relative performance in tasks 1 & 2 with the following response scale: "Top Quartile (Top 25%)," "Second Quartile (Between 25th and 50th percentile)," "Third Quartile (Between 50th and 75th percentile)," and "Fourth Quartile (Bottom 25%)." Subjects were informed that they would be paid $1 for correctly rating their task-1 performance and $1 for correctly rating their task-2 performance.

2.4. Nominations (tasks 3B & 4B)

Subjects completed tasks analogous to tasks 3A & 4A on behalf of a randomly-assigned subject in the same session ("nominee"). They also rated the relative performance of the nominee using the same response scale and incentives as above. Again, a more complete description of nominations can be found in IZ (2020) and/or Appendix A.

2.5. Risk preference elicitation (task 5)

Task 5 was a standard risk-preference measure over own payoffs (Holt & Laury, 2002). Subjects chose between a series of fixed payments, ranging from $0.00 to $10.00, and a lottery with a 50% ($10) chance of a $10 ($0) payment. All choices were presented vertically on a single screen. The first choice was between a $0.00 fixed payment and the lottery. The next was between a $1.00 fixed payment and the lottery. Thereafter, the fixed payment increased in $1.00 increments until it reached $10.00.

2.6. Questionnaire and payments

All subjects completed a seven-item questionnaire. Subject payments were determined after the completion of questionnaires. Subjects were paid: a $5 show-up fee; up to $4 for correctly indicating their and their nominee's relative performance in tasks 1 & 2; $1 for correctly indicating the gender of their nominee, and the payment from one randomly selected payment task from tasks 1, 2, 3A, 3B, 4A, 4B, and 5. To determine the payment task, balls numbered from one to seven were placed in a bingo spinner and one ball was chosen randomly. If task 5 was chosen, the bingo spinner was used to select one of the 11 fixed payments and to implement the lottery. Subjects received their cash payments as they exited the session.

3. Results

3.1. Willingness to compete

We begin by comparing the willingness to compete of subjects who self-identify as Asian to those who do not. Compared to non-Asians, Asians are significantly more willing to compete—that is, to choose the $2.00 tournament payment over the $0.50 piece-rate payment—in task 3A (72% versus 47%, $p < 0.001$).

The "Asian gap" in willingness to compete is present for both men and women: 82% of Asian men choose to compete in comparison to 56% of non-Asian men ($p = 0.002$), and 64% of Asian women choose to compete in comparison to 39% of non-Asian women ($p = 0.002$).

We replicate NV's gender gap in willingness-to-compete: compared to women, men are significantly more willing to compete in task 3A (63% versus 49%, $p = 0.008$).[7] The gender gap is significant for Asians (82% (men) versus 64% (women), $p = 0.046$) and non-Asians (56% (men) versus 39% (women), $p = 0.017$).

3.2. Performance, rating of own relative performance, and willingness to compete

A possible explanation for the Asian gap in willingness to compete may be that Asians perform better than non-Asians on the summation task. Indeed, Asians solve 11.6 and non-Asians solve 9.3 problems correctly in task 2 ($p < 0.001$). This gap holds for men (12.2 (Asian) versus 9.7 (non-Asian), $p < 0.001$) and women (11.1 (Asian) versus 8.8 (non-Asian), $p < 0.001$).

Given this performance gap, it is not surprising that, on average, Asians are more confident in their relative performance than are non-Asians: Asians' guess of their quartile rank is higher than non-Asians' (1.8 versus 2.1, $p = 0.003$). This gap holds for women (1.9 (Asian) versus 2.3 (non-Asian), $p = 0.008$) but not for men (1.7 (Asian) versus 2.0 (non-Asian), $p = 0.081$).

In sum, Asians both perform better than non-Asians on the summation task, and Asians rate their relative performance more highly than non-Asians. In the next section, we control for these differences to estimate the Asian gap in competitive preferences.[8]

3.3. Competitive preferences

To estimate the Asian gap in competitive preferences, we estimate a probit regression with standard errors clustered by session. Specifically, the Asian gap in competitive preferences is estimated as the residual Asian gap in willingness to compete, controlling for performance (the number of problems solved correctly in task 2), the improvement in performance between

[7] Three subjects who identified as "Gender Non-Conforming" are dropped from all analyses that consider gender in anyway.

[8] We examine whether there is a stronger relationship between beliefs and performance for Asians than non-Asians by regressing beliefs regarding own relative performance in task 2 on performance in task 2 separately for Asians and non-Asians. The coefficients on performance are statistically indistinguishable for Asian and non-Asian subjects ($p = 0.41$).

tasks 1 & 2 (the difference between the number of problems solved correctly in task 2 minus the number solved correctly in task 1), and confidence (guessed quartile rank in task 2).

The results indicate that Asians have significantly greater competitive preferences than do non-Asians (marginal effect = 17.1 pp, $p < 0.001$, see Table 1). It is also worth noting that willingness to compete increases with performance ($p < 0.001$), decreases with improvement in performance between tasks 1 & 2 ($p = 0.027$), and increases with confidence ($p < 0.001$). This result is robust to the inclusion of gender covariates and the percentage of subjects in the session that are Asian.[9]

Lastly, we estimate the residual willingness to compete with the inclusion of an interaction term for Asian and female. We find that the Asian coefficient is statistically significant (marginal effect = 24.7 pp, $p = 0.007$); the female and interaction coefficients are both insignificant (see Table 2). Again, willingness to compete increases with performance ($p = 0.002$), decreases with improvement in performance between tasks 1-2 ($p = 0.038$), and increases with confidence ($p < 0.001$).

3.4. Retrospective choice to compete

We estimate the residual gender gap in the willingness to compete in task 4A (retrospective choice of payment scheme for task 1) controlling for performance and confidence in task 1. The results indicate no significant Asian gap ($p = 0.38$; see Table 3). NV argue that the significant residual gap in the willingness to compete with prospective choices (task 3A) and its absence in retrospective choices (task 4A) indicate that the significant residual gap in task 3A is explained by variant competitive preferences. In other words, our results suggest that the Asian gap in the willingness to compete in prospective choices is due to an Asian gap in "thrill or fear of performing in a competition" and not fully explained by Asian gaps in other factors (e.g., overconfidence, feedback aversion, and risk aversion).

3.5. Willingness to compete for each level of confidence

One pattern that was reported in NV—and helped explain the gender gap in the willingness to compete—was that more confident women (who rated their own relative performance highly) were less willing to compete than more confident men, and that less confident men (who rated their own relative performance lowly) were more willing to compete than less confident women. Figure 1A presents the gender gap in willingness to compete for each level of confidence (guessed quartile rank in task 2) by gender. The pattern described above is apparent in our data, though none of the gender gaps in willingness to compete are statistically significant. For example, 86% of men who rate their performance in the top quartile enter the

[9] We calculated each subject's risk preferences as measured by each subject's lottery certainty equivalent in task 5 (nine subjects had multiple switch points and were dropped from the two following analyses). We find that Asians' and non-Asians' risk preferences were statistically indistinguishable ($p = 0.62$) and that the Asian gap in competitive preferences is robust to including risk preference as a covariate.

competition, compared to 76% of women ($p < 0.092$), and 18% of men who rate their performance in the bottom quartile enter the competition, compared to 0% of women ($p < 0.133$).

Conducting an analogous analysis comparing Asians to non-Asians, we find that 94% of Asians who rate their performance in the top quartile enter the competition, compared to 73% of non-Asians ($p < 0.004$), and 62% of Asians who rate their performance in the second quartile enter the competition, compared to 38% of non-Asians ($p < 0.045$). Figure 1B presents the gender gap in willingness to compete for each level of confidence (guessed quartile rank in task 2) by race/ethnicity.

3.6. Willingness to compete and competitive preferences in the context of nominations

We examine whether nominations close the Asian gap in competition. We find that Asian and non-Asian nominators are statistically indistinguishably likely to choose the tournament payment over the piece-rate payment for their nominee in task 3B (0.44 versus 0.42, $p = 0.77$). We estimate the residual gap in Asian versus non-Asian nominators' willingness to enter their nominee into competition, controlling for nominee performance (the number of problems the nominee solved correctly in task 2), the improvement in nominee performance between tasks 1 & 2 (the difference between the number of problems the nominee solved correctly in task 2 minus the number the nominee solved correctly in task 1), and confidence in the nominee (guessed quartile rank of nominee's performance in task 2). The results indicate that the residual gap is statistically indistinguishable from zero ($p = 0.60$, see Table 4).

In sum, Asian and non-Asian nominators make similar decisions for their nominees.[10]

4. Conclusion

We find an Asian gap in willingness to compete and competitive preferences: Asians' willingness to compete and competitive preferences are significantly greater than non-Asians. This gap is not present in retrospective choices to compete, nor in decisions made for a nominee, suggesting that the gap is driven by the "thrill or fear of performing in a competition," as this motivation is absent in retrospective choice and in decisions for nominees. Whether the Asian gap we observe is driven by differences between Asian Americans and non-Asians, and/or Asian foreign nationals and non-Asians, and whether it would be observed in other countries, is left for future research.

[10] We cannot determine whether a nominee being Asian impacted the nominator's decision, as we did not inform nominators of the nominee's race. As a proxy for having an Asian nominee, we estimate nominators' willingness to enter their nominee into a competition controlling for the percent of subjects in the session who are Asian (both with and without other controls). The coefficient on the percent of subjects in the session who are Asian is insignificant in both analyses.

References

Baldiga, N.R., & Coffman, K.B. (2018). Laboratory evidence on the effects of sponsorship on the competitive preferences of men and women. *Management Science*, 64(2), 888-901.

Benjamin, D. J., Choi, J. J., & Strickland, A. J. (2010). Social identity and preferences. American Economic Review, 100(4), 1913-28.

Carlsson, F., Lampi, E., Martinsson, P., & Yang, X. (2020). Replication: Do Women Shy Away from Competition? Experimental Evidence from China. Journal of Economic Psychology, 102312.

Cason, T. N., Masters, W. A., and Sheremeta, R. M. (2010). Entry into winner-take-all and proportional-prize contests: An experimental study. *Journal of Public Economics*, 94(9), 604-611.

Chen, D. L., Schonger, M., & Wickens, C. (2016). oTree—An open-source platform for laboratory, online, and field experiments. *Journal of Behavioral and Experimental Finance*, *9*, 88-97.

Fortune (2020). The number of female CEOs in the Fortune 500 hits an all-time record (May 18), Fortune Media Group Holdings, New York, New York. https://fortune.com/2020/05/18/women-ceos-fortune-500-2020/

Goldin, C., Katz, L. F., and Kuziemko, I. (2006). The Homecoming of American College Women: The Reversal of the College Gender Gap. *Journal of Economic Perspectives*, 20(4), 133-156.

Grosse, N. D., and Riener, G. (2010). "Explaining Gender Differences in Competitiveness: Gender-Task Stereotypes." Jena Economic Research Papers 017.

Halladay, B. (2017). “Perception Matters: The Role of Task Gender Stereotype on Confidence and Tournament Selection.” Working paper.

Ifcher, J., & Zarghamee, H. (2016a). Pricing competition: a new laboratory measure of gender differences in the willingness to compete. *Experimental Economics*, 19(3), 642-662.

Ifcher, J., & Zarghamee, H. (2016b). Do Gender-Variant Preferences for Competition Persist in the Absence of Performance? *Economic Inquiry*, 54(4), 1918-1930.

Ifcher, J., & Zarghamee, H. (2020). Do nominations close the gender gap in competition? IZA Discussion Paper 13852.

Kamas L., and Preston, A. (2009). Social preferences, competitiveness and compensation: Are there gender differences? Working Paper.

Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. Journal of personality and social psychology, 72(6), 1245.

Klinowski, D. (2019). Selection into self-improvement and competition pay: Gender, stereotypes, and earnings volatility. *Journal of Economic Behavior & Organization*, 158, 128-146.

Muthukrishna, M., Henrich, J., Toyokawa, W., Hamamura, T., Kameda, T., & Heine, S. J. (2018). Overconfidence is universal? Elicitation of Genuine Overconfidence (EGO) procedure reveals systematic differences across domain, task knowledge, and incentives in four populations. PloS one, 13(8), e0202288.

Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *The quarterly journal of economics*, 122(3), 1067-1101.

Niederle, M., and Vesterlund, L. (2011). Gender and competition. *Annual Review of Economics*, 3(1), 601-630.

Saccardo, S., Pietrasz, A., & Gneezy, U. (2018). On the size of the gender difference in competitiveness. *Management Science*, 64(4), 1541-1554.

Siddique, A., & Vlassopoulos, M. (2020). Competitive preferences and ethnicity: Experimental evidence from Bangladesh. *Economic Journal*, 130(627), 793-821.

U.S. Census Bureau. (2020). Historical Income Tables: Households. Table H-6. Regions-by Median and Mean Income. https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html

Wozniak, D., Harbaugh, W., and Mayr, U. (2014). The Menstrual Cycle and Performance Feedback Alter Gender Differences in Competitive Choices. *Journal of Labor Economics*, 32(1), 161-198.

Yates, J. F., Lee, J. W., & Bush, J. G. (1997). General knowledge overconfidence: cross-national variations, response style, and "reality". *Organizational behavior and human decision processes*, 70(2), 87-94.

Table 1. Asian gap in competitive preferences

	Choose tournament		
Asian (marginal effect)	0.171	(0.052)	***
Performance in task 2	0.026	(0.007)	***
Performance improvement (between tasks 1 & 2)	-0.025	(0.012)	**
Confidence in task 2	0.206	(0.036)	***
Observations	324		

NOTES: Standard errors are clustered by session and are in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 2. Asian gap in competitive preferences with interaction term (Asian * Female)

	Choose tournament		
Asian (marginal effect)	0.247	(0.087)	***
Female (marginal effect)	-0.111	(0.074)	
Asian * Female (marginal effect)	-0.102	(0.131)	
Performance in task 2	0.024	(0.008)	**
Performance improvement (between tasks 1 & 2)	-0.024	(0.012)	**
Confidence in task 2	0.209	(0.036)	***
Observations	321		

NOTES: Standard errors are clustered by session and are in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively. Three subjects who identified as gender non-conforming dropped from the analysis.

Table 3. Residual Asian gap in willingness to compete with retrospective choice

	Choose tournament		
Asian (marginal effect)	0.036	(0.042)	
Performance in task 1	-0.013	(0.012)	
Confidence in task 1	0.327	(0.041)	***
Observations	324		

NOTES: Standard errors are clustered by session and are in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 4. Gap in competitive preferences for nominee, by Asian nominator

	Choose tournament		
Nominator is Asian (marginal effect)	0.032	(0.063)	
Nominee performance in task 2	0.012	(0.009)	
Nominee performance improvement (between tasks 1 & 2)	-0.032	(0.011)	**
Confidence in nominee in task 2	0.181	(0.041)	***
Observations	324		

NOTES: Standard errors are clustered by session and are in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Figure 1A: Percentage of subjects that choose the tournament payment scheme, by gender and beliefs about relative performance

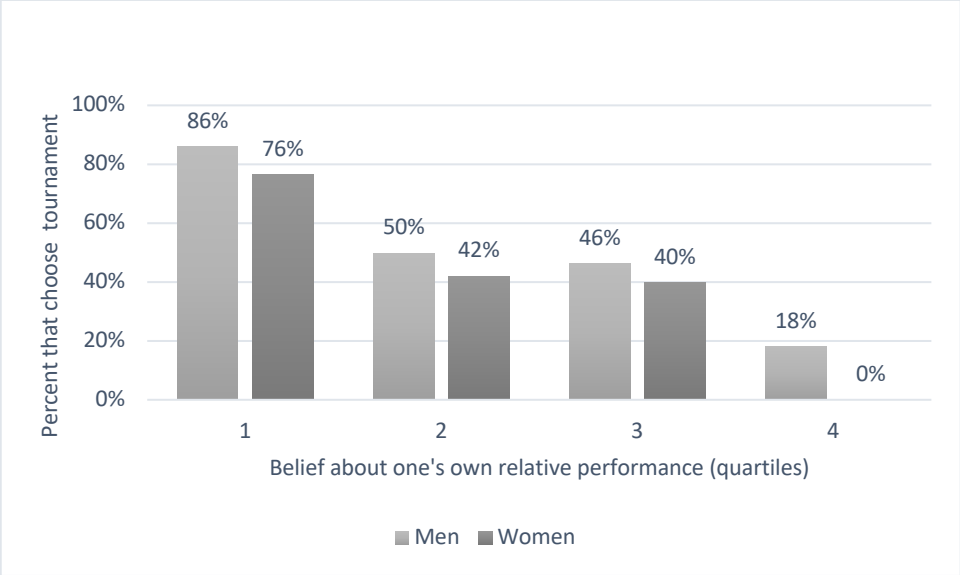
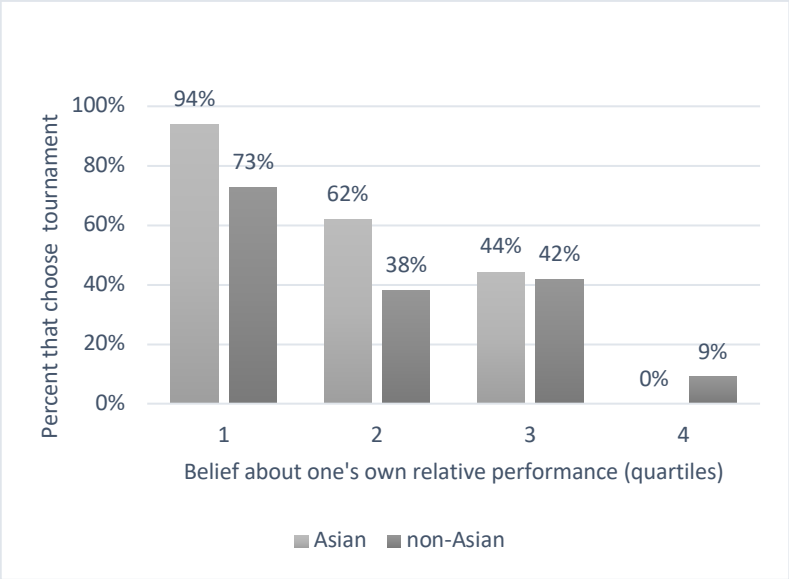


Figure 1B: Percentage of subjects that choose the tournament payment scheme, by Asian and beliefs about relative performance



Welcome!

Thank you for your willingness to participate.

Please wait quietly for the session to begin.

Please raise your hand if you have any questions.

Please DO NOT click the “Instructed to Proceed” button until instructed to do so.

Instructed to Proceed

Note: Subject will have signed the inform consent form prior to being seated.

Instructions

Welcome! Thank you for your willingness to participate.

Please read these instructions carefully and do not communicate with any other participants during this session. If you have a question, please raise your hand, and the experimenter will go where you are to answer your question privately. If you have a question after you leave today, please use the information provided on your copy of the consent form to contact the experimenters.

All cell phones should be turned off and put away for the entire length of the session. This session should take about an hour.

In this study you will be asked to complete 7 tasks. None of the tasks will take more than 5 minutes. At the end of the study, you will receive $5 for having completed the 7 tasks.

In addition, after completing the 7 tasks, we will randomly select one task and pay you based on that task. Thus, you should complete each task as if your payment depends on it. The task randomly selected for payment will be referred to as the "PAYMENT TASK." We will determine the payment task by drawing one ball from this spinner. The spinner contains 7 balls numbered from 1 to 7.

The method used to determine payments in each task varies. Before each task, we will describe how your payment for that task would be determined.

Please note that in economic studies deception is not permitted, as it would be considered fraud for us to mislead you when your decisions may impact your payment.

The payment will be made in cash at the end of this session. All payments will be distributed in a manner that ensures your anonymity.

Finally, please do not talk to other students about the study until after 12/6/19, as we will be conducting additional sessions through this date and the person you are talking to may participate in a future session.

PLEASE RAISE YOUR HAND NOW IF YOU HAVE ANY QUESTIONS BEFORE WE BEGIN.

Please DO NOT click the "Instructed to Proceed" button until instructed to do so.

Instructed to Proceed

Note: The instruction will be read out loud by the experimenter.

Please answer the three questions below

The answers that you provide to the following questions will not affect your payment.

Question 1: What year in school are you?

- ◯ **First-Year Student**
- ◯ **Sophomore**
- ◯ **Junior**
- ◯ **Senior**
- ◯ **Graduate Student**
- ◯ **Not Listed**

Question 2: What is your gender?

- ◯ **Female**
- ◯ **Male**
- ◯ **Transgender Female**
- ◯ **Transgender Male**
- ◯ **Gender Non-Conforming**
- ◯ **Not Listed**

Question 3: In which category does your major (or intended major) fall? (If you have a double major, then indicate in which category your first major falls?) :

- ◯ **Business or Management**
- ◯ **Economics**
- ◯ **Humanities**
- ◯ **Life Sciences**
- ◯ **Math or Statistics**
- ◯ **Physical Sciences**
- ◯ **Social Sciences (excluding economics)**
- ◯ **Not Listed**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Task 1 Instructions

For Task 1 you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 1 Payment Information

If Task 1 is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task. Your payment does not decrease if you provide an incorrect answer to a problem.

We refer to this payment scheme as “Piece-Rate” payment.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 1

The time left to solve problems: 0:07

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

41	22	91	68	34	
81	89	17	35	13	
81	77	24	76	90	
69	17	42	90	30	
10	15	58	96	13	
12	16	38	44	20	
80	20	74	24	87	
47	95	36	64	60	
28	70	66	45	87	
37	61	19	69	17	
70	86	20	24	16	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 1 Results

You solved 0 problems correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 2 Instructions

For Task 2 you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 2 Payment Information

If Task 2 is chosen as the payment task, then you will receive either:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in this task.
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

We refer to this payment scheme as "Tournament" payment.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 2

The time left to solve problems: 0:08

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

12	76	30	62	97	
38	31	50	32	91	
47	81	34	98	85	
26	77	69	29	17	
93	81	74	67	61	
63	36	43	16	88	
31	52	97	56	91	
88	27	40	91	39	
27	98	14	61	45	
73	84	11	54	62	
22	75	69	42	20	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 2 Results

You solved 0 problems correctly in Task 2.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Information about you and Participant X

Below is some information about you and one other randomly-selected participant in this session (hereafter referred to as "Participant X").

Please copy this information onto your scratch paper for later reference. Feel free to use abbreviations or shorthand. This information is for your reference only.

	You	Participant X
Year in school	First-Year Student	None
Gender	Female	None
Major	Business or Management	None
Problems solved correctly in Task 1	0	None
Problems solved correctly in Task 2	0	None

Please note that each participant in this session will be shown information about one other randomly-selected participant in this session. This includes Participant X. However, you and Participant X are NOT a “pair.” That is, Participant X will be shown information about themselves and one randomly-selected participant other than you in this session.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Instructions

For Task 3A you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 3A Payment Information

In Task 3A you will choose which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to your performance in Task 3A.

If Task 3A is chosen as the payment task, then what you receive will be determined as follows:

- If you choose the Piece-Rate payment scheme, then you will receive $0.50 per problem you solve correctly in this task.
- If you choose the Tournament payment scheme, then you will receive either:
  - $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
  - $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please indicate which payment scheme you would like to apply to your Task 3A performance :

- ◯ **Piece-Rate**
- ◯ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Payment Information (Continued)

You have chosen to apply the Piece-Rate payment scheme to your performance in Task 3A.

If Task 3A is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Payment Information (Continued)

You have chosen to apply the Tournament payment scheme to your performance in Task 3A.

If Task 3A is chosen as the payment task, then you will receive:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Task 3A

The time left to solve problems: 0:07

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

17	79	40	30	62	
87	86	46	75	77	
18	38	11	89	18	
14	34	65	43	25	
18	75	82	36	86	
69	77	73	83	75	
71	87	83	66	31	
45	96	85	89	93	
15	32	83	10	55	
28	31	83	67	54	
48	92	98	16	89	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 3A Results

You solved 0 problems correctly in Task 3A.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4A Instructions

For Task 4A you do not have to add any numbers.

Task 4A Payment Information

In Task 4A you will choose which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to your performance in Task 1.

Recall, the number of problems you correctly solved in Task 1 was 0.

If Task 4A is chosen as the payment task, then what you receive will be determined as follows:

- If you choose the Piece-Rate payment scheme, then you will receive $0.50 per problem you solved correctly in Task 1.
- If you choose the Tournament payment scheme, then you will receive either:
  - $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
  - $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)

Please indicate which payment scheme you would like to apply to your Task 1 performance :

- ◯ **Piece-Rate**
- ◯ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4A Payment Information (Continued)

You have chosen to apply the Tournament payment scheme to your performance in Task 1.

If Task 4A is chosen as the payment task, then you will receive:

- $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4A Payment Information (Continued)

You have chosen to apply the Piece-Rate payment scheme to your performance in Task 1.

If Task 4A is chosen as the payment task, then you will receive $0.50 per problem you solved correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Your Relative Performance in Tasks 1 and 2

In Task 1, in which category below would you place your performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- **Top Quartile (Top 25%)**
- **Second Quartile (Between 25th and 50th percentile)**
- **Third Quartile (Between 50th and 75th percentile)**
- **Bottom Quartile (Bottom 25%)**

In Task 2, in which category below would you place your performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- **Top Quartile (Top 25%)**
- **Second Quartile (Between 25th and 50th percentile)**
- **Third Quartile (Between 50th and 75th percentile)**
- **Bottom Quartile (Bottom 25%)**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Information about you and Participant X

Below is the same information about you and one other randomly-selected participant in this session that was displayed previously.

	You	Participant X
Year in school	Senior	First-Year Student
Gender	Transgender Male	Female
Major	Life Sciences	Business or Management
Problems solved correctly in Task 1	0	0
Problems solved correctly in Task 2	0	0

Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will be shown information about themselves and one randomly-selected participant other than you in this session.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Instructions

For Task 3B you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 3B Payment Information

In Task 3B you will choose on behalf of Participant X which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to Participant X's performance in Task 3B.

(Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will not make a decision on your behalf.)

If Task 3B is chosen as the payment task, then what Participant X receives will be determined as follows:

- If you choose the Piece-Rate payment scheme on behalf of Participant X, then Participant X will receive $0.50 per problem Participant X solves correctly in this task.
- If you choose the Tournament payment scheme on behalf of Participant X, then Participant X will receive either:
  - $2.00 per problem Participant X solves correctly in this task if Participant X answers more problems correctly than 75 percent of the participants in this session in Task 2. (That is, Participant X's performance in this task will be compared to other participants' performance in Task 2.)
  - $0.00 per problem Participant X solves correctly in this task if Participant X does not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, Participant X's performance in this task will be compared to other participants' performance in Task 2.)

Participant X's payment does not decrease if Participant X provides an incorrect answer to a problem.

Please indicate which payment scheme you would like to apply to Participant X's Task 3B performance :

- ○ **Piece-Rate**
- ○ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Payment Information (Continued)

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Piece-Rate payment scheme to your performance in Task 3B.

If Task 3B is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task plus 10 percent of what Participant X receives for this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Payment Information (Continued)

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Tournament payment scheme to your performance in Task 3B.

If Task 3B is chosen as the payment task, then you will receive:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Task 3B

The time left to solve problems: 0:08

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

58	31	66	76	88	
95	31	95	42	99	
55	10	53	34	56	
93	72	98	63	31	
42	30	67	58	27	
52	96	22	90	51	
82	12	29	59	46	
63	74	79	29	65	
47	66	57	43	35	
93	61	67	89	19	
53	26	95	84	34	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 3B Results

You solved 0 problems correctly in Task 3B.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4B Instructions

For Task 4B you do not have to add any numbers.

Task 4B Payment Information

In Task 4B you will choose on behalf of Participant X which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to Participant X's performance in Task 1.

(Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will not make a decision on your behalf.)

Recall, the number of problems Participant X correctly solved in Task 1 was 0.

If Task 4B is chosen as the payment task, then what Participant X will receive for this task will be determined as follows:

- If you choose the Piece-Rate payment scheme on behalf of Participant X, then Participant X will receive $0.50 per problem Participant X solved correctly in Task 1.
- If you choose the Tournament payment scheme on behalf of Participant X, then Participant X will receive either:
    - $2.00 per problem Participant X solved correctly in Task 1 if Participant X answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, Participant X's performance in Task 1 will be compared to other participants' performance in Task 1.)
    - $0.00 per problem Participant X solved correctly in Task 1 if Participant X did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, Participant X's performance in Task 1 will be compared to other participants' performance in Task 1.)

Further, if Task 4B is chosen as the payment task, then you will receive an additional payment that is equal to 10 percent of what Participant X receives for this task.

Please indicate which payment scheme you would like to apply to Participant X's Task 1 performance :

- ◯ **Piece-Rate**
- ◯ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4B Payment Information (Continued

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Piece-Rate payment scheme to your performance in Task 1.

If Task 4B is chosen as the payment task, then you will receive $0.50 per problem you solved correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4B Payment Information (Continued

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Tournament payment scheme to your performance in Task 1.

If Task 4B is chosen as the payment task, then you will receive:

- $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- Plus 10 percent of what Participant X receives for this task.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Note: Approximately half of the subjects will see Tasks 3B & 4B first and Tasks 3A & 4A second. The order of these tasks was randomized so that we can examine order effects.

Participant X's Relative Performance in Tasks 1 and 2

In Task 1, in which category below would you place Participant X's performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- **Top Quartile (Top 25%)**
- **Second Quartile (Between 25th and 50th percentile)**
- **Third Quartile (Between 50th and 75th percentile)**
- **Bottom Quartile (Bottom 25%)**

In Task 2, in which category below would you place Participant X's performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- **Top Quartile (Top 25%)**
- **Second Quartile (Between 25th and 50th percentile)**
- **Third Quartile (Between 50th and 75th percentile)**
- **Bottom Quartile (Bottom 25%)**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Task 5 Instructions

In 11 items, you will choose between a lottery and a fixed payment. For each item, the lottery is a 50% chance of earning $10 and a 50% chance of earning $0, while the amount of the fixed payment varies.

Task 5 Payment Information

If Task 5 is chosen as the payment task, then what you receive for this task will be determined as follows:

- One of the 11 items in this task will be selected randomly.
    - If you choose the fixed payment over the lottery for that item, then you will receive the fixed payment.
    - If you choose the lottery over the fixed payment for that item, then your payment will depend on the outcome of the lottery. Specifically, we will put 10 numbered balls in the spinner, ranging from 1 to 10. One ball will be chosen randomly from the spinner. If the chosen ball is numbered between 1 and 5, then the lottery payment will be $0. If the chosen ball is numbered between 6 and 10, then the lottery payment will be $10.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 5

For each choice below, the lottery is a 50% chance of earning $10 and a 50% chance of earning $0.

For each choice below, please indicate whether you prefer the fixed payment or the lottery.

Choose:	◯ $0 Fixed Payment	◯ Lottery
Choose:	◯ $1 Fixed Payment	◯ Lottery
Choose:	◯ $2 Fixed Payment	◯ Lottery
Choose:	◯ $3 Fixed Payment	◯ Lottery
Choose:	◯ $4 Fixed Payment	◯ Lottery
Choose:	◯ $5 Fixed Payment	◯ Lottery
Choose:	◯ $6 Fixed Payment	◯ Lottery
Choose:	◯ $7 Fixed Payment	◯ Lottery
Choose:	◯ $8 Fixed Payment	◯ Lottery
Choose:	◯ $9 Fixed Payment	◯ Lottery
Choose:	◯ $10 Fixed Payment	◯ Lottery

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Please answer the question below

Question 1: Please indicate the gender of Participant X. (If you are correct, you will receive an additional payment of $1.)

- ◯ **Female**
- ◯ **Male**
- ◯ **Transgender Female**
- ◯ **Transgender Male**
- ◯ **Gender Non-Conforming**
- ◯ **Not Listed**

Click OK to continue.

OK

Please answer the questions below

The answers that you provide to the following questions will not affect your payment.

Question 1: Are you on a college varsity team?

- ◯ **Yes**
- ◯ **No**

If yes, what team are you on?

Question 2: How old are you in years?

Question 3: What race/ethnicity do you identify yourself as (check all that apply):

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic (having origins in Mexico, Central, or South America)
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Not listed

Question 4: How would you characterize your political views:

- ◯ **Conservative**
- ◯ **Moderate**
- ◯ **Progressive**

Note: This page and the next page will appear on one page in the program. We broke it into two pages here to improve readability.

Question 5: What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of yourself?

Question 6: What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of Participant X?

Question 7: Finally, in the space provided below, please try to describe what you believe to be the purpose of the study:

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Payment Task Determination

Now we will determine the payment task. Please focus your attention on the experimenters at the front of the classroom.

Please raise your hand if you have any questions.

Please DO NOT click the “Instructed to Proceed” button until instructed to do so.

Instructed to Proceed

Your payment

Again, thank you for your willingness to participate.

Your payment will be calculated as follows:

1. You will receive a $5 payment for completing the 7 tasks.

2. You will be paid for the payment task. Table 1 below indicates your payment for tasks 1-4B if one of those tasks is the payment task. Table 2 below indicates the choices you made in task 5; if task 5 is the payment task, then the experimenters will explain how to determine your payment from Table 2.

3. There were 5 questions for which you could earn an additional $1 for each you answered correctly. Table 3 below indicates which questions you answered correctly.

4. Finally, you will receive 10 percent of Participant X's payment if the payment task was 3B or 4B.

Please remain seated until we call you by your seat number. Once your number is called please come to the front of the classroom to collect your payment.

Please raise your hand if you have any questions.

Again, thank you for your willingness to participate.

Table 1: Payment for tasks 1-4B

Task	Payment scheme	Problems solved correctly	Performance quartile	Payment if payment task
Task 1	Piece-Rate	0	1	0.00
Task 2	Tournament	0	1	0.00
Task 3A	Piece-Rate	0	1	0.00
Task 4A	Tournament	0	1	0.00
Task 3B[a]	Piece-Rate	0	1	0.00
Task 4B[a]	Tournament	0	1	0.00

[a] A randomly-selected participant--other than Participant X--in this session chose to apply the payment scheme on your behalf in Tasks 3B & 4B.

Note: This page and the next page will appear on one page in the program. We broke it into two pages here to improve readability.

Table 2: Payment for task 5 (recall you made 11 choices between a fixed payment and a lottery. The lottery is a 50% chance of earning $10 and a 50% chance of earning $0.)

Fixed payment	Your choice
$0	Lottery
$1	Lottery
$2	Lottery
$3	Lottery
$4	Lottery
$5	Lottery
$6	Lottery
$7	Lottery
$8	Lottery
$9	Lottery
$10	Lottery

Table 3: Answers to 7 questions

Question	You answered	Correct?[b]
Your Task 1 quartile: 1	4	False
Your Task 2 quartile: 1	4	False
Participant X's Task 1 quartile: 1	4	False
Participant X's Task 2 quartile: 1	4	False
Participant X's gender: Female	Not Listed	False

[b] True indicates that your answer was correct and false indicates your answer was incorrect. For each correct answer you will earn an additional $1.

Please DO NOT click the “Instructed to Proceed” button until instructed to do so.

Instructed to Proceed