# No Gender Difference in Willingness to Compete When Competing against Self: Online Appendix 

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## Appendix A: Instructions for the Lab Experiment

## Welcome

Hi and welcome! In this experiment you will be asked to complete different tasks. Please press OK to get started with the experiment.

## General Instructions

In this experiment you will be asked to complete three different tasks. None of these will take more than 5 minutes.
At the end of the experiment we will randomly select one of the tasks. This is the task that will be relevant for your profit. Once you have completed the three tasks we determine which task counts for your profit by randomly drawing a number between 1 and 3.
The method we use to determine your earnings varies across tasks. Before each task we will describe in detail how your payment is determined.

## Rules for Task 1

For Task 1 you will be asked to calculate the sum of five randomly chosen two-digit numbers.
You will be given 5 minutes to do a series of these problems. You are not allowed to use a calculator to determine the sum. However you are welcome to write the numbers down and make use of the provided scratch paper. You submit an answer by clicking the OK button with your mouse.
If Task 1 is the one randomly selected for your profit, then you get 1 dollar per problem you solve correctly in the 5 minutes. Your profit does not decrease if you provide an incorrect answer to a problem. We refer to this task as the Piece Rate task. If you have any questions before we begin, please raise your hand.

## Rules for Task 2 - Other treatment

As in Task 1 you will be given 5 minutes to calculate the correct sum of a series of five 2digit numbers.
However for Task 2 your payment depends on your performance relative to that of another participant who is here right now, and who has been put in a group together with you. Each group consists of two randomly grouped people.
If Task 2 is the one randomly selected for payment, then your profit depends on the number of problems you solve compared to the other person in your group. The individual who solves the most problems correctly will receive 2 dollars for every
problem he or she solved correctly, while the other participant receives no profit. If there is a tie the payment will be split between the two of you.
We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until the end of the experiment.
If you have any questions before we begin, please raise your hand.

## Rules for Task 2 - Self treatment

As in Task 1 you will be given 5 minutes to calculate the correct sum of a series of five 2digit numbers.
However for Task 2 your payment depends on your performance relative to your own performance in Task 1.
If Task 2 is the one randomly selected for payment, then your profit depends on the number of problems you solve in Task 2 compared to the number of problems you solved in Task 1. If you solve more problems correctly than you did in Task 1, you will receive 2 dollars for every correct answer you give in Task 2. Otherwise, you will receive no profit from Task 2. If there is a tie with your previous Task 1 score, then you will receive 1 dollar for every correct answer in Task 2.
We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until the end of the experiment.
If you have any questions before we begin, please raise your hand.

## Rules for Task 3 - Other treatment

As in the previous two tasks you will be given 5 minutes to calculate the correct sum of a series of five 2-digit numbers. However you will now get to choose which of the two previous payment schemes you prefer to apply to your performance on the third task. If Task 3 is the one randomly selected for profit, then your earnings for this task are determined as follows. If you choose the Piece Rate, you receive 1 dollar per problem you solve correctly. If you choose the Tournament Rate, your performance will be evaluated relative to the performance of the other participant in your group in the Task 2tournament. If you correctly solve more problems than s/he did during Task 2, then you receive two times the profit from the piece rate, which means you will get 2 dollars per problem you solve correctly. You will receive no earnings for this task if you choose the tournament and do not solve more problems correctly now, than the other person in your group did during Task 2.
The next screen will ask you to choose whether you want the piece rate or the tournament rate applied to your performance in Task 3. You will then be given 5 minutes to calculate the correct sum of a series of five randomly chosen two-digit numbers in the same way as before.
If you have any questions before we begin, please raise your hand.

## Rules for Task 3 - Self treatment

As in the previous two tasks you will be given 5 minutes to calculate the correct sum of a series of five 2-digit numbers. However you will now get to choose which of the two previous payment schemes you prefer to apply to your performance on the third task. If Task 3 is the one randomly selected for profit, then your earnings for this task are determined as follows. If you choose the Piece Rate, you receive 1 dollar per problem
you solve correctly. If you choose the Tournament Rate, your performance will be evaluated relative to your own performance in the Task 2-tournament. If you correctly solve more problems than you did during Task 2, then you receive two times the profit from the piece rate, which means you will get 2 dollars per problem you solve correctly. You will receive no earnings for this task if you choose the tournament and do not solve more problems correctly now, than you did during Task 2.
The next screen will ask you to choose whether you want the piece rate or the tournament rate applied to your performance in Task 3. You will then be given 5 minutes to calculate the correct sum of a series of five randomly chosen two-digit numbers in the same way as before.
If you have any questions before we begin, please raise your hand.

## Task 3 Payment Scheme Choice:

Which compensation scheme do you prefer for Task 3?

## Rank Guess

In this part we want you to make some guesses.
For each correct guess 1 dollar will be added to your profit from the experiment.
First we would like you to guess in which round your own performance was the best.

- I did more tasks correctly in Task 2 than I did in Task 1.
- I did more tasks correctly in Task 3 than I did in Task 2.

Now we would like you to guess how you performed compared to the other person in your group.
(Self treatment: Now we would like you to guess how you performed compared to a randomly chosen person in this room.)

- In Task 2 I did more tasks correctly than what the other person in my group did.


## End of Experiment Survey

- How do you see yourself: Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?
Not at all willing

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

- Do you consider yourself a "competitive" person? Please rate on a scale of 1 to 10 Not competitive at all Extremely competitive $\begin{array}{llllllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10\end{array}$
- Do you think men or women would do better in this addition task?
- Are you an undergraduate or graduate student?
- Have you seen math task in an ICES experiment before?
- Please indicate your gender.
- What is your age?
- What is your major?
- Please specify your ethnicity:

White
Hispanic/Latino
Black/African American
Asian/Pacific Islander
Other
Prefer not to say

- Was there any part of the experiment that confused you? Please explain:
- Do you have any comments or other suggestions on today's experiment? Please explain:


## Appendix B: Instructions for the Online Experiment

Thank you for participating in our study. We estimate that this study will take about 5-10 minutes to complete. After you have finished, you will receive a completion code. Please return to the HIT on MTurk and enter the completion code in the space provided, in order to receive your credit. You will receive $\$ 0.25$ for completing the HIT. In addition to that, you can earn a bonus of up to $\$ 3.50$ based on your, and others', performance. The additional money will be paid to you as a bonus through Amazon Mturk in the next few business days. We will now go through the instructions. Please read them carefully. You are only eligible for bonus payment if you adhere to the instructions. As established researchers and long-term Requesters on Amazon MTurk, we promise that the information in this survey is truthful and accurate. We never use deception: the decisions you make are real, any groups that you participate in is real and we always send you the money that you earn in your interactions with others in this HIT. If you have any questions about this research, please feel free to email us at mturk.surveys.research@gmail.com.

Before we move on, please answer the following demographic questions:
What is your age (in years)?
Ethnicity Ethnicity:
O Asian (1)
O Black (2)
O Hispanic-Latino (3)
O Native American (4)
O White (5)
O Other (6)
Gender What is your gender?
O Male (1)
O Female (2)

Residence What is your country of residence?
O United States (1)
O Canada (2)
O Other (3)
Student Are you currently a student?
O Yes (1)
O No (2)
You will participate in an experiment. This experiment has many other participants in addition to you. Your payoffs will be paid to you as a bonus on Mturk and will depend on your performance and/or on the performance of others. In this experiment you will be asked to complete three tasks that will each take 90 seconds. At the end of the
experiment we will randomly select one of the tasks. This is the task that will be relevant for your profit. We determine which task counts for your profit by randomly drawing a number between 1 and 3 . The method used to determine your earnings varies across tasks. Before each task we will describe in detail how your payment is determined.

## Rules for task 1

For task 1, you will be asked to solve a series of problems by counting the number of zeros ( 0 ) in tables consisting of zeros (0) and ones (1). You will be given 90 seconds to count the zeros in as many tables as possible. After the 90 seconds are up you will automatically continue to the next page. That means that you do not need to keep time yourself, but can concentrate on solving the tables. If you solve all available tables before the time is up, please just wait for the survey to continue automatically. In task 1, you get 15 cents per table you solve correctly in the 90 seconds. Your profit does not decrease if you provide an incorrect answer to a table. We refer to this task as the Piece Rate task. Now click to continue to get started with task 1
This is task 1. Please count the number of 0 s in each table below and provide the answer.

## Rules for task 2 - Self treatment

As in task 1, you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However, for task 2 your payment depends on your performance relative to that of your own performance in task 1. In task 2, your profit depends on the number of tables you solve in task 2 compared to the number of tables you solved in task 1. If you solve more tables correctly now than you did in task 1, you will receive 30 cents for every correct answer you give in task 2. Otherwise you will receive no profit from task 2. If there is a tie with your previous task 1 score, you will receive 15 cents for every correct answer in task 2. We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until you receive your bonus payment. Now click to continue to get started with task 2.

## Rules for task 2 - Other treatment

As in task 1, you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However for task 2 your payment depends on your performance relative to that of another participant who is doing the same experiment with the same tables as you, and who has been put in a group together with you. Each group consists of two randomly grouped people. You will not be given any information about the other person in your group, and that person will not be given any information about you. In task 2, your profit depends on the number of tables you solve compared to the other person in your group. The individual who solves the most tables correctly will receive 30 cents for every table s/he solved correctly, while the other participant receives no profit. If there is a tie the payment will be split between the two of you. We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until you receive your bonus payment. Now click to continue to get started with task 2.

## Rules for task 2 - Other Same Ability treatment

As in task 1, you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However for task 2 your payment depends on your performance relative to that of another participant who is doing the same experiment with the same tables as you, and who has been put in a group together with you. Each group consists of two randomly grouped people. The only information that you will be given about the other person in your group is that your performance in task 1 was the same, that is you solved the same number of tables in task 1. This information is also given to the other person. In task 2, your profit depends on the number of tables you solve compared to the other person in your group. The individual who solves the most tables correctly will receive 30 cents for every table s/he solved correctly, while the other participant receives no profit. If there is a tie the payment will be split between the two of you. We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until you receive your bonus payment. Now click to continue to get started with task 2.

Rules for task 2 - Other Same Gender treatment (the information women/man and she/he is varied after the person's own gender)

As in task 1, you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However for task 2 your payment depends on your performance relative to that of another participant who is doing the same experiment with the same tables as you, and who has been put in a group together with you. Each group consists of two randomly grouped people. The only information that you will be given about the other person in your group is that she (he) is a woman (man). She (He) will get the same information about you. In task 2, your profit depends on the number of tables you solve compared to the other person in your group. The individual who solves the most tables correctly will receive 30 cents for every table s/he solved correctly, while the other participant receives no profit. If there is a tie the payment will be split between the two of you. We refer to this as the Tournament Task. You will not be informed of how you did in the tournament until you receive your bonus payment. Now click to continue to get started with task 2.

## Rules for task 3 - Self treatment

As in the previous two tasks you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However, for task 3 you will get to choose which of the two previous payment schemes you prefer to apply to your performance on the third task. In task 3 your earnings are determined as follows: If you choose the Piece Rate, you receive 15 cents per table you solve correctly. If you choose the Tournament Rate, your performance will be evaluated relative to your own performance in task 2. If you correctly solve more tables now than you did during task 2, then you receive double the profit from the piece rate. That means that you will get 30 cents per table you solve correctly. You will receive no earnings for this task if you choose the tournament and do not solve more tables correctly now, than you did during Task 2. The next screen will ask you to choose whether you want the Piece Rate or the Tournament Rate applied to your performance in task 3. You will then be given 90 seconds to count the number of zeros in a series of tables with ones and zeroes, in the same way as before. Now click to continue.

## Rules for task 3 - Other treatments

As in the previous two tasks you will be given 90 seconds to count the zeros in a series of tables with ones and zeros. However, for task 3 you will get to choose which of the two previous payment schemes you prefer to apply to your performance on the third task. In task 3 your earnings are determined as follows: If you choose the Piece Rate, you will receive 15 cents per table you solve correctly. If you choose the Tournament Rate, your performance will be evaluated relative to the performance of the other participant in your group in the Task 2-tournament. If you correctly solve more tables than $\mathrm{s} / \mathrm{he}$ did during Task 2, you will receive double the profit from the piece rate. That means you will get 30 cents per table you solve correctly. You will receive no earnings for this task if you choose the tournament rate and do not solve more tables correctly now, than the other person in your group did during Task 2. The next screen will ask you to choose whether you want the Piece Rate or the Tournament Rate applied to your performance in task 3. You will then be given 90 seconds to count the number of zeros in a series of tables with ones and zeroes, in the same way as before. Now click to continue.

## Ranks Guess

In this part we want you to make some guesses. For each correct guess 0.1 dollar will be added to your profit from the experiment.

I did more tasks correctly in Task 2 than I did in Task 1:
O Yes (1)
O No (2)
I did more tasks correctly in Task 3 than I did in Task 2:
O Yes (1)
O No (2)
If my performance is compared to that of the person I was matched to (for Self treatment: that of a randomly chosen person who also participated in this experiment), I think that I did more tasks correctly in Task 2 than s/he did:
O Yes (1)
O No (2)
How do you see yourself: Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?
O 1(Not at all willing to take risks) (1)
O 2 (2)
○ 3 (3)
O 4 (4)
O 5 (5)
O 6 (6)
O 7 (7)
○ 8 (8)
○ 9 (9)
O 10 (very willing to take risks) (10)

Do you think men or women generally do better in the "counting zeros"-task that you just did?
O 1 (Women do a lot better) (1)
O 2 (2)
○ 3 (3)
O 4 (4)
O 5 (5)
O 6 (6)
○ 7 (7)
○ 8 (8)
○ 9 (9)
O 10(Men do a lot better) (10)
The experiment is now finished. Please answer the following questions. You will then see the completion code on the screen.

What was your total income last year? Take into account all your sources of income, including scholarships, health benefits, fringe benefits, and others. Please note that this is your personal income, not the income of your household.
O Less than $\$ 10,000$ (1)
O \$10,000 to \$20,000 (2)
O \$20,000 to \$30,000 (3)
O \$30,000 to \$40,000 (4)
O \$40,000 to \$50,000 (5)
O \$50,000 to \$60,000 (6)
O \$60,000 to \$70,000 (7)
O \$70,000 to \$80,000 (8)
O \$80,000 to \$90,000 (9)
O \$90,000 to \$100,000 (10)
O Over \$100,000 (11)
What is your highest level of education completed?
O Less than a high school degree (1)
O High School Diploma (2)
O Vocational Training (3)
O Some College (4)
O Bachelor's Degree (5)
O Graduate Degree (6)
What was/is your major in college/graduate school?
O Economics (1)
O Psychology (2)
O Sciences / Math (3)
O Humanities / Arts (4)
O Business / MBA (5)
O Medical (6)

O Law (7)
O Others (8)
O Not applicable (9)
Was anything unclear in the instructions or survey questions? (Optional)

## Appendix C: Summary Statistics and Additional Analysis for the Lab Experiment

Table C1: Summary Statistics

|  |  | Women | Men | Total |
| :---: | :---: | :---: | :---: | :---: |
| Other | N | $\mathrm{N}=48$ | $\mathrm{N}=52$ | $\mathrm{N}=100$ |
|  | Age | 21.02 (0.31) | 20.50 (0.23) | 20.75 (0.19) |
|  | Task 1 Score | 8.25 (0.36) | 8.40 (0.45) | 8.33 (0.29) |
|  | Task 2 Score | 9.71 (0.38) | 9.42 (0.52) | 9.56 (0.32) |
|  | Task 3 Score | 9.98 (0.36) | 10.40 (0.51) | 10.20 (0.31) |
|  | Confidence 1 | 0.69 (0.07) | 0.73 (0.06) | 0.71 (0.05) |
|  | Confidence 2 | 0.56 (0.07) | 0.67 (0.07) | 0.62 (0.05) |
|  | Confidence 3 | 0.71 (0.07) | 0.85 (0.05) | 0.78 (0.04) |
|  | Risk Attitudes | 6.00 (0.29) | 7.25 (0.24) | 6.65 (0.20) |
| Self | N | $N=55$ | $\mathrm{N}=49$ | $\mathrm{N}=104$ |
|  | Age | 21.09 (0.25) | 21.33 (0.26) | 21.20 (0.18) |
|  | Task 1 Score | 8.29 (0.35) | 8.49 (0.48) | 8.38 (0.29) |
|  | Task 2 Score | 9.49 (0.42) | 9.47 (0.46) | 9.48 (0.31) |
|  | Task 3 Score | 9.53 (0.43) | 9.76 (0.52) | 9.63 (0.33) |
|  | Confidence 1 | 0.64 (0.07) | 0.73 (0.06) | 0.68 (0.05) |
|  | Confidence 2 | 0.56 (0.07) | 0.61 (0.07) | 0.59 (0.05) |
|  | Confidence 3 | 0.71 (0.06) | 0.76 (0.06) | 0.73 (0.04) |
|  | Risk Attitudes | 6.16 (0.29) | 7.35 (0.27) | 6.72 (0.21) |
| Total | N | $\mathrm{N}=103$ | $\mathrm{N}=101$ | $\mathrm{N}=204$ |
|  | Age | 21.06 (0.20) | 20.90 (0.18) | 20.98 (0.13) |
|  | Task 1 Score | 8.27 (0.25) | 8.45 (0.33) | 8.36 (0.20) |
|  | Task 2 Score | 9.59 (0.28) | 9.45 (0.34) | 9.52 (0.22) |
|  | Task 3 Score | 9.74 (0.28) | 10.09 (0.36) | 9.91 (0.23) |
|  | Confidence 1 | 0.66 (0.05) | 0.73 (0.04) | 0.70 (0.03) |
|  | Confidence 2 | 0.56 (0.05) | 0.64 (0.05) | 0.60 (0.03) |
|  | Confidence 3 | 0.71 (0.04) | 0.80 (0.04) | 0.75 (0.03) |
|  | Risk Attitudes | 6.09 (0.21) | 7.30 (0.18) | 6.69 (0.14) |

Notes: Standard errors in parentheses. Confidence 1 is the incentivized belief question on scoring better in Task 2 than in Task 1 (1 if Yes, 0 if No). Confidence 2 is the incentivized belief question on scoring better in Task 3 than in Task 2 (1 if Yes, 0 if No). Confidence 3 is the incentivized belief question on scoring better than the other person in Task 2 ( 1 if Yes, 0 if No). Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk".

Table C2: Proportion (in percentages) Who Chooses Tournament Pay in Task 3

|  | Women | Men | Total | $p$-values for gender difference |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | t-test of Proportions | Fisher's <br> Exact test |
| Other | 37.5 (7.1) | 57.7 (6.9) | 48.0 (5.0) | $\mathrm{p}=0.044$ | $\mathrm{p}=0.048$ |
| Self | 41.8 (6.7) | 55.1 (7.2) | 48.1 (4.9) | $\mathrm{p}=0.176$ | $\mathrm{p}=0.238$ |
| Total | 39.8 (4.8) | 56.4 (5.0) | 48.0 (3.5) | $\mathrm{p}=0.018$ | $\mathrm{p}=0.025$ |

Notes: Standard errors in parentheses.

Table C3: Risk Preferences

|  |  |  |  | p-values for gender <br> difference |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Women | Men | Total | d-test |  |
|  |  |  |  | Wilcoxon test |  |
| Other | $6.00(0.29)$ | $7.25(0.24)$ | $6.65(0.20)$ | $\mathrm{p}=0.001$ | $\mathrm{p}=0.002$ |
| Self | $6.16(0.29)$ | $7.35(0.27)$ | $6.72(0.21)$ | $\mathrm{p}=0.004$ | $\mathrm{p}=0.005$ |
| Total | $6.09(0.21)$ | $7.30(0.18)$ | $6.69(0.14)$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ |

Notes: Standard errors in parentheses. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk".

Table C4: Confidence

|  | Women | Men | Total | $p$-values for gender <br> difference |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | t -test for <br> Proportions |
|  | Fisher's |  |  |  |  |
|  |  |  |  | Exact test |  |

Notes: Standard errors in parentheses. Confidence is a binary variable that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments).

Table C5: Improvement in Task Scores (in percentages) Between Task 1 and Task 2, by Treatment and Gender

|  | Women | Men | Total | $p$-values diff | gender nce |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | t-test | Wilcoxon test |
| Other | 32.8 (13.0) | 15.5 (4.4) | 23.9 (6.7) | $\mathrm{p}=0.196$ | $\mathrm{p}=0.641$ |
| Self | 18.2 (4.4) | 18.2 (5.4) | 18.2 (3.4) | $\mathrm{p}=0.992$ | $\mathrm{p}=0.628$ |
| Total | 25.0 (6.5) | 16.8 (3.5) | 21.0 (3.7) | $\mathrm{p}=0.271$ | $\mathrm{p}=0.568$ |

Notes: Improvement in score between Task 1 and Task 2. Standard errors in parentheses. Score improvement is calculated by ([Task2Score/Task1Score] - 1)*100.

Table C6: Probit Regressions for the Tournament Entry Decision (marginal effects from probit):

|  | $(1)$ <br> (Other) | $(2)$ <br> (Other) | $(3)$ <br> (Self) | $(4)$ <br> (Self) |
| :--- | :---: | :---: | :---: | :---: |
| Female | $-0.193^{* *}$ | -0.113 | -0.130 | -0.026 |
|  | $(0.09)$ | $(0.09)$ | $(0.10)$ | $(0.09)$ |
| Confidence |  | $0.242^{* *}$ |  | -0.019 |
|  |  | $(0.12)$ |  | $(0.10)$ |
| Risk |  | $0.039^{*}$ |  | $0.089^{* * *}$ |
|  |  | $(0.02)$ |  | $(0.02)$ |
| N | 100 | 104 | 104 |  |
| Pseudo R-square | 0.091 | 0.144 | 0.014 | 0.108 |

Notes: This table is the probit analysis version of Table 2 - Panel A in the main paper. Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for task ability measured as the score in task 1. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the "Other"-treatment). Significance: ${ }^{* * * p<0.01 ~}{ }^{* *} p<0.05$ *p $<0.1$

|  | Entry Decision |  | (3) | (4) |
| :---: | :---: | :---: | :---: | :---: |
| Female | -0.162** | -0.128 |  |  |
|  | (0.07) | (0.10) |  |  |
| Treatment (Other) |  | 0.028 | 0.155 | -0.223* |
|  |  | (0.10) | (0.21) | (0.12) |
| Female*Treatment |  | -0.070 |  |  |
|  |  | (0.14) |  |  |
| Risk |  |  | 0.081*** |  |
|  |  |  | (0.02) |  |
| Risk*Treatment |  |  | -0.022 |  |
|  |  |  | (0.03) |  |
| Confidence |  |  |  | 0.070 |
|  |  |  |  | (0.10) |
| Confidence*Treatment |  |  |  | 0.268* |
|  |  |  |  | (0.15) |
| Constant | 0.347*** | 0.333*** | -0.209 | 0.280** |
|  | (0.11) | (0.12) | (0.16) | (0.13) |
| N | 204 | 204 | 204 | 204 |
| R-square | 0.050 | 0.051 | 0.105 | 0.063 |

Notes: Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for task ability measured as the score in task 1. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the "Other"-treatment). Significance: ${ }^{* * *} p<0.01{ }^{* *} p<0.05{ }^{*} p<0.1$

## Appendix D: Summary Statistics and Additional Analysis for the Online Experiment

Table D1: Summary Statistics

|  |  | Women | Men | Total |
| :---: | :---: | :---: | :---: | :---: |
| Other | N | $\mathrm{N}=115$ | $\mathrm{N}=130$ | $\mathrm{N}=245$ |
|  | Age | 36.66 (1.10) | 36.68 (0.95) | 35.61 (0.72) |
|  | Task 1 Score | 2.97 (0.14) | 2.87 (0.12) | 2.92 (0.09) |
|  | Task 2 Score | 3.27 (0.15) | 3.33 (0.12) | 3.30 (0.10) |
|  | Task 3 Score | 3.57 (0.15) | 3.75 (0.13) | 3.67 (0.10) |
|  | Confidence 1 | 0.43 (0.05) | 0.62 (0.04) | 0.53 (0.03) |
|  | Confidence 2 | 0.62 (0.05) | 0.65 (0.04) | 0.63 (0.03) |
|  | Confidence 3 | 0.53 (0.05) | 0.61 (0.04) | 0.57 (0.03) |
|  | Risk Attitudes | 5.41 (0.22) | 5.78 (0.20) | 5.60 (0.15) |
|  | Income (\$) | 41,957 (3,068) | 40,000 (2,626) | 40,918 (2,001) |
| Other, <br> Same <br> Gender | N | $\mathrm{N}=128$ | $\mathrm{N}=129$ | $\mathrm{N}=257$ |
|  | Age | 37.34 (1.03) | 33.44 (0.96) | 35.39 (0.71) |
|  | Task 1 Score | 3.10 (0.12) | 2.92 (0.13) | 3.01 (0.09) |
|  | Task 2 Score | 3.23 (0.14) | 3.02 (0.14) | 3.12 (0.10) |
|  | Task 3 Score | 3.50 (0.14) | 3.21 (0.13) | 3.35 (0.09) |
|  | Confidence 1 | 0.42 (0.04) | 0.49 (0.04) | 0.46 (0.03) |
|  | Confidence 2 | 0.64 (0.04) | 0.55 (0.04) | 0.60 (0.03) |
|  | Confidence 3 | 0.48 (0.04) | 0.50 (0.04) | 0.49 (0.03) |
|  | Risk Attitudes | 5.00 (0.21) | 5.84 (0.20) | 5.42 (0.15) |
|  | Income (\$) | $33,984(2,533)$ | 39,496 (2,576) | 36,751 (1,811) |
| Other, Same Ability | N | $\mathrm{N}=124$ | $\mathrm{N}=120$ | $\mathrm{N}=244$ |
|  | Age | 35.37 (0.97) | 33.88 (1.01) | 34.64 (0.70) |
|  | Task 1 Score | 3.02 (0.15) | 2.92 (0.14) | 2.97 (0.10) |
|  | Task 2 Score | 3.49 (0.14) | 3.13 (0.15) | 3.31 (0.10) |
|  | Task 3 Score | 3.78 (0.14) | 3.29 (0.16) | 3.54 (0.11) |
|  | Confidence 1 | 0.57 (0.04) | 0.53 (0.05) | 0.55 (0.03) |
|  | Confidence 2 | 0.62 (0.04) | 0.54 (0.05) | 0.58 (0.03) |
|  | Confidence 3 | 0.53 (0.04) | 0.63 (0.04) | 0.58 (0.03) |
|  | Risk Attitudes | 5.02 (0.22) | 5.76 (0.21) | 5.39 (0.15) |
|  | Income (\$) | 33,951 (2,431) | 38,417 (2,744) | 36,148 (1,831) |
| Self | N | $\mathrm{N}=129$ | $\mathrm{N}=119$ | $\mathrm{N}=248$ |
|  | Age | 36.93 (1.06) | 32.74 (0.82) | 34.92 (0.69) |
|  | Task 1 Score | 3.14 (0.12) | 2.86 (0.13) | 3.00 (0.09) |
|  | Task 2 Score | 3.36 (0.13) | 3.09 (0.13) | 3.23 (0.09) |
|  | Task 3 Score | 3.57 (0.14) | 3.55 (0.14) | 3.56 (0.10) |
|  | Confidence 1 | 0.56 (0.04) | 0.60 (0.05) | 0.58 (0.03) |


|  | Confidence 2 | $0.55(0.04)$ | $0.55(0.05)$ | $0.55(0.03)$ |
| :--- | :--- | :---: | :---: | :---: |
|  | Confidence 3 | $0.29(0.04)$ | $0.48(0.05)$ | $0.38(0.03)$ |
|  | Risk Attitudes | $5.05(0.18)$ | $6.00(0.19)$ | $5.50(0.14)$ |
|  | Income $(\$)$ | $39,031(2,761)$ | $39,370(2,726)$ | $39,194(1,939)$ |
|  |  |  | $\mathrm{N}=496$ | $\mathrm{~N}=498$ |
|  | N | $36.58(0.52)$ | $33.70(0.42)$ | $35.14(0.35)$ |
|  | Age | $3.06(0.07)$ | $2.89(0.06)$ | $2.98(0.05)$ |
|  | Task 1 Score | $3.34(0.07)$ | $3.14(0.07)$ | $3.24(0.05)$ |
|  | Task 2 Score | $3.61(0.07)$ | $3.45(0.07)$ | $3.53(0.05)$ |
|  | Task 3 Score | $0.50(0.02)$ | $0.56(0.02)$ | $0.53(0.02)$ |
|  | Confidence 1 | $0.61(0.02)$ | $0.57(0.02)$ | $0.59(0.02)$ |
|  | Confidence 2 | $0.46(0.02)$ | $0.55(0.02)$ | $0.51(0.02)$ |
|  | Confidence 3 | $5.11(0.10)$ | $5.84(0.10)$ | $5.48(0.07)$ |
|  | Risk Attitudes | $37,137(1,353)$ | $39,337(1,329)$ | $38,239(948)$ |

Notes: Standard errors in parentheses. Confidence 1 is the incentivized belief question on scoring better in Task 2 than in Task 1 ( 1 if Yes, 0 if No). Confidence 2 is the incentivized belief question on scoring better in Task 3 than in Task 2 ( 1 if Yes, 0 if No). Confidence 3 is the incentivized belief question on scoring better than the other person in Task 2 (1 if Yes, 0 if No). Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Income is the selfreported personal earnings in the last year. It takes on the value 1 if the income is less than \$10,000; 2 if income is within the interval from $\$ 10,000$ to $\$ 20,000 ; 3$ if $\$ 20,000$ to $\$ 30,000 ; 4$ if $\$ 30,000$ to $\$ 40,000 ; 5$ if $\$ 40,000$ to $\$ 50,000 ; 6$ if $\$ 50,000$ to $\$ 60,000$; 7 if $\$ 60,000$ to $\$ 70,000 ; 8$ if $\$ 70,000$ to $\$ 80,000 ; 9$ if $\$ 80,000$ to $\$ 90,000 ; 10$ if $\$ 90,000$ to $\$ 100,000 ; 11$ if over $\$ 100,000$. While calculating the average, we take the mid-point of each interval. Mid-point of income over $\$ 100,000$ is estimated as $\$ 125,000$.

Table D2: Proportion (in percentages) Who Chooses Tournament Pay in Task 3

|  | Women | Men | Total | p-values for gender difference |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | t-test for Proportions | Fisher's Exact test |
| Other | 27.8 (4.2) | 40.0 (4.3) | 34.3 (3.0) | $\mathrm{p}=0.045$ | $\mathrm{p}=0.059$ |
| Other, Same Gender | 21.9 (3.7) | 34.1 (4.2) | 28.0 (2.8) | $\mathrm{p}=0.029$ | $\mathrm{p}=0.037$ |
| Other, Same Ability | 30.6 (4.2) | 33.3 (4.3) | 32.0 (3.0) | $\mathrm{p}=0.653$ | $\mathrm{p}=0.682$ |
| Self | 35.7 (4.2) | 31.1 (4.3) | 33.5 (3.0) | $\mathrm{p}=0.446$ | $\mathrm{p}=0.501$ |
| Total | 29.0 (2.0) | 34.7 (2.1) | 31.9 (1.5) | $\mathrm{p}=0.054$ | $\mathrm{p}=0.057$ |

Notes: Standard errors in parentheses.

Table D3: Risk Preferences

|  | Women | Men | Total |  | $p$-values for gender <br> difference |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | t-test |  |
|  |  |  |  | Wilcoxon <br> test |  |  |
| Other | $5.41(0.22)$ | $5.78(0.20)$ | $5.60(0.15)$ | $\mathrm{p}=0.222$ | $\mathrm{p}=0.243$ |  |
| Other, Same Gender | $5.00(0.21)$ | $5.84(0.20)$ | $5.42(0.15)$ | $\mathrm{p}=0.004$ | $\mathrm{p}=0.005$ |  |
| Other, Same Ability | $5.02(0.22)$ | $5.76(0.21)$ | $5.39(0.15)$ | $\mathrm{p}=0.016$ | $\mathrm{p}=0.025$ |  |
| Self | $5.05(0.18)$ | $6.00(0.19)$ | $5.50(0.14)$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ |  |
| Total | $5.11(0.10)$ | $5.84(0.10)$ | $5.48(0.07)$ | $\mathrm{p}=0.000$ | $\mathrm{p}=0.000$ |  |

Notes: Standard errors in parentheses. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk".

Table D4: Confidence

|  | Women | Men | Total | $p$-values for gender <br> difference |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | t -test for <br> Proportions | Fisher's <br> Exact test |
|  |  |  |  |  |  |
| Other | $0.53(0.05)$ | $0.61(0.04)$ | $0.57(0.03)$ | $\mathrm{p}=0.223$ | $\mathrm{p}=0.246$ |
| Other, Same Gender | $0.48(0.04)$ | $0.50(0.04)$ | $0.49(0.03)$ | $\mathrm{p}=0.755$ | $\mathrm{p}=0.803$ |
| Other, Same Ability | $0.53(0.04)$ | $0.63(0.04)$ | $0.58(0.03)$ | $\mathrm{p}=0.143$ | $\mathrm{p}=0.155$ |
| Other-treatments |  |  |  |  |  |
| combined | $0.51(0.03)$ | $0.58(0.03)$ | $0.55(0.02)$ | $\mathrm{p}=0.085$ | $\mathrm{p}=0.091$ |
| Self | $0.55(0.04)$ | $0.55(0.05)$ | $0.55(0.03)$ | $\mathrm{p}=0.947$ | $\mathrm{p}=1.000$ |
| Total | $0.52(0.02)$ | $0.57(0.02)$ | $0.55(0.02)$ | $\mathrm{p}=0.128$ | $\mathrm{p}=0.143$ |

Notes: Standard errors in parentheses. Confidence is a binary variable that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments).

Table D5: Improvement in Task Scores (in percentages) Between Task 1 and Task 2, by Treatment and Gender

|  | Women | Men | Total | p-values for gender difference |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | t-test | Wilcoxon test |
| Other | 15.40 (6.34) | 33.80 (8.32) | 25.23 (5.36) | $p=0.087$ | $\mathrm{p}=0.409$ |
| Other, Same Gender | 13.63 (5.65) | 17.89 (7.00) | 15.75 (4.49) | $p=0.636$ | $\mathrm{p}=0.789$ |
| Other, Same Ability | 30.35 (7.12) | 21.88 (7.20) | 26.16 (5.06) | $\mathrm{p}=0.404$ | $\mathrm{p}=0.437$ |
| Self | 11.30 (4.78) | 25.25 (8.30) | 18.01 (4.71) | $\mathrm{p}=0.139$ | $\mathrm{p}=0.759$ |
| Total | 17.58 (3.01) | 24.78 (3.86) | 21.20 (2.45) | $p=0.142$ | $\mathrm{p}=0.899$ |

Notes: Improvement in score between Task 1 and Task 2. Standard errors in parentheses. Score improvement is calculated by ([Task2Score/Task1Score] - 1)*100.

Table D6: Probit Regressions for the Tournament Entry Decision (marginal effects from

|  | probit) |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
|  | $($ Other $)$ | $($ Other $)$ | (Self) | (Self) |
| Female | $-0.125^{* *}$ | $-0.090^{*}$ | 0.051 | 0.079 |
|  | $(0.06)$ | $(0.05)$ | $(0.06)$ | $(0.06)$ |
| Confidence |  | $0.239^{* * *}$ |  | $0.126^{* *}$ |
|  |  | $(0.05)$ | $(0.06)$ |  |
| Risk | $0.045^{* * *}$ |  | $0.030^{* *}$ |  |
|  |  | $(0.02)$ | $(0.01)$ |  |
| N | 245 |  | 248 |  |
| Pseudo R^2 | 245 | 0.146 | 248 | 0.033 |

(5)

|  | (Other, Same <br> Gender) | (Other, Same <br> Gender) | (Other, Same <br> Ability) | (Other, Same <br> Ability) |
| :--- | :---: | :---: | :---: | :---: |
| Female | $-0.121^{* *}$ | $-0.092^{*}$ | -0.028 | 0.024 |
| Confidence | $(0.05)$ | $(0.05)$ | $(0.06)$ | $(0.06)$ |
|  |  | $0.255^{* * *}$ |  | $0.281^{* * *}$ |
| Risk | $(0.05)$ |  | $(0.05)$ |  |
|  |  | $0.026^{* *}$ |  | $0.039^{* * *}$ |
| N | $(0.01)$ |  | $(0.01)$ |  |
| Pseudo R^2 |  | 257 | 244 | 244 |

Notes: This table is the probit analysis version of Table 2 - Panels B and C in the main paper. Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for task ability measured as the score in task 1. Risk is a 1-10 selfassessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments). Significance: ${ }^{* * *} p<0.01{ }^{* *} p<0.05{ }^{*} p<0.1$

Table D7: OLS Regressions for the Difference in Difference Estimates in Tournament
Entry Decision

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
| Female | -0.039 | 0.043 |  |  |
|  | $(0.04)$ | $(0.06)$ |  |  |
| Treatment (Other) |  | 0.089 | -0.171 | $-0.108^{*}$ |
|  |  | $(0.06)$ | $(0.11)$ | $(0.06)$ |
| Female*Treatment |  | $-0.166^{*}$ |  |  |
|  |  | $(0.09)$ |  |  |
| Risk |  |  | $0.027^{*}$ |  |
|  |  |  | $(0.01)$ |  |
| Risk*Treatment |  |  | $0.032^{*}$ |  |
|  |  |  | $(0.02)$ |  |
| Confidence |  |  |  | $0.116^{*}$ |
|  |  |  |  | $(0.06)$ |
| Confidence*Treatment | $0.333^{* * *}$ | $0.289^{* * *}$ | 0.144 | $0.200^{* *}$ |
|  | $(0.05)$ | $(0.06)$ | $(0.10)$ | $(0.06)$ |
| Constant | 493 | 493 | 493 | 493 |
|  | 0.002 | 0.010 | 0.050 | 0.062 |
| N |  |  |  |  |
| R-square |  |  |  |  |

Notes: Regressions are for the pooled "Other" and "Self" treatments from the online experiment. Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for task ability measured as the score in task 1. Risk is a 1-10 selfassessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments). Significance:
*** $p<0.01{ }^{* *} p<0.05 * p<0.1$

## Appendix E: Analysis for the Pooled Data

Table E1: Confidence for combined three "Other" treatments, Pooled Data

|  |  |  |  | $\boldsymbol{p}$-valuesfor gender |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women | Men | Total | difference |  |

Notes: Data is from the pooled laboratory and online experiments. Standard errors in parentheses. Comparison of confidence in the Self-treatment to the combined three Other-treatments. Confidence is a binary variable that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments).

Table E2: OLS Regressions for the Tournament Entry Decision, Pooled Data

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| :--- | :---: | :---: | :---: | :---: |
|  | $($ Other $)$ | $($ Other) | (Self) | (Self) |
| Female | $-0.146^{* * *}$ | $-0.097^{* *}$ | -0.009 | 0.044 |
|  | $(0.05)$ | $(0.05)$ | $(0.05)$ | $(0.05)$ |
| Confidence |  | $0.251^{* * *}$ |  | $0.097^{*}$ |
|  |  | $(0.05)$ |  | $(0.05)$ |
| Risk |  | $0.041^{* * *}$ |  | $0.048^{* * *}$ |
|  |  | $(0.01)$ |  | $(0.01)$ |
| Constant | $0.432^{* * *}$ | 0.017 | $0.372^{* * *}$ | 0.012 |
|  | $(0.04)$ | $(0.07)$ | $(0.04)$ | $(0.09)$ |
| N | 345 | 345 | 352 | 352 |
| R-square | 0.066 | 0.180 | 0.010 | 0.063 |

Notes: Regressions are for the pooled "Other" and "Self" treatments from the online and laboratory experiments. Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for the normalized task ability measured as the score in task 1. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments). Significance: ${ }^{* * *} p<0.01{ }^{* *} p<0.05{ }^{*} p<0.1$

Table E3: OLS Regressions for the Difference in Difference Estimates in Tournament Entry Decision, Pooled Data

|  | (1) | (2) | (3) | (4) |
| :---: | :---: | :---: | :---: | :---: |
| Female | -0.077** | -0.010 |  |  |
|  | (0.04) | (0.05) |  |  |
| Treatment (Other) |  | 0.071 | -0.085 | $-0.135^{* *}$ |
|  |  | (0.05) | (0.10) | (0.05) |
| Female*Treatment |  | -0.135* |  |  |
|  |  | (0.07) |  |  |
| Risk |  |  | 0.043*** |  |
|  |  |  | (0.01) |  |
| Risk*Treatment |  |  | 0.015 |  |
|  |  |  | (0.02) |  |
| Confidence |  |  |  | 0.101** |
|  |  |  |  | (0.05) |
| Confidence*Treatment |  |  |  | 0.214*** |
|  |  |  |  | (0.07) |
| Constant | 0.403*** | 0.366*** | 0.114 | 0.309*** |
|  | (0.03) | (0.04) | (0.07) | (0.04) |
| $N$ | 697 | 697 | 697 | 697 |
| R-square | 0.030 | 0.035 | 0.078 | 0.076 |

Notes: Regressions are for the pooled "Other" and "Self" treatments from the online and laboratory experiments. Dependent variable is a dummy indicating choice of competition in the third round. Robust standard errors in parentheses. All regressions control for the normalized task ability measured as the score in task 1. Risk is a 1-10 self-assessed index of willingness to take risk with $1=$ "Not at all willing to take risks" and $10=$ "Very willing to take risk". Confidence is a dummy that takes on the value 1 for subjects who believed that they improved their performance between the second and the third round ("Self"-treatment) or that they performed better than the person they were matched to in the second round (the three "Other"-treatments). Significance: ${ }^{* * *} p<0.01{ }^{* *} p<0.05{ }^{*} p<0.1$

