Online Supplementary Materials for:

Preferences and Biases in Educational Choices and Labor Market Expectations: Shrinking the Black Box of Gender

Abstract

This document contains the supplementary materials for the paper Reuben et al. (2015). It is organized in the following way: Section SM-1 describes in detail the data analysis reported in the paper that is not fully reported there due to space constraints; Section SM-2 describes the procedures used to conduct the experiment, including a sample of the instructions.

SM-1 Complementary data analysis

In this section, we first complement the analysis linking the experimental measures to earnings expectations by looking at the effect of (i) estimating separate coefficients for students who are averse to competition and those who are overly competitive according to the measure of competitiveness based on expected utility maximization, and (ii) including students whose choices in the risk elicitation task are inconsistent with expected utility maximization. We then continue by complementing the analysis of major choice by, once again, estimating separate coefficients for students who are averse to competition and those who are overly competitive according to the measure of competitiveness based on expected utility maximization. Thereafter, we present the regressions reported in the paper linking the experimental measures to: expected population earnings, the difference between expected and actual population earnings, the variability of the earnings expectations of each student, and the students' expected number of working hours. Finally, we explain the precise procedure used to construct a measure of the variability of the earnings expectations of each student.

SM-1.1 Experimental measures and expected earnings

Tables SM-1 and SM-2 present estimates from additional regressions that evaluate the association between the students' beliefs about future earnings and their risk aversion, overconfidence, and competitiveness. We use regressions with the same structure and characteristics as the regressions presented in Table 5. For convenience, we continue the numbering of Table 5, which contains regressions I through VI, and refer to regressions in Table SM-1 as regressions VII to VIII and those in Table SM-2 as regressions IX to XIV.

Regressions VII and VIII in Table SM-1 are analogous to regressions IV and VI in Table 5. The only difference between them is that in regressions VII and VIII we no longer

Table SM-1: The gender gap in expected earnings

Note: OLS estimate with robust standard errors clustered at the individual level. The dependent variables are in $1000s and are winsorized at the 2nd and 98th percentiles. All regressions have 5 observations for each of the 240 students, resulting in a total of 1200 observations. ***, **, and * denote statistical significance at 1%, 5%, and 10%, respectively.

Variable	**Expected earnings at age 30**		**Expected earnings at age 45**	
	VII	VIII	VII	VIII
Male	13.94***	12.95***	23.26***	19.14**
	(4.85)	(4.87)	(8.52)	(8.45)
Averse to competition	-10.43**	-9.65**	-21.74***	-20.00***
	(4.70)	(4.66)	(6.83)	(6.43)
Overly competitive	4.59	7.77	-1.57	4.50
	(7.25)	(6.99)	(14.49)	(13.96)
Overconfidence	4.22**	5.25*	6.41*	9.23**
	(2.01)	(2.71)	(3.43)	(3.92)
CRRA coefficient	1.40	0.60	5.73*	3.47
	(2.07)	(2.03)	(3.13)	(3.18)
Constant	76.92***	76.60***	102.38***	102.51***
	(3.25)	(3.14)	(5.89)	(5.51)
Controls	No	Yes	No	Yes
R^2	0.04	0.06	0.04	0.10

assume a monotonic relation between competitiveness and expected earnings. Specifically, we disaggregate our measure of competitiveness based on expected utility maximization into two variables: a dummy variable indicating whether a student is averse to competition and one indicating whether a student is overly competitive (i.e., the omitted category corresponds to students who made the correct or neutral choice).

The regressions in Table SM-1 reveal that the positive relationship between earnings beliefs and competitiveness is driven by the significantly lower expected earnings of students who are averse to competition. By contrast, overly competitive students and neutral students have similar earnings expectations. Moreover, the coefficients of the other variables do not seem affected by the disaggregation of the competitiveness measures.

Regressions IX through XIV in Table SM-2 are analogous to regressions I through VI in Table 5. The only difference between them is that in regressions IX and XIV we include the 17 subjects who made choices inconsistent with expected utility maximization in the risk elicitation task. Since for these students we do not have a measure of risk aversion, we set their coefficient of relative risk aversion equal to the mean. In addition, we control

Table SM-2: The gender gap in expected earnings

Note: OLS estimate with robust standard errors clustered at the individual level. The dependent variables are in \$1000s and are winsorized at the 2^{nd} and 98^{th} percentiles. All regressions have 5 observations for each of the 257 students (one for each of the major categories: Business, Engineering, Humanities, Natural Sciences, and Drop out), resulting in a total of 1285 observations. ***, **, and * denote statistical significance at 1%, 5%, and 10%, respectively.

Variable	**Expected earnings at age 30**						**Expected earnings at age 45**					
	IX	X	XI	XII	XIII	XIV	IX	X	XI	XII	XIII	XIV
Male	16.51***	16.61***	13.39***	15.02***	13.25***	13.90***	24.64***	23.54***	20.81**	23.10**	18.47**	19.25**
	(4.88)	(4.92)	(4.84)	(4.74)	(4.60)	(4.75)	(8.95)	(8.92)	(8.44)	(8.46)	(7.95)	(8.45)
Tournament entry			11.19**		12.42***				7.72		8.66	
			(4.83)		(4.54)				(8.41)		(7.58)	
EU competitiveness				6.79**		7.85**				10.85*		13.10**
				(3.38)		(3.43)				(6.07)		(5.82)
Overconfidence			1.34	2.79	1.43	3.97			5.86	4.54	7.97	7.57**
			(2.84)	(1.97)	(2.97)	(2.54)			(4.76)	(3.31)	(5.20)	(3.80)
CRRA coefficient			0.69	0.93	0.24	0.62			3.70	4.26	1.96	3.04
			(1.85)	(1.95)	(1.81)	(1.93)			(3.10)	(3.23)	(3.22)	(3.18)
Constant	73.74***	73.59***	70.78***	75.19***	70.27***	75.65***	95.60***	95.85***	94.26***	97.62***	94.55***	99.20***
	(2.28)	(2.25)	(2.73)	(2.45)	(2.66)	(7.63)	(4.06)	(3.94)	(5.54)	(4.37)	(5.27)	(4.30)
Controls	No	Yes	No	No	Yes	Yes	No	Yes	No	No	Yes	Yes
R^2	0.03	0.05	0.04	0.03	0.07	0.07	0.02	0.08	0.03	0.03	0.09	0.09

Table SM-3: The gender gap in major choice

Note: Marginal effects of logit estimates. Robust standard errors for the marginal effects clustered at the individual level are reported in parentheses. All regressions have major and individual fixed effects, and 4 observations for each of the 240 students (one for each of the major categories: Business, Engineering, Humanities, and Natural Sciences), resulting in a total of 960 observations. ***, **, and * denote statistical significance at 1%, 5%, and 10%, respectively.

Variable	**Business**		**Engineering**		**Humanities**		**Natural Sciences**	
	V	VI	V	VI	V	VI	V	VI
Male	0.20**	0.14	0.02	0.02	-0.21**	-0.16*	-0.01	0.00
	(0.09)	(0.09)	(0.02)	(0.02)	(0.09)	(0.09)	(0.05)	(0.05)
Averse to competition	0.13	0.18*	-0.01	-0.01	-0.21**	-0.24**	0.09	0.08
	(0.09)	(0.10)	(0.02)	(0.02)	(0.10)	(0.10)	(0.06)	(0.06)
Overly competitive	-0.04	-0.02	0.02	0.02	-0.22*	-0.23*	0.24**	0.22**
	(0.10)	(0.11)	(0.04)	(0.04)	(0.12)	(0.12)	(0.10)	(0.10)
Overconfidence	0.03	0.04	0.01	0.01	-0.08	-0.08	0.06**	0.07**
	(0.04)	(0.05)	(0.01)	(0.01)	(0.05)	(0.06)	(0.03)	(0.03)
CRRA coefficient	0.01	0.01	0.00	0.00	0.02	0.03	-0.03	-0.04
	(0.04)	(0.03)	(0.01)	(0.01)	(0.04)	(0.04)	(0.02)	(0.02)
Expected earnings		0.11***		0.01		0.13***		0.05**
		(0.04)		(0.01)		(0.04)		(0.02)

for them through the inclusion of a dummy variable.

The estimated coefficients in Table SM-2 are generally consistent with those in Table 5. Particularly, the effect of competitiveness remains unaffected by the inclusion of the inconsistent students. The main difference between these regressions and those in Table 5 is that the magnitude and significance of the coefficient for overconfidence weakens slightly in some regressions. Finally, the dummy variable for the inconsistent students is always negative and statistically significant for earnings at age 45.

SM-1.2 Experimental measures and major choice

Tables SM-3 and SM-4 present additional regressions evaluating the link between the students' major choice and their risk aversion, overconfidence, and competitiveness. We use regressions with the same structure and characteristics as the regressions presented in Table 7. For convenience, we continue the numbering of Table 7, which contains regressions I through IV, and refer to regressions in Table SM-3 as regressions V and VI and those in Table SM-4 as regressions VII to X.

Regressions V and VI in Table SM-3 are analogous to regressions II and IV in Table 7.

The only difference between them is that in regressions V and VI we split the variable EU competitiveness in two: a dummy variable indicating whether a student is averse to competition and one indicating whether a student is overly competitive (i.e., the omitted category corresponds to students who made the correct or neutral choice).

Like in Table 7, the regressions in Table SM-3 do not support our hypotheses concerning competitiveness and major choice. First, we do not find that more competitive students are significantly more likely to major in business. In fact, our evidence points in the opposite direction since we find that students who are averse to competition are the ones who have a higher probability of majoring in business ($p = 0.159$ in regression V and $p = 0.067$ in regression VI). Second, although we do find that students who are overly competitive are significantly less likely to major in the humanities ($p < 0.036$), the same is true for students who are averse to competition ($p < 0.066$). In other words, we find a non-monotonic relationship between competitiveness and choosing a major in the humanities. A non-monotonic relationship is also observed for the probability of majoring in the natural sciences: it is higher for both students who are overly competitive and students who are averse to competition compared to neutral students (although the difference is significant only for overly competitive students $p < 0.022$; for students averse to competition $p > 0.138$). Our other findings concerning major choice are not affected by the disaggregation of the competitiveness measure.

Regressions VII through X in Table SM-4 are analogous to regressions I through IV in Table 7. The only difference between them is that in regressions VII and X we include the 17 subjects who made choices inconsistent with expected utility maximization in the risk elicitation task. As before, since for these students we do not have a measure of risk aversion, we set their coefficient of relative risk aversion equal to the mean. In addition, we control for them through the inclusion of a dummy variable.

The estimated marginal effects in Table SM-4 are almost identical to those in Table 7. There is no relationship with competitiveness and major choice and overconfident students are more likely to major in the natural sciences. Finally, the magnitude and significance of the marginal effect of overconfidence on majoring in the humanities strengthens slightly (it is now significantly negative, from $p = 0.017$ in IX to $p = 0.043$ in VIII). Finally, the dummy variable for the inconsistent students is never statistically significant.

SM-1.3 Experimental measures and other beliefs

Table SM-5 presents estimation results of regressions that investigate whether the students' risk aversion, overconfidence, and competitiveness are correlated with their expectations concerning population earnings, the accuracy of these expectations, the variability of the students' earnings expectations, and their expected number of working hours. We use

Table SM-4: The gender gap in major choice

Note: Marginal effects of logit estimates. Robust standard errors for the marginal effects clustered at the individual level are reported in parentheses. All regressions have major and individual fixed effects, and 4 observations for each of the 257 students (one for each of the major categories: Business, Engineering, Humanities, and Natural Sciences), resulting in a total of 1028 observations. ***, **, and * denote statistical significance at 1%, 5%, and 10%, respectively.

Variable	**Business**				**Engineering**				**Humanities**				**Natural Sciences**			
	VII	VIII	IX	X	VII	VIII	IX	X	VII	VIII	IX	X	VII	VIII	IX	X
Male	0.18**	0.18**	0.13	0.13	0.01	0.01	0.01	0.01	-0.16*	-0.18**	-0.12	-0.14	-0.03	-0.02	-0.01	0.00
	(0.08)	(0.08)	(0.08)	(0.08)	(0.01)	(0.02)	(0.01)	(0.01)	(0.09)	(0.09)	(0.09)	(0.09)	(0.05)	(0.05)	(0.05)	(0.05)
Tournament entry	-0.05		-0.08		0.02		0.01		0.01		0.02		0.04		0.04	
	(0.08)		(0.08)		(0.01)		(0.01)		(0.09)		(0.09)		(0.05)		(0.05)	
EU competitiveness		-0.06		-0.08		0.01		0.01		0.03		0.05		0.03		0.03
		(0.06)		(0.06)		(0.01)		(0.01)		(0.06)		(0.06)		(0.04)		(0.04)
Overconfidence	0.07	0.04	0.08	0.05	0.01	0.01	0.01	0.00	-0.13**	-0.10**	-0.15**	-0.11**	0.08**	0.07**	0.08**	0.07**
	(0.05)	(0.04)	(0.05)	(0.04)	(0.01)	(0.01)	(0.01)	(0.01)	(0.06)	(0.05)	(0.06)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)
CRRA coefficient	0.02	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	-0.03	-0.03	-0.03	-0.03
	(0.04)	(0.03)	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)
Expected earnings			0.11***	0.11***			0.00	0.00			0.13***	0.12***			0.05***	0.06***
			(0.04)	(0.03)			(0.01)	(0.01)			(0.04)	(0.04)			(0.02)	(0.02)

regressions with the same structure and covariates as the regression III and IV in Table 5. We use the students' beliefs across all major categories and cluster standard errors at the individual level.

The dependent variable in the first two regressions of Table SM-5 is the students' expected earnings in each major category for an average 30-year old individual of their own gender. We can see that none of the experimental variables are statistically significant ($p > 0.151$ for competitiveness, $p > 0.485$ for overconfidence, and $p > 0.265$ for the CRRA coefficient). In other words, overconfident and competitive students do not expect higher earnings because they overestimate population earnings, but instead because they think their own earnings will be much higher than those of an average graduate.

The dependent variable in the next two regressions is the difference between the students' expected population earnings and the actual earnings of 30-year old graduates of the corresponding gender and major category. We see that the expected population earnings of male students are, on average, as accurate as those of female students. Once again, we find that none of the experimental variables are statistically significant ($p > 0.151$ for competitiveness, $p > 0.485$ for overconfidence, and $p > 0.265$ for the CRRA coefficient). Thus, the higher earnings expectations of overconfident and competitive students are not due to inaccurate expectations about population earnings.

The dependent variable in the third pair of regressions is a measure of the earnings uncertainty. Specifically, it the interquartile range of each student's future earnings distribution for each major category. The range is calculated assuming that earnings expectations follow a log-normal distribution (see the subsequent subsection for a detailed description of how we constructed this variable). On average, male students expect slightly higher earnings uncertainly than female students but this difference is not statistically significant ($p = 0.158$ in I and $p = 0.320$ in II). Risk aversion does not display a statistically significant relation with earnings uncertainty ($p > 0.522$). The coefficients for competitiveness display a positive relation with earnings uncertainty ($p = 0.127$ for tournament entry and $p = 0.082$ for EU competitiveness). On average, a competitive student expects an interquartile range that is around 22% larger than a non-competitive student. This is consistent with competitive students anticipating that they will enter more tournaments at work and thus face higher variation in earnings. Finally, the coefficients for overconfidece convey a mixed result. In I it is negative while in II is it positive ($p = 0.368$ and $p = 0.068$). Thus, at least according to II, overconfident students expect higher earnings but think they come at the expense of higher earnings uncertainty.

Lastly, the dependent variable in the fourth pair of regressions is the number of hours students' expect to work per week in each of the major categories. We do not find a significant effect for competitiveness ($p > 0.404$) or for overconfidence ($p > 0.388$). In other

Table SM-5: Experimental measures and other variables of interest

Note: OLS estimate with robust standard errors clustered at the individual level. The dependent variables labeled "Population earnings" and "Population error" are in \$1000s and are winsorized at the 2nd and 98th percentiles. All regressions have 5 observations for each of the 240 students, resulting in a total of 1200 observations. ***, **, and * denote statistical significance at 1%, 5%, and 10%, respectively.

Variable	**Population earnings**		**Population error**		**Earnings uncertainty**		**Hours of work**	
	I	II	I	II	I	II	I	II
Male	6.78*	5.70	-3.35	-4.43	8.07	4.97	0.35	0.80
	(3.81)	(3.65)	(3.81)	(3.65)	(5.69)	(4.99)	(1.34)	(1.16)
Tournament entry	0.90		0.90		9.66		1.15	
	(3.32)		(3.32)		(6.31)		(1.83)	
EU competitiveness		3.04		3.04		9.17*		1.05
		(2.11)		(2.11)		(5.25)		(1.25)
Overconfidence	-0.18	1.09	-0.18	1.09	-2.30	4.10*	-0.36	-0.62
	(2.22)	(1.56)	(2.22)	(1.56)	(2.55)	(2.24)	(0.89)	(0.71)
CRRA coefficient	1.50	2.01	1.50	2.01	0.03	1.49	0.67**	0.68*
	(1.79)	(1.80)	(1.79)	(1.80)	(1.91)	(2.33)	(0.33)	(0.36)
Constant	61.73***	62.84***	5.81**	6.92***	34.16***	40.01***	47.32***	47.72***
	(2.49)	(2.16)	(2.49)	(2.16)	(2.82)	(2.17)	(0.84)	(0.91)
R^2	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01

words, overconfident and competitive students do not display higher expected earnings because they expect to work more. The CRRA coefficient is positive and significant ($p = 0.046$ in I and $p = 0.060$ in II) suggesting that risk averse individuals expect to work more hours per week.

SM-1.4 Variance in expected earnings

We use the students' expected earnings at age 30, their subjective probability that their earnings will exceed \$35k at age 30, and their subjective probability that their earnings will exceed \$85k at age 30 to get an indication of the variance of the expected earnings distribution of each student in each major category.

Specifically, from these three data points, we estimate a log-normal distribution approximation to individual beliefs about the distribution of earnings. For each individual i, we assume beliefs about earnings in major k follow $\ln Earn_{i,k} \sim \mathcal{N}\left(\mu_{i,k}, \sigma^2_{i,k}\right)$. The individual-specific beliefs parameters consist of $\omega_{i,k} = \left[\mu_{i,k}, \sigma_{i,k}\right]$. We compute the best fitting parameters to approximate the assumed distribution using simulation. For any

given parameter vector $\omega_{i,k}$, we form a sequence of simulated earnings beliefs draws. From this sequence of earnings draws, we construct the simulated counterpart to the three statistics detailed above. We then choose the $\omega_{i,k}$ parameters that minimize the quadratic distance between the simulated and actual data beliefs. Note that we compute $\omega_{i,k}$ for all individual and major categories. Once we have an estimate for $\omega_{i,k}$ we use it along with the elicited mean $\exp(\mu_{i,k})$ to calculate the distribution's interquartile range.

SM-2 Experimental procedures and instructions

In this section, we first provide a detailed description of the experimental procedures. Subsequently, we provide the instructions given to students.

SM-2.1 Procedures

The computerized experiment was conducted in May 2012 in the CESS Computer Lab of New York University. Participants for the experiment were recruited through two methods: (i) students who had participated in a survey conducted in 2010 and had consented to take part in follow-up studies were contacted by email (the previous survey is analyzed in Wiswall and Zafar, 2015), and (ii) students were recruited from the email list used by the Center for Experimental Social Sciences (CESS) at NYU. Of the 246 students in which we base our data analysis, 137 students were new recruits and the remaining 109 students were participants from the first survey.[1] Upon agreeing to participate, students could sign up for a 90-minute session. The experiment was programmed and conducted with z-Tree (Fischbacher, 2007).

After their arrival, students drew a card to be randomly assigned to a seat in the laboratory. Once seated, the students read and signed the study's consent form. Thereafter, they were given the instructions of the experiment. Students were told that the experiment consisted of eight rounds and that they would be paid their earnings from one randomly-selected round.

At this point, the students read the instructions and performed each round of the experiment. They received the instructions for a round only after everyone had completed the previous round. In some of the rounds, students performed an adding task. It consisted of solving sums of four two-digit numbers (e.g., $84+52+31+77$). The two-digit numbers were randomly drawn, with the same draw for all students in a group. After each answer,

[1] Of the 365 respondents of the first survey, 115 participated in the experiment (6 were engineering students and therefore excluded from the data analysis). Note that the response rate of $\frac{115}{365} = 31.5\%$ is a lower bound, since some of the students who participated in 2010 could have graduated by the time we conducted the experiment.

students could see whether their answer was correct and their total number of correct answers. While performing the adding tasks, students could not use a calculator, but they were provided with scratch paper. Before taking part in the first round, students had a practice round in which they performed the adding task for two-minutes (performance in this round did not affect earnings). As described in the main body of the paper, the first four rounds correspond to: (i) performing the addition task with the tournament compensation scheme; (ii) choosing between the tournament and piece-rate compensation schemes and then performing the addition task; (iii) performing the addition task with the piece-rate compensation scheme, and (iv) estimating their rank in the first round. The four remaining rounds are not analyzed in this paper. In the first of those rounds, students decided whether they want to be paid for their performance in the piece-rate round (i.e., their performance in round iii) according to a tournament or a piece-rate compensation scheme. In the remaining three rounds, students received information concerning their actual rank in the piece-rate task (they were told whether or not their rank is better than at least one other group member), which we use to elicit their updated beliefs about their rank and re-elicit their choice in the fifth round.

After all eight rounds were completed, we elicited the students' risk preferences. To do so, we gave them ten choices, one of which was randomly selected for payment. Each choice consisted of selecting between a lottery and a certain payoff. The lottery was the same in all choices (winning either \$5 or \$1, each with a 0.50 probability), but the certain payoff increased from \$1.25 in the first choice to \$3.50 in the tenth choice in increments of \$0.25. Thereafter, students were asked to complete a survey (constructed using SurveyMonkey). The survey took 30 minutes to complete. After the survey, we randomly selected a round to be paid and paid them their earnings in private.

SM-2.2 Experimental Instructions

Below we provide the instructions for the first four rounds of the experiment and the risk elicitation task. The instructions of the remaining rounds are available upon request.

Welcome

In the experiment today you will be asked to complete eight different tasks. None of these will take more than 4 minutes. At the end of the experiment you will receive \$5 for having completed the eight tasks. In addition we will randomly select one of the tasks and pay you based on your performance in that task. Once you have completed the eight tasks, we will determine which task counts for payment by drawing a number between 1 and 8. The method we use to determine your earnings varies across tasks. Before each task we will describe in detail how your payment is determined.

Your total earnings from the experiment are the sum of your payment for the randomly selected task, and your $5-payment for completing the tasks.

Please do not talk with one another at any point during the experiment. If you have any questions, please raise your hand.

Practice Round

In the experiment today, some tasks consist of calculating the sum of four randomly chosen two-digit numbers. Throughout the experiment, you cannot use a calculator, however you are welcome to write the numbers down and make use of the provided scratch paper. You submit an answer by clicking the submit button with your mouse. When you enter an answer the computer will immediately tell you whether your answer is correct or not. Your answers to the problems are anonymous.

To familiarize you with the screen, you will take part in a practice round. The practice round will NOT affect your payment. Once everyone has finished reading, you will be given 2 minutes to calculate sums.

Task 1 – Tournament

For Task 1 you will be given 4 minutes to calculate the sum of four randomly chosen two-digit numbers. Your payment for Task 1 will depend on your performance relative to that of a group of other participants. Specifically, you have been randomly paired with three other participants currently in the room to form a group of *four people*. If Task 1 is the task randomly selected for payment, then your earnings will depend on the number of sums you solve compared to the three other people in your group. The individual who correctly solves the largest number of sums will receive $2 per correct sum, while the other participants will receive $0. If there are ties the winner will be randomly determined. We refer to this as the *tournament* payment. You will not be informed of your relative performance in Task 1 until all tasks have been completed. Are there any questions before we begin?

Task 2 - Choice

As in the previous task you will be given 4 minutes to calculate the correct sum of a series of four 2-digit numbers. However, you will get to choose the payment scheme that will apply to your performance in this task.

If Task 2 is the one randomly selected for payment, then your earnings for this task are determined as follows:

- If you choose *piece rate*, you will receive $0.50 per sum you solve correctly (your

payment is unaffected by incorrectly answered sums). Note that in this case your payment does not depend on the performance of other participants.

- If you choose *tournament*, your performance will be evaluated relative to the *performance in Task 1* of the other participants in your group. If you correctly solve more sums than they did in Task 1, then you will receive $2 for every sum you solve correctly in Task 2. However, if you do not solve more sums in Task 2 than the others in your group did in Task 1 then you will receive $0 in this task. If there are ties the winner will be randomly determined.

You will not be informed of your relative performance in Task 2 until all tasks have been completed. Are there any questions before we begin?

Task 3 – Piece Rate

As in the previous two tasks, you will be given 4 minutes to calculate the sum of four randomly chosen two-digit numbers.

If Task 3 is the one randomly selected for payment, then you will receive $0.50 per sum you solve correctly (your payment is unaffected by incorrectly answered sums). Note that your payment in Task 3 does not depend on the performance of other participants. We refer to this payment as the *piece rate* payment. Are there any questions before we begin?

Task 4 – Belief about Task 1

We next ask you about how you believe your performance in Task 1 compared to the performance of the other three participants of your group in the Task 1. You obtained one of four ranks within your group, with 1 being the highest rank (i.e., if your Task 1 performance was better than the Task 1performance of all the other three group members) and 4 being the lowest rank.

Recall that in Task 1, you correctly solved X sum(s).

For each of the ranks below, what is the percent chance (or chances out of 100) that you think you got that rank in Task 1? Enter a number between 0 and 100 for each rank (do not enter a percent sign). The numbers across all ranks need to add up to 100.

1	highest	—
2		—
3		—
4	lowest	—
	Total	100

If Task 4 is the one randomly chosen for payment, you will be paid depending on the accuracy of your beliefs according to the following formula: $20 - 10 \sum_{k=1}^{4} (1\{rank = k\} - 0.01 \times p_k)^2$. While this formula may look complicated, what it means for you is simple: *you get paid the most on average when you honestly report your best guesses of the probability of each rank.* The range of payoff is \$0-\$20.

Final task

At the end of the session, you will receive payment for this task in addition to receiving payment for one of the first eight tasks. For this task, you are asked to choose between Option A and Option B in each of the 10 alternatives on the next screen. After you make your choices, one alternative will be chosen at random to determine your payment.

In each alternative, if you choose Option A, you will receive \$5 with 50% chance and \$1 with 50% chance. The payment for Option A is the same in each of the alternatives. If you choose Option B, you will receive a fixed amount. However, the amount that you will receive under Option B varies across the alternatives, from \$1.25 in Alternative 1 to \$3.50 in Alternative 10.

Please click Next to view the 10 options, and make your decisions.

References

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