

Supplementary Materials: Voluntary Disclosure of Private Information and Unraveling in the Market for Lemons: An Experiment

Instructions

Part 1 - Holt Laury

Welcome to this experiment on decision-making!

The experiment is separated into two parts. These instructions only cover the first part. You will get the instructions for the second part after the first part has finished. No personal data will be saved in the context of this experiment.

In the first part of the experiment you have to decide 10 times between two lotteries. There is always an “Option A” and an “Option B.” The exact lotteries are described in the screenshot below.

No.	Option A	Decision	Option B
1.	EUR 2.00 with a probability of 10% or EUR 1.60 with a probability of 90%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 10% or EUR 0.10 with a probability of 90%.
2.	EUR 2.00 with a probability of 20% or EUR 1.60 with a probability of 80%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 20% or EUR 0.10 with a probability of 80%.
3.	EUR 2.00 with a probability of 30% or EUR 1.60 with a probability of 70%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 30% or EUR 0.10 with a probability of 70%.
4.	EUR 2.00 with a probability of 40% or EUR 1.60 with a probability of 60%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 40% or EUR 0.10 with a probability of 60%.
5.	EUR 2.00 with a probability of 50% or EUR 1.60 with a probability of 50%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 50% or EUR 0.10 with a probability of 50%.
6.	EUR 2.00 with a probability of 60% or EUR 1.60 with a probability of 40%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 60% or EUR 0.10 with a probability of 40%.
7.	EUR 2.00 with a probability of 70% or EUR 1.60 with a probability of 30%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 70% or EUR 0.10 with a probability of 30%.
8.	EUR 2.00 with a probability of 80% or EUR 1.60 with a probability of 20%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 80% or EUR 0.10 with a probability of 20%.
9.	EUR 2.00 with a probability of 90% or EUR 1.60 with a probability of 10%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 90% or EUR 0.10 with a probability of 10%.
10.	EUR 2.00 with a probability of 100% or EUR 1.60 with a probability of 0%.	Option A <input type="radio"/> Option B <input type="radio"/>	EUR 3.85 with a probability of 100% or EUR 0.10 with a probability of 0%.

After you have made the 10 decisions, the first part is completed. At the very end of the experiment, i.e., after the second part of the experiment has finished, the computer will randomly pick one of the 10 lotteries that will be paid. You can document your decisions on the screenshot if you want to compare your decisions to the results once they are displayed.

At the end of the experiment the computer will generate two independent random numbers which are both equally distributed on the interval [0; 1]. If the first random number is between 0.00 and 0.10, number 1 will be paid, if it is between 0.10 and 0.20, number 2 will be paid, and so on. If the first random number is between 0.90 and 1.00, number 10 will be paid.

The second random number decides whether you have won the higher or the lower amount of money. For example, at number 3 you will earn the higher amount if the second random number is smaller

than 0.30. Otherwise you will get the lower amount of money. At the number 8 the second random number needs to be smaller than 0.80 to get the higher amount of money.

Control questions

Assume your decisions were as follows:

No.	Choice
1	A
2	A
3	A
5	B
6	B
7	B
8	B
9	B
10	B

1. Assume the first random number is 0.2748 and the second one is 0.4711. Which number will be paid in this case and which amount would you have gained?
2. Suppose the first random number is 0.8456 and the second one is 0.7123. Which number would be paid in this case and which amount would you have gained?

Part 2 - Revelation game

First, please read these instructions carefully. This experiment is anonymous. That means you will not get to know which participants you have interacted with or which participants acted in which roles during the experiment. Please be aware that you are not allowed to talk to other participants during the experiment. If you have any questions please raise your hand and we will come to your cubicle and answer your question personally and privately.

In this experiment the participants will act as workers and as employers. At the beginning of the experiment the computer randomly determines the role you will play. The assignment remains constant for the duration of the experiment.

In total, there are 18 periods in this experiment. In each period of the experiment the computer will randomly sort workers and employers into groups. One group always comprises one worker and two employers. This sorting will take place in each period. Hence, you will not be interacting with the same participants in every period.

The workers in this experiment differ with regard to their productivity. The productivity of the worker determines the revenue of the employer who hires the worker. An employer who hires a worker with a productivity of 200 will earn 200 ECU. From this revenue the employer has to pay a wage to the worker, but this will be explained at a later stage.

Moreover, there are three different labor markets which are played on a rotating basis: Market A, Market B, and Market C. At the beginning of each period your screen will display the labor market to be played in the corresponding period. The labor markets differ in the possible productivities of the workers.

In the Table S1 you can see the different labor markets in the experiment. Assume Labor Market B is played in this period. As a consequence, in this period a worker can have either of the following productivities of 200, 448, 510, 551, 582 or 607. All six possible productivities are equally likely. The computer will randomly determine the productivities of the workers in this period by making a random draw from this set. Note that in all periods, each possible productivity will be attributed to exactly one worker.

Table S1. Productivities in the three labor markets.

	Labor market A	Labor market B	Labor market C
Possibility 1	200	200	200
Possibility 2	210	448	280
Possibility 3	230	510	360
Possibility 4	260	551	440
Possibility 5	300	582	520
Possibility 6	600	607	600
Average	300	483	400

Every participant will begin the experiment with a starting capital of 1600 ECU. This starting capital simultaneously serves as the show-up fee, which is the amount of money you receive independent of behavior during the experiment—simply for arriving at the lab on time.

Your task:

Each period has three stages where decisions need to be made: In the first stage workers have to decide, then the employers need to make a decision, and finally workers need to decide again. At the end of a period everybody receives a summary of the outcome of that period.

First decision of the workers: Certificate

At the beginning, workers are given their individual productivities. The employers do NOT, however, get to know the productivities of the workers, they only know which labor market (A, B, C) is being played in that period.

Each worker has to make the following decision in every period of the experiment: she needs to decide whether or not she would like to buy a certificate at a price of 100 ECU. The certificate reveals your productivity. That means, if you decide to purchase the certificate the employers will get to know your productivity in this period. If you do not buy a certificate, the employers only know which labor market is being played in this period and thus only know the six possible values your productivity can take this round. If you decide to buy the certificate you will have to pay the price of 100 ECU from the wage paid to you by one of the employers.

Decision of the employer: Making a wage offer

As an employer you receive an endowment of 200 ECU each period. Beyond that you have to make a wage offer to the worker in your group. If the worker bought the certificate for 100 ECU you will get to know her productivity in this period. If the worker did not buy the certificate you will only know the six possible values the productivity can have in this period. Your wage offer needs to be at least 0 ECU and at most 800 ECU. Note that wage offers may comprise up to two decimal places.

Second decision of the worker: Accepting a wage offer

In the third stage the workers get to know the wage offers they received from the two employers in their group and have to accept one of the two offers. The employer, whose wage offer is accepted, will then hire the worker. She receives the productivity of the worker as a revenue but also has to pay the wage she offered to the worker. The other employer does not hire the worker. She therefore does not get a revenue and does not have to pay a wage. The worker receives the offer she accepted as wage payment. Depending on whether or not she has bought the certificate, she may still have to pay the costs of the certificate (100 ECU). Table S2 summarizes this profit calculation.

Table S2. Profit calculation.

Worker without certificate	Worker with certificate	Employer whose bid is accepted	Employer whose bid is not accepted
Wage	Wage – 100 ECU	200 + Productivity – Wage	200

Example: Consider the following example. A worker and employers 1 and 2 form a group. The worker has a productivity of 300, the wage offer of employer 1 is 240 ECU and the wage offer of employer 2 is 250 ECU. Assume the worker accepts the wage offer of the second employer.

In this case Employer 1 earns only the basic amount of 200 ECU in this period. The worker earns 150 ECU (250 ECU wage minus 100 ECU certificate) in case she bought the certificate and 250 ECU otherwise. The second employer earns in this period:

$$\begin{aligned}
 &+ 200 \text{ ECU (base payment)} \\
 &+ 300 \text{ ECU (productivity of the worker)} \\
 &- 250 \text{ ECU (wage of the worker)} \\
 &= 250 \text{ ECU}
 \end{aligned}$$

As previously mentioned, the experiment lasts 18 periods. At the end, the earnings you have gained during the experiment will be converted into EUR at a rate of 400 ECU = 1 EUR and you will receive the corresponding amount in cash. Furthermore, we will round up the amounts to the next 50-cent threshold. Please be aware that the displayed amount paid out includes the show-up-fee which was integrated into the starting capital.

We kindly ask you to wait in your cubicle until we call you to get your payment. Please ensure you bring all the documents you have received from us when you collect your payment.

If you have any questions, please raise your hand now!

Control Questions

Assume that Labor Market B is played this period.

1. What is the probability that the worker in a group has a productivity of 582?
2. What is the probability that the worker in a group has a productivity of 448?
3. What is the probability that the worker in a group has a productivity of 360?

Assume that the worker in your group has a productivity of 510.

1. What does the worker earn in this round when the accepted wage offer is 450 and she has not bought a certificate?
2. What does the worker earn in this round when the accepted wage offer is 450 and she has bought a certificate?
3. What do the employers 1 and 2 earn, if the wage offer is 300 ECU (employer 1) or 350 ECU (employer 2) and the worker chose to accept the wage offer of employer 1?

What information does the employer in a group have about the productivity of the worker if he has bought a certificate?

What information does the employer in a group have about the productivity of the worker if he has not bought a certificate?

How much is the certificate for the worker?

How much is a certificate for the employer who hires the worker?

How much is a certificate for the employer who does not hire the worker?