Behavioural Economics and Consumer Decision Making
First experimental problem set

Academic Year 2023-24

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- Due date: October 22, 2023 at 12PM (noon). Assignments must be uploaded on Luiss Learn. Late submissions will be awarded zero points.

- The files you should upload are:

  1. A pdf file with your answers to the questions.
  2. A stata do file (with comments describing your steps).

- Each file must be named after your group in the following way:

  `Groupname_assignment_1`

  For example, group Barney must upload two files, named `Barney_assignment_1.pdf` and `Barney_assignment_1.do`.

- Be sure to write the names of all group members at the top of page 1 of the pdf file.

- This assignment is worth up to 5 points.

- *Buon lavoro!*

The data

In this assignment you will examine data from a risk elicitation experiment in which you were given a set of nine paired lotteries to choose from. These pairs were structured so that the smaller reward in Option A was always worth more than the smaller reward in Option B (specifically, in one pair the high reward in Option A was 2.00 EUR and the low reward was 1.60 EUR, whereas the high reward in Option B was 3.85 EUR and the low reward was 0.10 EUR). Initially, the probability of the high reward was 1/10 and the chance of the low reward was 9/10. With each step, the probability of the high reward steadily increased by 1/10 (meaning that, for instance, the second pair had a probability of 2/10 for the high reward and 8/10 for the low reward).

A description of all variables is given below.

Questions

1. How many observations are in the data set? What is the proportion of males and females? What is the mean age? Do Canale A and Canale B differ in

mean age and gender composition?

2. What are the proportions of subjects who chose Option A and Option B in each set of paired lotteries? Use tables and/or graphs to substantiate your answer.

3. Briefly discuss your findings from the previous question. For example, how did subjects' choices change as the probability of receiving a high reward increased? Do you think that subjects who chose Option B in the first sets of paired lotteries are risk loving or risk averse? And what about subjects who chose Option A in the last sets of paired lotteries?

4. Consider the second, fifth, and eight sets of paired lotteries. Do the proportions of subjects who chose Option A in each of these sets differ by gender? Do they differ by Canale?

5. Consider only subjects who chose Option A in the first set of paired lotteries and switched only once from Option A to Option B (hint: use the `if (lottery1==0 & numswitch==1)` option). On average, at which set of paired lotteries did subjects from Canale A made the switch? And what about students from Canale B? Is there a statistically significant difference between Canale A and Canale B? What can you infer from this result?

Variable description

Option A	Which lottery would you like to choose?	Option B	Variable
90%: 1.60 EUR 10%: 2.00 EUR	○ A ○ B	90%: 0.10 EUR 10%: 3.85 EUR	lottery1
80%: 1.60 EUR 20%: 2.00 EUR	○ A ○ B	80%: 0.10 EUR 20%: 3.85 EUR	lottery2
70%: 1.60 EUR 30%: 2.00 EUR	○ A ○ B	70%: 0.10 EUR 30%: 3.85 EUR	lottery3
60%: 1.60 EUR 40%: 2.00 EUR	○ A ○ B	60%: 0.10 EUR 40%: 3.85 EUR	lottery4
50%: 1.60 EUR 50%: 2.00 EUR	○ A ○ B	50%: 0.10 EUR 50%: 3.85 EUR	lottery5
40%: 1.60 EUR 60%: 2.00 EUR	○ A ○ B	40%: 0.10 EUR 60%: 3.85 EUR	lottery6
30%: 1.60 EUR 70%: 2.00 EUR	○ A ○ B	30%: 0.10 EUR 70%: 3.85 EUR	lottery7
20%: 1.60 EUR 80%: 2.00 EUR	○ A ○ B	20%: 0.10 EUR 80%: 3.85 EUR	lottery8
10%: 1.60 EUR 90%: 2.00 EUR	○ A ○ B	10%: 0.10 EUR 90%: 3.85 EUR	lottery9

- *identifier*: unique subject identifier.

- *age*: subject's age in years.

- *gender*: subject's gender.

- *canale*: subject's Canale (A or B).

- *switcht*: binary variable that takes the value 1 if a subject switched from Option A to Option B or from Option B to Option A between choice rounds $t-1$ and t, and the value 0 otherwise (for example, Switch2 takes the value 1 if a subject switched from A to B or from B to A between rounds 1 and 2).

- *numswitch*: total number of switches from A to B or from B to A.

- *firstswitch*: choice round at which a subject made the first switch.