

# Introduction to experimental methods in economics

## Group assignment

**Motivation:** Recently, academics are more and more frequently engaging in an important discussion regarding the replicability of published experimental findings. In addition, behavioral economics has been hit by the scandal of Harvard professor Francesca Gino, whose team is believed to have falsified data from research on (ironically) dishonest behavior.

As a step one, your task is to read the following four papers:

- 1) The dishonesty of honest people: A theory of self-concept maintenance. In this paper, authors report that in their experiment, people who were given the opportunity to cheat did not cheat if they were first asked to recall the 10 commandments.
- 2) Registered replication report on Mazar, Amir, and Ariely. In this paper, the authors conduct 25 replication experiments of the original study on large samples and find no positive effect of recalling the 10 commandments.
- 3) Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. In this paper, the authors conduct several experiments and find that if they have people sign a sentence about behaving honestly right at the beginning of a form, they cheat less than if the form is signed at the end. This paper is the subject of a debate led mainly by Datacolada analysts, and it seems that the data was fabricated. It is therefore officially retracted.
- 4) Signing at the beginning versus at the end does not reduce dishonesty. In this paper, the authors refute the positive effect of signing at the beginning of the form.

You can find PDF versions of these papers at [www.lorko.sk/lectures](http://www.lorko.sk/lectures)

**Your task:** Your task will be to conduct an experiment investigating selected factor(s) of your own choice that might increase or decrease the tendency to engage in dishonest behavior (e.g., cheating, lying) and write a short paper about your findings.

That said, your research question will be something like, "Does Factor X reduce the tendency to act dishonestly?" or "Does Factor Y increase the tendency to act dishonestly?" The choice of a particular X or Y factor is up to you, but make sure to back it up with a scientific literature. You can find some guidance in the book Dishonesty in behavioral economics (2019) by Bucciol and Montinari.

You can complete the assignment in pairs or in groups of three, and you can earn 15 points for it. In weeks 4 and 5 of the semester, you will be presenting your experimental designs (max 5 points). In weeks 9 and 10, you will be presenting your results (max 5 points). Papers need be submitted via Turnitin until May 21<sup>st</sup>. Pairs / groups of three should be entered in the table below:

[https://docs.google.com/spreadsheets/d/1kzNaYYUVF1N6ByFUqLxIWmy9EQwHO-65YA1KJ4g\\_wE8/](https://docs.google.com/spreadsheets/d/1kzNaYYUVF1N6ByFUqLxIWmy9EQwHO-65YA1KJ4g_wE8/)

## Basics for your experimental design

The first step is to design the task your participants will be solving in the experiment. It should be a task in which the participants have to report their performance or outcome. Don't be afraid to be creative. Critically, you need to be able to measure cheating. This can be accomplished in two ways:

- 1) The task is set up so that participants in the control group cannot cheat because you can measure actual performance of each participant. You can therefore detect cheating in other groups by comparing the results of participants who could not cheat (control group) with the results of participants who could cheat.
- 2) The task is set up so that you don't need a control group, because you can estimate zero cheating statistically. For example, for a dice roll, you can predict that if every participant reported their roll honestly, you would find that the outcomes have a uniform distribution in which approximately one-sixth of the participants rolled a one, one-sixth rolled a two, etc. You can detect cheating statistically by comparing the expected (in this case uniform) distribution with the distribution of the reported results.

Your experiment should include 2-3 groups of participants (a.k.a. treatments).

- 1) Control – it is not possible to cheat because even if each participant self-reports his/her performance to you, you can verify his/her performance (e.g., count the number of correct answers). You don't need a control group for the second design method mentioned above.
- 2) Dishonesty – it is possible to cheat because you cannot measure the actual performance - the participant self-reports his/her performance to you and you cannot verify it (e.g., he/she only reports his/her number of correct answers but does not hand the test to you).
- 3) Honesty – it is possible to cheat, but you introduce an intervention that theoretically should reduce the propensity to cheat. The choice of intervention is up to you, but it should be supported by some (psychological) theory.

Alternatively, you can use the "Extra Dishonesty" group instead of the "Honesty" group by introducing a (psychologically based) intervention that should increase the propensity to cheat even more.

You have to collect data from at least 30 participants (ideally 50 or more) for each group  
Critically important points:

- 1) Each participant in the experiment has to be **randomly** assigned to one group. You cannot have the same participant completing the experiment in more than one group.
- 2) Participants need to be motivated to cheat in the experiment. That said, you must include some incentives (rewards) in the experiment. It can be money, but it can also be something else that the participants want (e.g., candy, biscuits, etc.). However, you don't have to reward every participant. It is sufficient to reward just one or a few randomly selected participants.

- 3) The reward must be calculated from the performance (or reported performance) of the participant - the better the result, the higher the reward. This is important because it makes it worthwhile to cheat.
- 4) You have to inform your participants about the reward procedure right at the beginning.
- 5) In groups where cheating is possible, it must be guaranteed that you cannot detect cheating directly. That is, that you cannot find out what the actual result was for a given participant. You must make it clear to the participant in the "cheating" group right from the start that you will not verify their performance (so that they know they can cheat).

The experiment can be conducted in person (e.g., you give participants different forms, depending on the group) or online (e.g., different questionnaires, depending on the group). Participants in the experiment cannot be other students of this course.

### **Statistical analysis**

Since each participant in the experiment is assigned to a different group, you will collect independent observations (this is also called a between-subjects design). To choose the appropriate statistical test (according to the nature of the data collected), refer to the following slides, especially the table on slide 9 (which is in English).

[http://loroko.sk/wp-content/uploads/2023/11/EE\\_L9\\_SVK.pdf](http://loroko.sk/wp-content/uploads/2023/11/EE_L9_SVK.pdf)

In addition to their performance, you can also collect other data from participants. You can then include them as control variables in a regression analysis, with which you can test the robustness of your statistical test results.

### **Structure of the paper**

The paper should consist of the following sections:

- Introduction, motivation, research question (approx. 1 page)
- Short review of related literature (5-10 scientific papers, no wikipedia or "internet", approx. 2 pages)
- Hypotheses and experimental design (approx. 2-3 pages)
- Description of data collection (approx. 1 page)
- Data analysis (approx. 2-3 pages)
- Conclusions (approx. 1 page)

We look forward to your presentations and papers!

Matej and Tomáš

## References

Buccioli, A., & Montinari, N. (Eds.). (2019). *Dishonesty in behavioral economics*. Academic Press.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of marketing research*, 45(6), 633-644.

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Shu, L. L., Mazar, N., Gino, F., Ariely, D., & Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. *Proceedings of the National Academy of Sciences*, 109(38), 15197-15200

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