Foundations of Experimental Economics

University of Kassel

Winter Term 2025/2026

Lecture 4: Conducting Laboratory Experiments

Introduction

Phases of Experimental Research

1. **Design**: Define tasks, incentives, institutions and treatments.
2. **Preparation**: Set up and test software (and/or other materials).
3. **Data Collection**: Run the experiment.
4. **Analysis**: Clean and analyze data using appropriate statistical tools.
5. **Reporting**: Interpret results and write up findings.

Goals for Today

- **Explore** the practical steps of conducting a laboratory experiment after the design phase is completed.
- **Discuss** the use of (economics) students as subjects for experiments.
- **Discuss** the effects of culture on experimental results.
- **Explore** an example of a conventional lab experiment.

Recommended Readings

- Weimann, J., & Brosig-Koch, J. (2019). *Methods in experimental economics: An introduction*.
  - Chapter 2.3.2-4., p. 60-68
  - Chapter 3, p. 147-168

Required Reading

- Dal Bó, P. (2005). Cooperation under the shadow of the future: Experimental evidence from infinitely repeated games. *American Economic Review, 95*(5), 1591–1604.

Conducting a Laboratory Experiment

1. Preparing Instructions
2. Preparing the Experimental Materials
3. Ethics Approval & Pre-Registration
4. Pilot Testing
5. Recruitment of Participants
6. Lab Setup
7. Conduct Session
8. Payment

Repeated until final sample is reached.

Preparing Instructions

1. Preparing Instructions (1/2)

- The **instructions** are the written or verbal materials provided to participants that explain the rules of the experiment.

- The instructions must be written in way that that all subjects are able to gain an unambiguous understanding of the rules in a reasonable time:
  - Use simple, short and clear sentences.
  - Use redundancies if issues are complicated (assume subjects have no background in economics and game theory).
  - Avoid suggestive terms.
  - Tables, figures, example calculations etc. can be used but must also be explained verbally.
  - Keep differences between instructions for different treatments as minimal as possible.

INSTRUCTIONS FOR RESPONDERS:

Welcome to this study of decision-making. The experiment will take about 15 minutes. The instructions are simple, and if you follow them carefully, you can earn a considerable amount of money. All the money you earn is yours to keep, and will be paid to you, in cash, in private, after the experiment ends. Your confidentiality is assured. In this experiment, you have been assigned the role of "responder." You have been randomly matched with another participant who is in the role of the "proposer." Your earnings will depend on your decisions, as well as on the decision of the proposer.

The proposer has been asked to propose a split of ____ Rupees between him/her and you. That is, the proposer has made an offer that specifies how much of the total ____ Rupees you will receive and how much of the _____ Rupees he/she will receive.

You can choose either to accept or to reject this offer. If you accept the offer, both you and the proposer receive the amounts specified in the offer. If you reject the offer, both you and the proposer will receive zero earnings for this experiment.

The proposer has offered that out of the total amount of ____ Rupees, you receive ____ Rupees and he/she receives ____ Rupees.

Now, please tell us if you accept or decline this offer by the proposer.

Source: Andersen et al. (2011, p. 3438)

Preparing the Experimental Materials

2. Preparing the Experimental Materials (1/6)

- The **materials** for a lab experiment include all the tools and resources needed to run the sessions.

- The most important part of the material is a reliable system to record the data.

- Other materials include instruction sheets, consent forms, payment sheets or envelopes, and any physical props (e.g., dice) used during the experiment.

2. Preparing the Experimental Materials (2/6)

- Data in lab experiments can be recorded using a variety of methods, including:
  - Pen and paper.
  - Classical survey tools.
  - Experimental software.

- Each have specific strengths and limitations.

2. Preparing the Experimental Materials (3/6)

Method	Description	Strengths	Limitations	Best Used For
Pen and Paper	Manual entry of decisions, answers, or observations using physical forms	Very simple, low-tech, flexible; no setup needed, no technical errors	Prone to human error; time-consuming data entry; limited scope for interaction	Small-scale or one-shot experiments
Classical Survey Tools	Web-based platforms for structured survey input	Relatively simple; good for surveys, quizzes	Limited support for dynamic interactions, group tasks, or real-time feedback; technical errors	Pre/post-experiment surveys; simple individual decision tasks
Experimental Software	Purpose-built platforms for interactive, real-time economic experiments	Real-time interactions; randomization; automated data capture	Steeper learning curve; setup time; requires coding or platform knowledge; technical errors	Multi-player games, auctions, markets, real-time decisions

2. Preparing the Experimental Materials (4/6)

Classical Survey Tools

- Qualtrics, Typeform, soSci, Unipark, Google Forms, Survey Circle, Lime Survey

Experimental Software

- oTree, z-Tree, Lioness Lab, classEx, Veconlab
- There are many (!) more, see Chan et al. (2019) for a review.

Choice

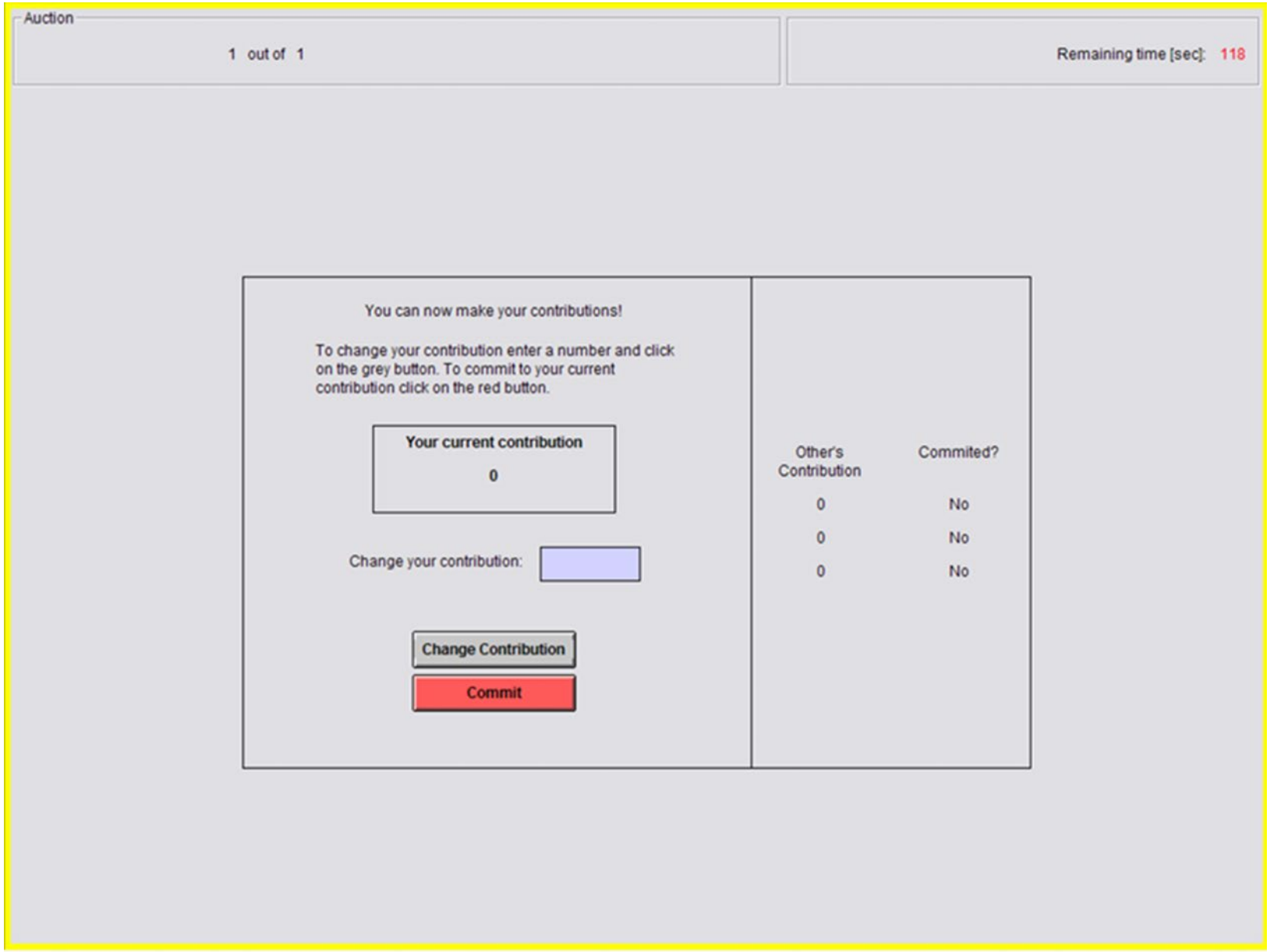
In each of the following 10 rows in the table, please select your prefereed option between A and B.

When done, please click on the button "Continue".

After you have chosen, one row will be randomly chosen and the lottery you chose will be played. The outcome of this lottery will be paid to you.

#	A			B	
1	1/10 of €2.0	9/10 of €1.6	○ A ○ B	1/10 of €3.85	9/10 of €0.1
2	2/10 of €2.0	8/10 of €1.6	○ A ○ B	2/10 of €3.85	8/10 of €0.1
3	3/10 of €2.0	7/10 of €1.6	○ A ○ B	3/10 of €3.85	7/10 of €0.1
4	4/10 of €2.0	6/10 of €1.6	○ A ○ B	4/10 of €3.85	6/10 of €0.1
5	5/10 of €2.0	5/10 of €1.6	○ A ○ B	5/10 of €3.85	5/10 of €0.1
6	6/10 of €2.0	4/10 of €1.6	○ A ○ B	6/10 of €3.85	4/10 of €0.1
7	7/10 of €2.0	3/10 of €1.6	○ A ○ B	7/10 of €3.85	3/10 of €0.1
8	8/10 of €2.0	2/10 of €1.6	○ A ○ B	8/10 of €3.85	2/10 of €0.1
9	9/10 of €2.0	1/10 of €1.6	○ A ○ B	9/10 of €3.85	1/10 of €0.1
10	10/10 of €2.0	0/10 of €1.6	○ A ○ B	10/10 of €3.85	0/10 of €0.1

Continue


Auction
1 out of 1
Remaining time [sec]: 118
You can now make your contributions!
To change your contribution enter a number and click on the grey button. To commit to your current contribution click on the red button.
Your current contribution
0
Change your contribution:
Change Contribution
Commit
Other's Contribution
Commited?
0 No
0 No
0 No

Ethics Approval & Pre-Registration

3. Ethics Approval & Pre-Registration (1/6)

- The **ethics approval** is the formal process through which an Institutional Review Board (IRB) or an ethics committee reviews and approves a research study to ensure that it complies with ethical standards, protecting participants' rights, safety, and privacy (see also Lecture 3).

- A **pre-registration** is the process of publicly documenting and committing to the experimental design, hypotheses, and analysis plan before data collection begins, ensuring transparency and reducing potential biases in research.

3. Ethics Approval & Pre-Registration (2/6)

Purpose of pre-registration:

- Increase transparency and credibility in experimental research.
- Prevent problematic research practices such as **HARKing** (Hypothesizing After the Results are Known) or p-Hacking.
- Publicly commit to the experimental design, hypotheses, and analysis plan before data collection.

Benefits of pre-registration:

- **Improves trustworthiness** of results by showing consistency between design and analysis.

3. Ethics Approval & Pre-Registration (3/6)

Things to consider

- Pre-registering a study requires careful planning and detailed documentation upfront, which can be time-consuming.
- Limited flexibility arises as any changes to the methodology or analysis plan after pre-registration require justification.
- Pre-registration is most beneficial for hypothesis-driven research and may not be suitable for exploratory studies.

Popular platforms

- AsPredicted (see next slides).
- Open Science Framework (OSF).
- AEA RCT Registry (American Economic Association).

Clear All

1) Data collection. Have any data been collected for this study already?

- ○ Yes, we already collected the data.
- ○ No, no data have been collected for this study yet.
- ○ It's complicated. We have already collected some data but explain in Question 8 why readers may consider this a valid **pre**-registration nevertheless.

(Note: *'Yes'* is not an accepted answer.)

2) Hypothesis What's the main question being asked or hypothesis being tested in this study?

Example: A month-long academic summer program for disadvantaged kids will reduce the drop in academic performance that occurs during the summer

3) Dependent variable Describe the key dependent variable(s) specifying how they will be measured.

Example: Simple average GPA across all courses during the first semester after the intervention.

4) Conditions How many and which conditions will participants be assigned to?

Example 1: Two conditions: Offering summer program: yes vs no.
Example 2: 12 conditions in a mixed design lab study. Participants will be assigned to one of four conditions: math training, verbal training, memory task, or control (4 between-subject conditions). Each participant will complete a math test, a verbal test, and a memory test (3 within-subject conditions).

5) Analyses Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Example. Linear regression predicting the simple average GPA in the semester after the intervention with a dummy variable indicating whether the participant was offered the summer program or not (intention-to-treat analysis). We will also conduct the same regression controlling for simple average GPA during the semester before the intervention, gender, & household income (an 8-point scale ranging from 1 = below $20,000 and 8 = above $150,000).

6) Outliers and Exclusions Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Example 1. We will compute the overall mean and standard deviation across all conditions, and winsorize at 2.5 SD above/below the mean.
Example 2: We will exclude participants who incorrectly answer at least 2 of our 3 attention check questions.
Example 3. We will exclude any participants who complete the survey in less than 30 seconds.

7) Sample Size How many observations will be collected or what will determine sample size?
No need to justify decision, but be precise about exactly how the number will be determined.

Example: We will offer the program until 500 people have agreed to participate in it or until June 30, 2016 (whichever comes first).

8) Other Anything else you would like to pre-register?
(e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

Example: We will include a battery of questions for exploratory purposes, including life satisfaction, amount of videogame playing, and family activity. We will also provide an additional survey with 24 questions assessing achievement orientation.We will not report the results of those analyses for the project being pre-registered.
NOTE: If you leave this blank it will read:`Nothing else to pre-register.`

3. Ethics Approval & Pre-Registration (6/6)

- Part of the pre-registration process is to state how many subjects will take part in the experiment.

Key considerations

  - Recruit enough participants to detect meaningful effects (statistical power).
  - Stay within budget and logistical constraints (lab capacity, deadlines etc.).

- The required number of participants can be estimated using a **power analysis**, which considers the expected effect size, the significance level (usually 5%), and the desired statistical power (typically 80%).
  - More information: https://stats.oarc.ucla.edu/other/mult-pkg/seminars/intro-power/

Pilot Testing

4. Pilot Testing

- Pilot testing refers to the initial, **small-scale run** of an experiment conducted before the main experiment.
  - Either with friends and colleagues (data cannot be used for analysis) or with the target audience (data can be used later if design isn't altered).

Purpose

- Identify technical glitches and software bugs.
- Test timing and flow of the session.
- Ensure clarity of instructions and user interface.
- Observe participant behavior for confusion or unexpected strategies.

Recruitment of Participants

5. Recruitment of Participants (1/2)

- An experiment consists of multiple **sessions**. Each session is a single run of the experiment with a specific group of participants.
- Participants are typically invited to sign up for a particular session where they will complete the experiment's tasks.
- **One or several treatments** can be conducted within a single session, depending on the design of the experiment.
- **Randomly assign** participants to treatments or groups.
  - This is crucial to ensure that each participant has an equal chance of being assigned to any group.

5. Recruitment of Participants (2/2)

- Most experimental economics labs maintain a **subject pool,** a database of individuals who have signed up to participate in future studies.

Recruitment process

- Participants from the pool receive **email invitations** to register for specific sessions.
- The email includes basic details such as the **time, location**, and **duration** of the session.
- **Important**: The invitation **must not include specific details** about the experimental task, game structure, or payment scheme, in order to avoid selection bias.

Managing no-shows

- It is common practice to **overbook sessions** to account for participant no-shows.
  - For example, allow **25 people to sign up** if only **20 participants** are needed.

Students as Subjects (1/3)

- Most lab experiments use students as subjects as this group provides some distinct advantages:
  - Easy to recruit (e.g., via lectures or mailing lists).
  - Highly educated → better understanding of instructions.
  - Familiar with university/lab settings
  - More flexible schedules → available during daytime.
  - Low opportunity costs → more responsive to monetary incentives.

- However, using students can lead to two types of selection bias:
  - Students ≠ general population (young, educated, limited work experience).
  - Volunteers for experiments may differ from other students.
    - Applies to every subject pool of volunteers.

Students as Subjects (2/3)

- Existing studies don't find strong differences between volunteers and non-volunteers of experiments in terms of risk or social preferences.

- Studies comparing students and non-students in experiments indicate that students tend to behave more selfishly, more strategically, and more rationally.
  - May be a result of experimenter demand effects among non-students.

Students as Subjects (3/3)

- Students are a practical and generally valid subject pool.
- Differences to other subject pools exist but are often moderate.
- For some questions, using non-students or experts may be necessary, though higher costs and effort should be expected.
- Sometimes it is argued that economics students are a special group among students. Let’s have a look!

Marwell & Ames (1981) (1/2)

Design

- Conducted 11 Public Goods Game experiments.
- Varied institutions, stakes, and participant groups to test robustness of behavior.

Findings

- Contribution rates were generally stable and well above the Nash equilibrium, indicating substantial cooperation.
- Exception: Economics students contributed significantly less, showing behavior closer to the self-interested equilibrium.

- **Implication**
  - Suggests that economics students either select into or are trained toward more self-interested behavior, compared to other groups.

Marwell & Ames (1981) (2/2)

Table 2

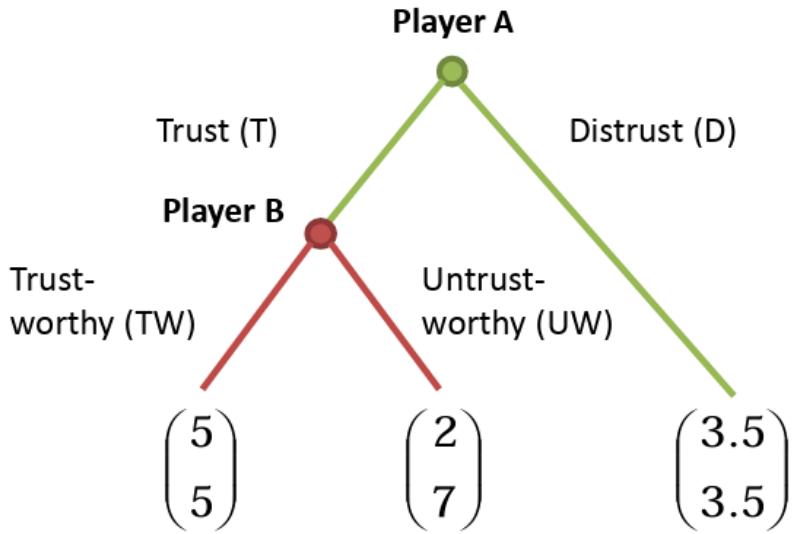
Summary of results: Experiments 1–11.

Experiment	Mean % of resources invested
1. Basic experiment	42%
2. Skewed resources and/or interest	53%
Experiments 1 and 2, combined	51%
3. Provision point	51%
4. Small groups with provision point (except those with sufficient interest to provide the good themselves)	60%
5. Experienced subjects	47%
6. High stakes	
Experienced interviewers	35%
All interviews	28%
7. Feedback, no changing initial investment	46%
8. Feedback, could change investment in individual account	50%
9. Feedback, could change investment in individual account — college students	49%
10. Manipulated feedback	
Low	43%
Medium	50%
High	44%
11. Non-divisibility	
Divisible (control)	43%
Non-divisible	84%
12. Economics graduate students	20%

Source: Marwell & Ames (1981, p. 307)

Haucap & Müller (2014) (1/3)

- Conducted with law and economics students using a simplified Trust Game.
- Examined the role of experience vs. innate traits: Compared first-year students with advanced students.
- Investigated gender effects as well.



Source: Haucap & Müller (2014, p. 4)

Haucap & Müller (2014) (2/3)

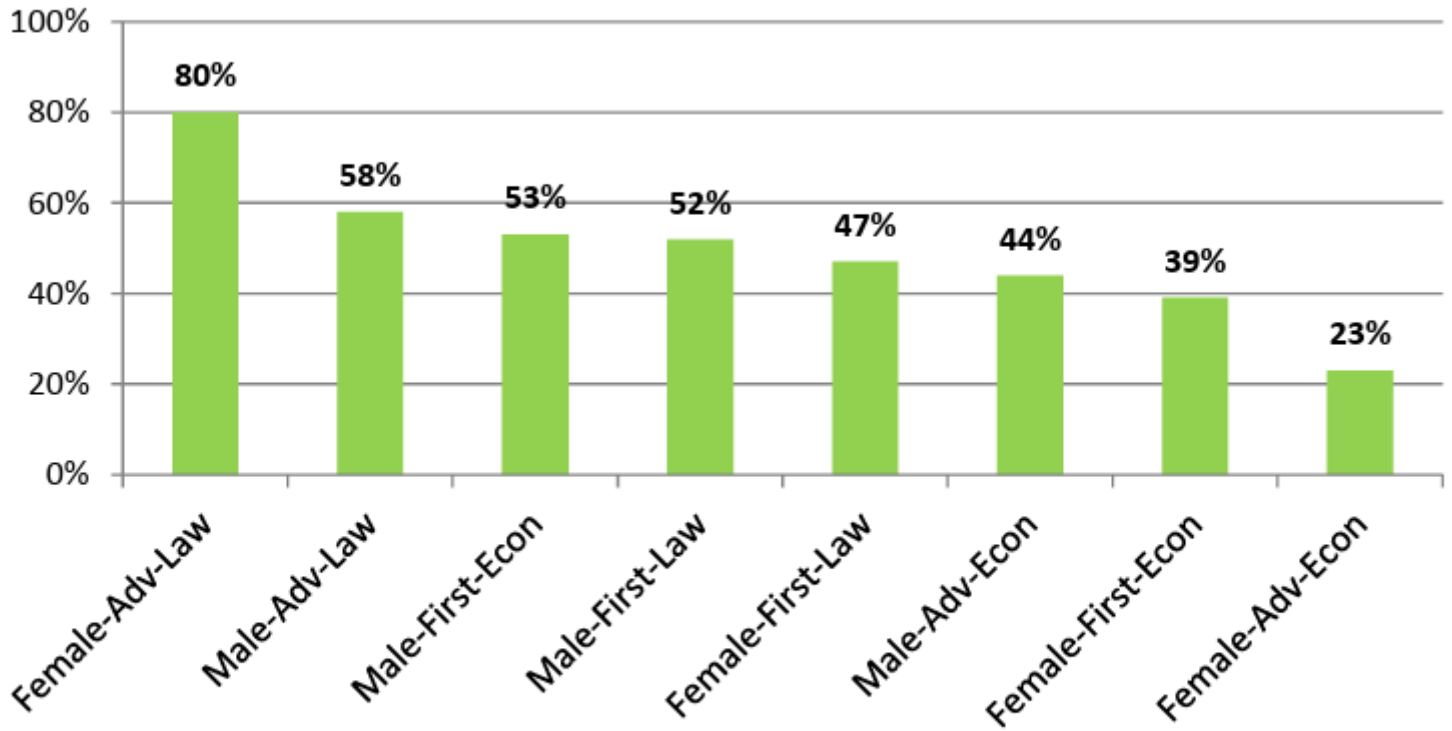


Figure 2: Share of trusting students within subgroups

Source: Haucap & Müller (2014, p. 7)

Haucap & Müller (2014) (3/3)

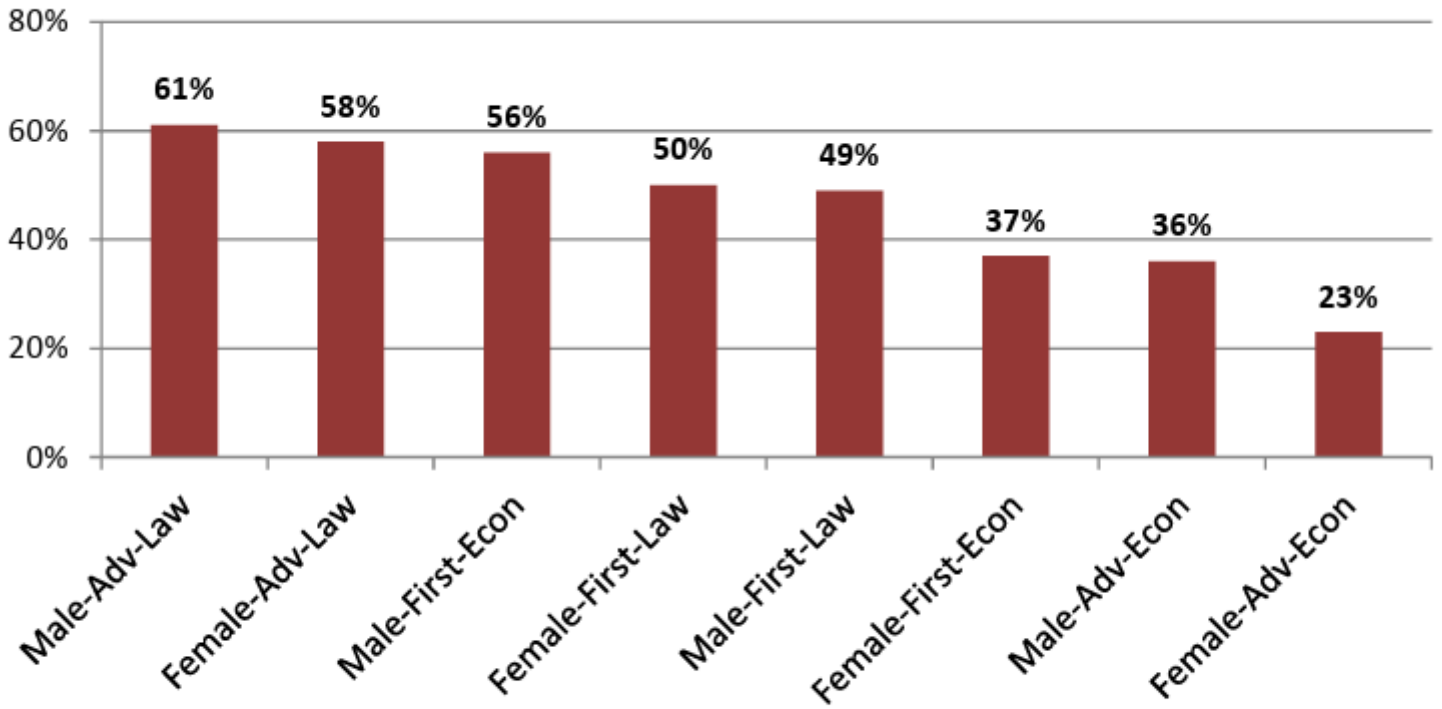


Figure 3: Share of trustworthy students within subgroups

Source: Haucap & Müller (2014, p. 8)

Economics Students as Subjects

Behavior differs across disciplines

- Economics students tend to be more self-interested and less cooperative.

Selection & training effects

- Could reflect both self-selection (who studies economics) and socialization (training in rational, self-interest models).

Practical implication

- Proper randomization matters.
- Always record participants' field of study.
- Consider cross-field comparisons or control for discipline in analysis.

Cultural Differences

- Experimental results may differ across countries due to cultural norms and socialization. This can be investigated by conducting the same experiment in different countries:
  - Csukás et al. (2008), e.g., conducted experiments using the Trust Game in four countries: Brazil, Greece, Hungary and Russia.

- When comparing experiments across cultures, it must be **ensured that only culture varies**, not procedures, language, or incentives.

Csukás et al. (2008) (1/5)

Subjects

- Graduate student participants with identical selection criteria at all venues ensured equivalent subject pools across countries.
  - Subjects were recruited locally in each country and had to be native and raised in the country (until age 18).

Instructions

- The original French instructions were translated by fluent native speakers of each target language, then back-translated into French by native French speakers to ensure accuracy and avoid misinterpretation.

Csukás et al. (2008) (2/5)

Currency

- To avoid currency effects and ensure equivalent strategy sets, artificial "Euros" were used and converted into local currencies at adjusted rates to equalize student purchasing power across countries.

Experimenters

- A central team of graduate students coordinated the project to ensure consistent procedures across countries; in countries not represented in the team, the main coordinator supervised and briefed local experimenters directly.

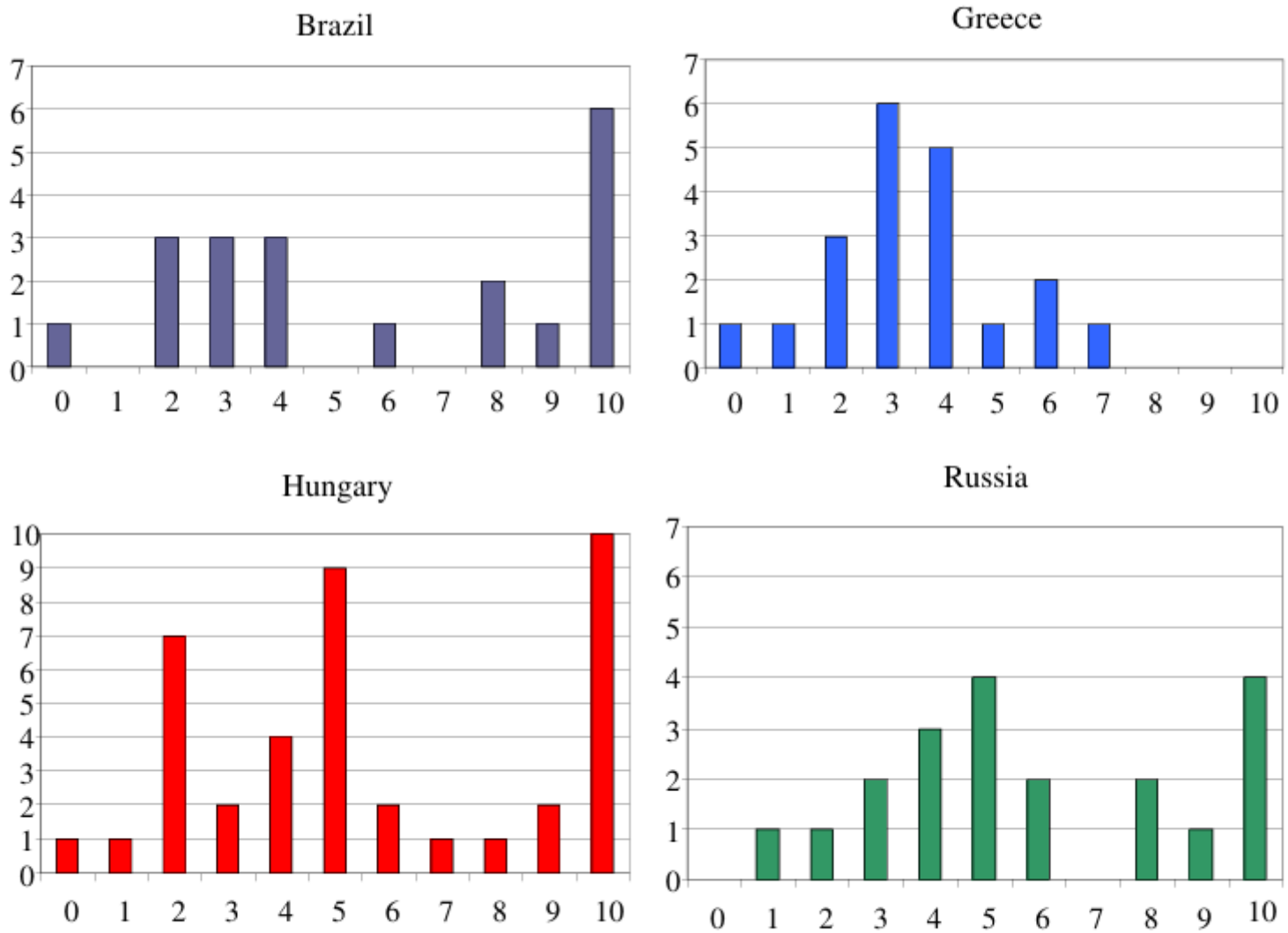


Figure 2. Distribution of Amounts Sent Sample by Sample

Source: Csukás et al. (2008, p. 81)

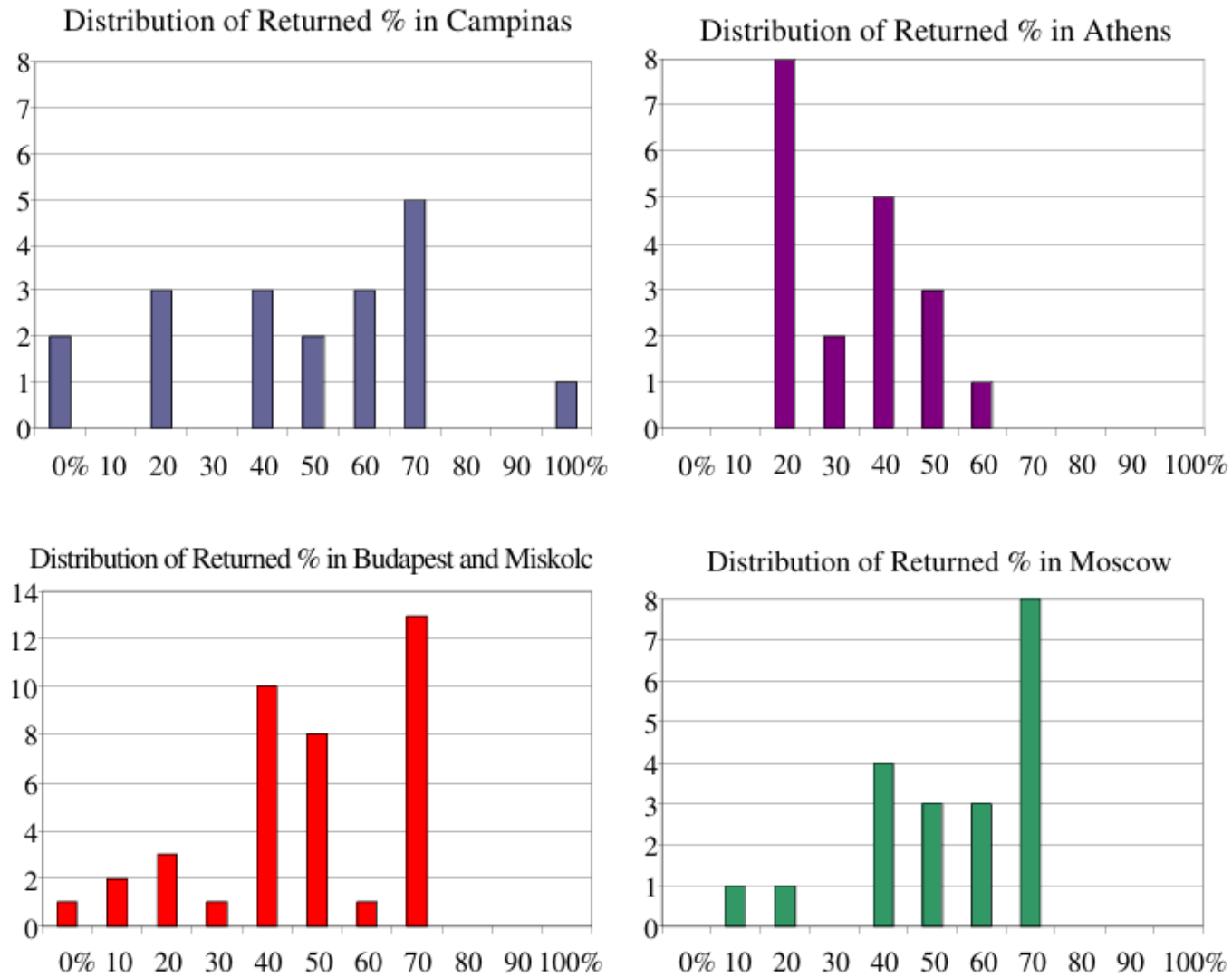


Figure 4. Frequency Distributions of Returned Percentages Sample by Sample

Source: Csukás et al. (2008, p. 88)

Csukás et al. (2008) (5/5)

- The study found significant cross-country differences, highlighting that both trust and reciprocity levels vary strongly by country:
  - Greek students sent and returned significantly less than others.
  - Russian students exhibited exceptionally high reciprocity.

Ockenfels & Weimann (1999) (1/2)

- Ockenfels & Weimann (1999) conducted Public Goods experiments with subjects socialized in either **West** or **East** Germany.
  - Experiments were conducted with students in 1995/1996; therefore, the students grew up in the specific parts of Germany before reunification.

- Many problems usually associated with cross-cultural studies do not arise in this context.
  - Same language, same currency, same experimenters etc.

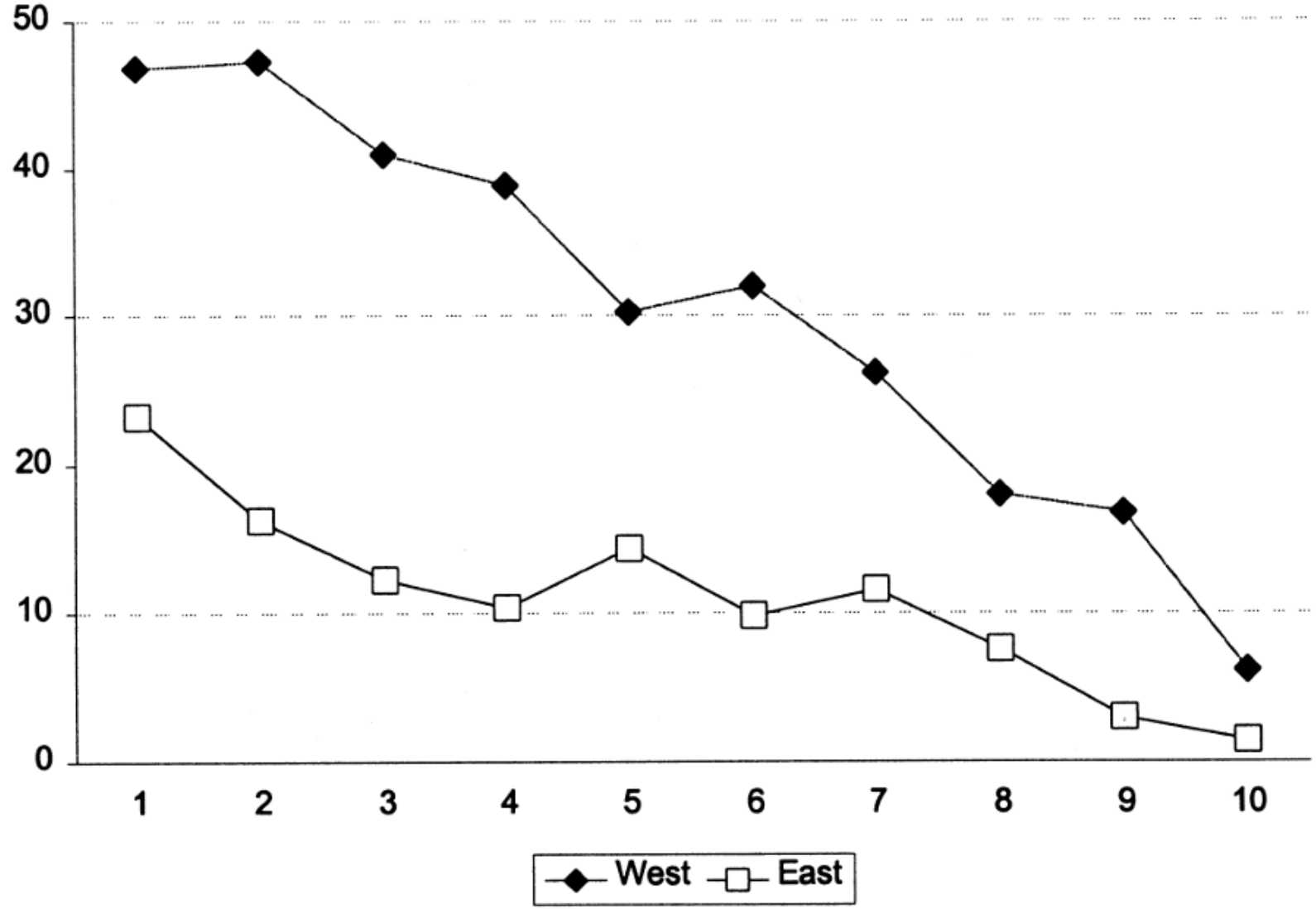


Fig. 1. Contributions in percent (first game): all subjects.

Source: Ockenfels and Weimann (1999, p. 280)

Lab Setup

6. Lab Setup (1/2)

Space and equipment

- Ensuring there are enough **computers** (or other necessary equipment, like tablets) for each participant.
- Arranging the seating to minimize **interaction** between participants, maintaining **privacy**.

Technology

- Ensuring that **software** or **online platforms** (e.g., z-Tree, oTree) are set up and tested before the session.
- Testing **internet connections**, **audio/visual tools**, and any other technology used in the experiment.

6. Lab Setup (2/2)

Payment Setup

- Ensuring **payment systems** are in place (cash, gift cards, or bank transfer).
- Ensuring that the payment is **immediate** or clearly communicated at the end of the session.

Conduct Session

7. Conduct Session (1/2)

Welcome

- Greeting participants and providing an **overview** of the session.
- Ensuring that **informed consent** is obtained without revealing specific details about the experiment.
- Clarifying **housekeeping items** (e.g., breaks, session duration, and emergency signaling).

Instructions

- Providing **clear instructions** for each treatment or task.
- Allowing participants to ask questions without incurring experimenter demand effects.

7. Conduct Session (2/2)

Monitor participant behavior

- Observing participants to ensure they are following the instructions and engaging correctly with the tasks.
- **Remaining neutral** and avoiding intervening unless there is a misunderstanding or technical issue.

End of session

- **Distributing payments** promptly, either at the end of the session or through a follow-up process.

Payment

8. Payment

- Once all the subjects have completed the experiment, payments can be made.

- **Anonymity is important:** To maintain privacy and reduce social pressure, payment should ideally take place in a separate room, not in the main experiment space.

- In laboratory experiments, payment is usually made **in cash**, as it is immediate and straightforward.

- Participants typically receive:
  - **Show-up fee** (guaranteed amount for attending).
  - **Earnings based on their performance** in the experiment.

Example for a Conventional Lab Experiment

American Economic Review

ISSN 0002-8282 (Print) | ISSN 1944-7981 (Online)

Cooperation under the Shadow of the Future: Experimental Evidence from Infinitely Repeated Games

Pedro Dal Bó

AMERICAN ECONOMIC REVIEW
VOL. 95, NO. 5, DECEMBER 2005
(pp. 1591–1604)

Download Full Text PDF

Article Information

Abstract

While there is an extensive literature on the theory of infinitely repeated games, empirical evidence on how "the shadow of the future" affects behavior is scarce and inconclusive. I simulate infinitely repeated prisoner's dilemma games in the lab with a random continuation rule. The experimental design represents an improvement over the existing literature by including sessions with finite repeated games as controls and a large number of players per session (which allows for learning without contagion effects). I find that the shadow of the future matters not only by significantly reducing opportunistic behavior, but also because its impact closely follows theoretical predictions.

Dal Bó (2005): Research Question

- How does the shadow of the future, i.e., the prospect of future interaction, affect behavior in repeated Prisoner's Dilemma games?

Dal Bó (2005): Decision-Making Task

TABLE 2—STAGE GAME PAYOFFS IN POINTS

		PD1			PD2	
		Blue player			Blue player	
		C	D		C	D
Red player	C	65, 65	10,100	Red player	75, 75	10, 100
	D	100, 10	35, 35		100, 10	45, 45

Source: Dal Bó (2005, p. 1595)

Dal Bó (2005): Incentives

- All payoffs in the game were given in points.

- At the end of each session, the points earned by each subject were converted into dollars at the exchange rate of 200 points $1 and paid privately in cash.
  - Subjects were also paid a $5 show-up fee.

Dal Bó (2005): Institutions

- Games were conducted as either **infinitely repeated games** or **finitely repeated games**.

- **Infinitely repeated games:** A random continuation rule was used to induce infinitely repeated play. There were three probabilities of continuation: (0, ½, ¾).

- **Finitely repeated games:** Fixed game lengths corresponding to the expected game length of the infinitely repeated games (1, 2 and 4).

Dal Bó (2005): Treatments (1/2)

- There are two factors: The **game** and the **continuation rule**.
- The game has **two levels:** PD1 and PD2
- The continuation rule has **six levels:** Infinitely-0; Infinitely-1/2; Infinitely-3/4; Finitely-1; Finitely-2; Finitely-3
- This leads to **twelve** treatments in total.

Dal Bó (2005): Treatments (2/2)

- Dal Bó (2005) uses a mixture of between- and within-subjects design.

- For each subject, the game and whether the continuation is infinitely or finitely repeated is fixed; the length varies within subjects.

Dal Bó (2005): Instructions

The participants are divided in two groups: Red and Blue.

Red and Blue participants will be matched together to interact in the following way. As you see on the screen at the front of the room, the Red participant can choose between U or D and the Blue participant can choose between L and R.

If the Red participant chooses U and the Blue participant chooses L, both earn 75 points.

If the Red participant chooses U and the Blue participant chooses R, the Red participant earns 10 and the Blue participant earns 100 points.

If the Red participant chooses D and the Blue participant chooses L, the Red participant earns 100 and the Blue participant earns 10 points.

If the Red participant chooses D and the Blue participant chooses R, both earn 45 points.

The points of the Red participants are indicated on the screen in red, and the Blue participant points are indicated in blue.

In addition, the screen will show on the right hand side the result of previous rounds of the current match.

Every ten seconds, we will generate a random number between 1 and 1000 and project this number on the screens in the front of the room. You can use this number to select one of the actions, if you want, like the flip of a coin. For example, if you are a Red participant, you can decide to choose U any time the random number is above, say, 200.

Source: Dal Bó (2005, p. 2)

Full instructions: https://assets.aeaweb.org/asset-server/articles-attachments/aer/data/dec05_app_20030568.pdf

Dal Bó (2005): Participants and Payments (1/2)

The experimental sessions were run between November 2001 and April 2002, with an average length of one hour (excluding the time spent paying subjects). Excluding the subjects selected to be monitors, 390 subjects participated in the experiment, an average of 48.75 subjects per session with a maximum of 60 and a minimum of 30. The subjects were UCLA undergraduates recruited through advertisements on university Web pages and signs posted on campus. Of the subjects, 22.31 percent indicated that they were majoring in economics. The subjects performed a total of 22,482 actions and earned an average of \$18.94, with a maximum of \$25.85 and a minimum of \$12. In the treatments $\delta = ½$ and $\delta = ¾$, the average number of rounds per match was 1.91 and 3.73, respectively. Some descriptive statistics are in Table 4.

Source: Dal Bó (2005, p. 1598)

Dal Bó (2005): Participants and Payments (2/2)

TABLE 4—SESSIONS DESCRIPTIVE DATA

		PD1		PD2	
		Dice	Finite	Dice	Finite
Normal	Date	11/6/01	11/13/01	2/7/02	4/18/02
	Time*	2:30–3:28	4:45–5:31	1:45–2:56	5:15–6:25
	Subjects	42	30	54	48
	Any econ†	23.81%	23.33%	12.96%	18.75%
	Ave earning	17.09	13.03	19.91	19.36
	Max earning	19.40	15.23	22.18	21.88
	Min earning	13.48	12.05	15.98	15.48
UD	Date	11/29/01	11/20/01	4/9/02	4/15/02
	Time*	5:10–6:05	5:10–6:05	4:45–5:53	4:45–5:54
	Subjects	42	54	60	60
	Any econ†	16.67%	12.96%	31.67%	35%
	Ave earning	14.37	17.77	23.09	22.11
	Max earning	16.23	21.55	25.85	25.10
	Min earning	12.18	12	19.93	17.15

* *Starting scheduled time and actual final time.*
† Percentage of all economics majors in the session.

Source: Dal Bó (2005, p. 1599)

Dal Bó (2005): Results

TABLE 6—PERCENTAGE OF COOPERATION BY ROUND AND TREATMENT*

		Round											
		1	2	3	4	5	6	7	8	9	10	11	12
Dice	$\delta = 0$	9.17											
	$\delta = ½$	30.93	26.10	19.87	12.50	12.96							
	$\delta = ¾$	46.20	40.76	38.76	34.58	33.04	27.27	24.75	26.28	29.17	26.04	32.29	31.25
Finite	$H = 1$	10.34											
	$H = 2$	13.31	6.90										
	$H = 4$	34.58	21.55	18.97	10.63								

** All sessions, matches four through ten.*

Source: Dal Bó (2005, p. 1600)

Questions

Exam Objectives

In the exam, you should be able to:

- **Describe** the different methods of data collection for economic experiments and their advantages and disadvantages**.**
- **Discuss** the advantages and potential problems (selection biases) of using students as subjects in economic experiments.
- **Describe** the experiment by Dal Bó (2005) in terms of the decision making-task, subjects, treatments and main results.

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Image Sources

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