

Course EE-LECO

# Experimental Economics

## Guidelines for Group Project

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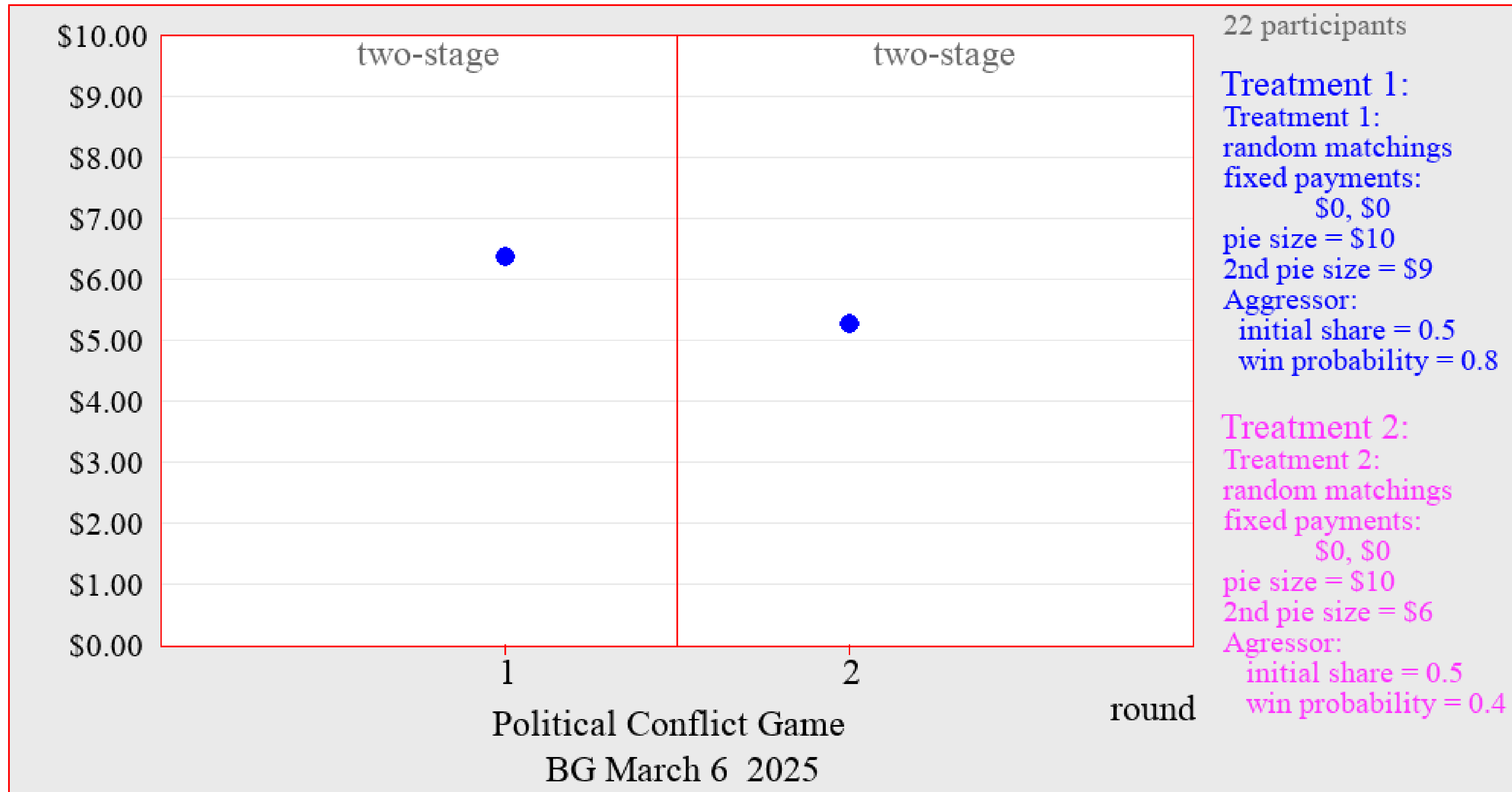
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# Outline for today

- Nash Equilibrium in the Dictator and Ultimatum games
- Political Conflict game
- Guidelines for the Group Project
- Start working

# Your experiment



# Structure for the Group Project

## 1. Motivation & research question

- Discuss the motivation behind your study
- Clearly state the main research question(s)
- Why does it matter?

## 2. Related literature

- Outline the literature fields that this question relates to
- Highlight gap in literature the paper aims to fill

## 3. Theoretical framework

- Explain the basic model, key concepts, and assumptions
- Summarize the theoretical hypotheses

## 4. Methodology

- Describe the experimental design

## 5. Results

- Explain analytical approach (regressions, qualitative analysis, etc.)
- Present the main findings clearly
- Discuss whether the hypotheses were confirmed

## 6. Summary

- Discuss potential limitations (methodological, theoretical, or empirical)
- Summarize the key takeaways

# Motivation & research question

What, why, for whom?

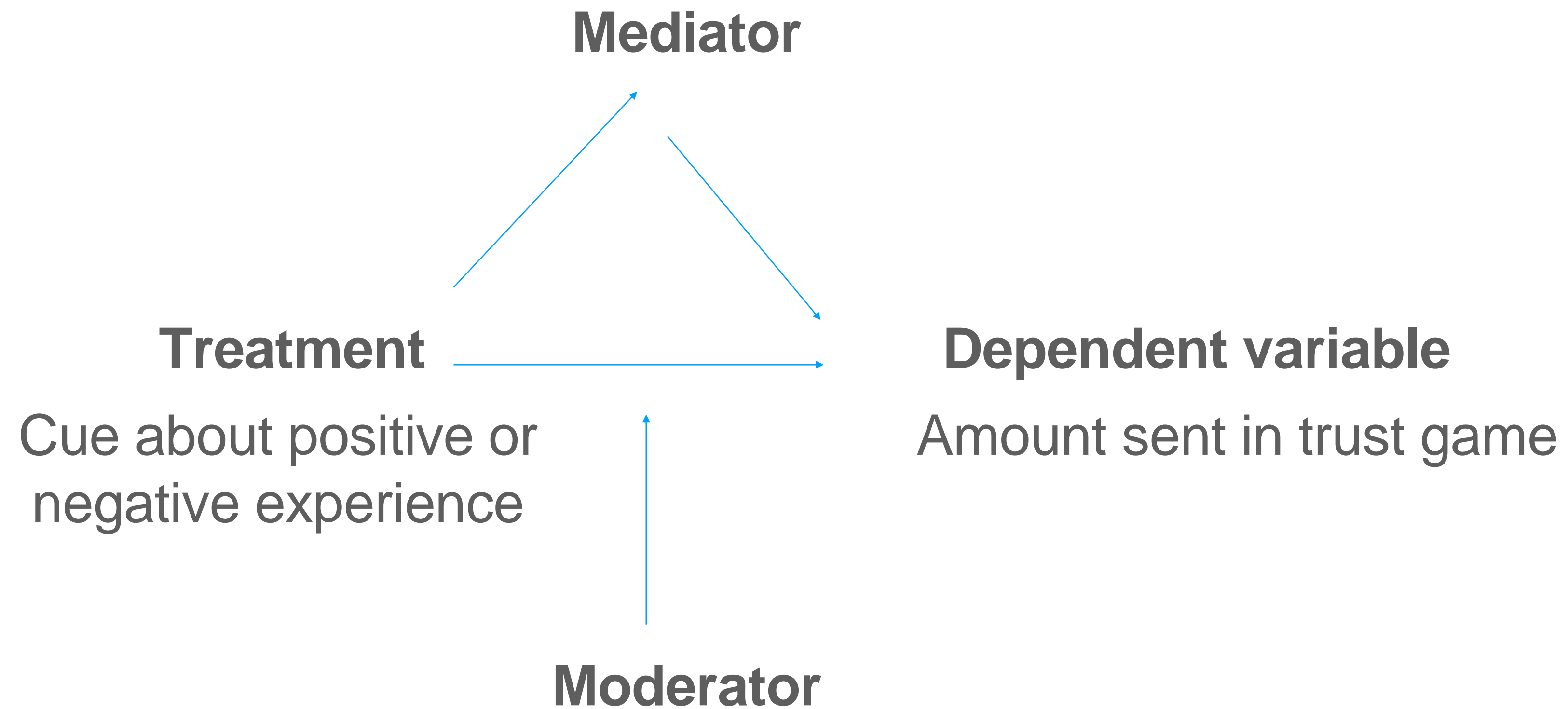
- Clearly state the main research question
- Discuss the motivation behind your research question
- Why is this important?
  - You can get new insights of how people behave?
  - It's an advance in economic theory?
  - In experimental economics methodology?
  - It's a robustness check to a study that already exists?
- Who can benefit from your project? Academics, policy makers, private sector?

# Literature, theoretical framework & hypotheses

- Related literature
  - Outline the literature fields that this question relates to
  - Highlight the gap in the literature the paper aims to fill
- Theoretical framework
  - Explain the basic model, key concepts, and assumptions
  - Independent variable (treatment variable) → Dependent variable (outcome variable)
- Hypotheses
  - Summarize the theoretical hypotheses
  - Equilibrium under standard predictions?
  - And how do you expect people will behave for real, in the experiment?

# Theoretical framework

Know what you want to measure



# Experimental design

## How?

- How are you going to answer this question?
- A field, lab or online experiment (data collection tool)?
- Is it a market, a game or an individual choice?
- What are the treatments?
- Subjects (number, who are they, how recruited)?
- Between or subject design?
- Are the instructions framed or abstract?
- One-shot vs repeated
- Incentives? Explain the payoffs in your experiment
- Timeline of the experiment (instructions, practice round, follow-up...)



# Analysis & (results)

- Appropriate analysis for the data given → I recommend Stata or Python
- Explain analytical approach (regressions, qualitative analysis, etc.)
- (Present the main findings clearly)
- (Discuss whether the hypotheses were confirmed or rejected)

# Analysis & (results)

- Average Treatment Effect (ATE)
- We are mainly interested in testing whether there is a significant difference in means (averages) of the key outcome variable in treatment vs. control group
  - Simple way (assuming normally distributed data): T-Test
  - Non-parametric tests (e.g., rank sum, such as Mann-Whitney-U Test)
- Multivariate regression models including control variables:

Outcome var. =  $\beta_1$  \* Treatment-Dummy +  $\beta_2$  \* Control1 +  $\beta_3$  \* Control2 +  $\varepsilon$ ,

where Treatment-Dummy: is 1 if respondent is in treatment group and 0 otherwise.

Example: Amount sent =  $\beta_1$  \* Treatment-Dummy +  $\beta_2$  \* Gender +  $\beta_3$  \* Age +  $\varepsilon$

# Presentation

- **15-20 minutes**
- **Send slides (as PDF) to me via email**
- **I will grade the team assignment, i.e., you get a team grade**
- **Keep it concise:** Stick to the structure and avoid unnecessary details.
- **Use slides sparingly and keep content minimal:** Use visuals (figures, models) to help understanding.
- **Encourage discussion:** End with thought-provoking questions.

# My support

- I am happy to discuss ideas with you
- I am happy to provide you with feedback along the way on
  - research question
  - design
  - set-up
  - data analysis

# Timeline

- **Today: Research question and start to think about design**
- **March 20: Finalize research design & prepare short pitch (max 2 slides), which should be send to me via email by March 21**
- **March 25: Feedback session**
- **April 3: Input from me (lecture on experimental data analysis)**
- **Meantime (regular lectures by me): Data analysis at home**
- **April 22-29: Presentations**