



Welcome to Game Theory

By Finance & Economics Club





Introduction: Winning the Game of Life

Lecture to follow: Game Theory with Ben Polak

Other links to follow:

Game theory challenge: Can you predict human behavior? - Lucas Husted

How to outsmart the Prisoner's Dilemma - Lucas Husted

Case Study of Brexit



Project



“What distinguishes Economics from other disciplines is not its subject matter but its approach.

The economic approach is applicable to all human behaviour.”

-Gary S. Becker (Nobel in Economics in 1991)

This project involves fundamentals of any research work, experimentation and of course, game theory.





One frequently studied type of game is an auction. There are 4 types of auction:

1) the **ascending-bid** (open, oral, or English) auction

(2) the **descending-bid** (Dutch) auction

(3) the **first-price**, sealed-bid auction

(4) the **second-price**, sealed-bid (Vickrey) auction

} Pool A

} Pool B

Useful links:

[First Price Auctions Explained \[Whiteboard Video\]](#)

[Second Price Ad Auctions Explained \[Whiteboard Video\]](#)

[Main Auction types and its history in just 2 minutes!](#)



Description

This project is advised to be performed in pairs/groups of 3-4.

Teams should choose either pool A or B. Each pool comprises of similar yet opposite kind of auction strategies. The team should avail 2 separate games from suitable resources/make their own games for the 2 auction strategy in the chosen pool. Then the teams are required to conduct live experiments by playing out the 2 chosen games for any set of participants.

Note: The teams are the experimenter and the participants can be their friends/family.

Eg:

Say team *Ecomavericks* made Game 1 for first-price sealed-bid auction and Game 2 for second-price sealed-bid auction. They decide to play out these 2 games for one of the team member's family of 5 people. The data of these 5 people for the 2 games is noted to further analyse and draw conclusions.



The games should be played out as many times as possible to make a decent sample size. The data collected should be then be analysed.

A report should be co-authored by the team. The report should mainly address:

- Theory about the 2 auction strategies
- Method of experimentation
 - Detailed explanation of the 2 games
 - No. of times the games were played out
 - Sample size of participants
 - Assumptions while analysing the data
 - Link to the spreadsheets with data
- What differences in the behavior of people were found between the 2 games?
- Were the outcomes from the experiment in line with the already existing theory about the 2 auction strategies(that the team chose)?
- What deviations from the existing theory were observed?

Link to submission:

<https://forms.gle/sCK1tKRogiksNsH69>

