

Competitive Market Experiment

Objective

You will participate in a market as a buyer or seller. Your goal is to maximize your **profit**.

Your Role

Your role is randomly assigned. You keep your role for the first five rounds and switch for the next five rounds.

- Buyers receive a private value (maximum willingness to pay)
- Sellers receive a private cost (minimum acceptable price)

Step 1: Submit Your Bid / Ask

- Buyers submit one bid price: how much they are willing to pay.
- Sellers submit one ask price: the price they want to be paid.

Step 2: Market Clearing

After all submissions:

- Bids are ranked from highest to lowest
- Asks are ranked from lowest to highest
- The highest buyer is matched with the lowest seller
- The second-highest buyer is matched with the second-lowest seller
- A match is successful only if the buyer's bid is greater than or equal to the seller's ask.
- This process of matching continues until the buyer's bid is lower than the seller's ask.

Step 3: Market Price

How much will you pay as a buyer? How much will you receive as a seller? A **single market price** will be calculated on the basis of all submitted bids and asks. All trades occur at the same price.

- Look at the **last successful match**
- Take the buyer's bid and the seller's ask in that match
- The market price is the average of these two numbers.

Example of a Market Price

Bids: 100, 90, 80, 70 **Asks:** 20, 40, 60, 85

- $100 \geq 20$ (match)
- $90 \geq 40$ (match)
- $80 \geq 60$ (match)
- $70 < 85$ (stop)

The number of trades is 3. The last matched bid: 80 Last matched ask: 60. The market price is the average: $(60+80)/2 = 70$.

Step 4: Profit

If you are selected among the matched traders, you will trade at the market price.

- Buyer profit = Value – Market Price
- Seller profit = Market Price – Cost

If you do not trade, your profit is zero.

Multiple Rounds

The experiment will be repeated for several 10 rounds. You will keep your role for the first 5 rounds. Then, you will switch roles for the next 5 rounds. Try to improve your decisions based on previous outcomes. At the end, we will add all your profits and show a ranking of performance in the experiment.

Strategy Tips

- Buyers: Do not bid above your value (you will lose money)
- Sellers: Do not ask below your cost (you will lose money)
- Consider how your decision affects your chance of trading