Appendix D: Experimental Instructions

Note: Intermediate instructions screens are omitted.
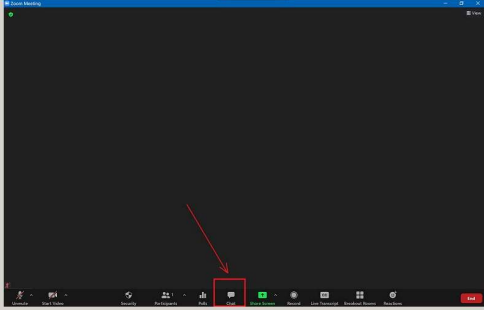

Introduction 1/2

Thank you for participating in this study.

This is a study in the economics of decision making. If you follow the instructions carefully, you may earn money. You will be paid your show-up fee and your earnings privately via Venmo after the experiment. The amount of your earnings depends on the decisions you make, the decisions other participants make, and some random factors.

Please do not communicate with other participants in any form during the experiment.

If you have questions during the experiment, please send a private message to the experimenter on Zoom.

Continue

Introduction 2/2

In today's experiment, you will be a participant in a market in a sequence of periods. There are 4 sellers and 4 buyers, and you will be randomly assigned a role. Once you have been assigned your role, you will remain a seller or a buyer throughout all periods.

On the next screen you will learn whether you are a seller or a buyer, what kinds of decisions you need to make and how you can earn money.

During the experiment, all earnings will be in the unit of ECUs (Experimental Currency Units), which will be converted to US dollars at the end of the experiment (300 ECUs = $1).

You will play a multiple-period game. The game will be repeated for 60 periods for sure, and then starting from Period 61, a virtual die will be rolled at the end of each period. With a probability of 90%, the game will continue to the next period. With a probability of 10%, the game will end. Therefore, you only know that the game will last for at least 60 periods, but you will not know exactly when the game ends.

At the end of the session, you will receive the sum of earnings in all periods. Your earnings are based on your decisions and the decisions of others. How your earnings will be calculated will be explained in the following screens.

Continue

Your role in the experiment
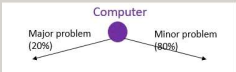
You are a buyer for all periods today.

Buyer has a problem to be solved

At the beginning of each period, the computer will randomly match one seller with one buyer, and this matching will be reshuffled after each period (in other words, you will be most likely paired with a different seller/buyer in each period).

In each period, the buyer will encounter a problem that needs to be solved. The problem is either a **major** problem or a **minor** problem. There is a 20% chance that the problem is a **major** one and a 80% chance that it is a **minor** one.

The buyer him/herself is NOT able to identify the type of his/her problem. Only the seller can identify whether the buyer's problem is a **major** one or a **minor** one.
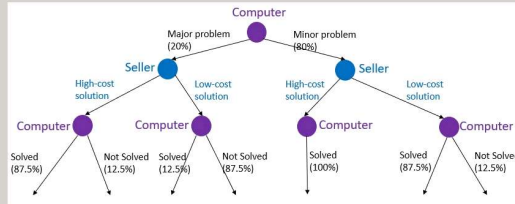
After identifying the buyer's problem, the seller can choose either a **high-cost** solution or a **low-cost** solution.

• If the buyer's problem is a **major** one, then:
   - A **high-cost** solution solves the buyer's **major** problem with a probability of 87.5% and fails to solve the problem with a probability of 12.5%.
   - A **low-cost** solution solves the buyer's **major** problem with a probability of 12.5% and fails to solve the problem with a probability of 87.5%.

• If the buyer's problem is a **minor** one, then:
   - A **high-cost** solution solves the buyer's **minor** problem with a probability of 100%.
   - A **low-cost** solution solves the buyer's **minor** problem with a probability of 87.5% and fails to solve the problem with a probability of 12.5%.

**The graph below describes the procedures so far:**

Continue

The seller can now figure out his/her **potential profit.** After the seller chooses a solution to the buyer's problem, the seller pays a cost for the solution and charges the buyer a price.

• If the seller chooses a **high-cost** solution, he/she pays a cost of 40 ECUs and charges the buyer a price of 80 ECUs. Therefore, the seller's **potential profit** for choosing a **high-cost** solution is 80 - 40 = 40 ECUs.
• If the seller chooses a **low-cost** solution, he/she pays a cost of 0 ECUs and charges the buyer a price of 50 ECUs. Therefore, the seller's **potential profit** for choosing a **low-cost** solution is 50 - 0 = 50 ECUs.

The graph below demonstrates the steps described so far and the seller's potential profit in each scenario:
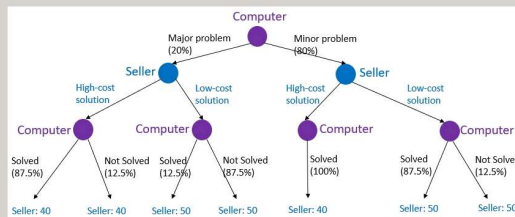
Continue

The buyer's **potential profit** in each period equals to the **revenue** he/she receives from the seller solution minus the price the seller charges her for the solution.

The **revenue** is determined by whether his/her problem is solved.

• If the buyer's problem is solved, then he/she receives a **revenue** of 120 ECUs.
• If the buyer's problem is NOT solved, then he/she receives a **revenue** of 0 ECUs.

As stated in the last screen, when the seller chooses a **high-cost** solution, the **price** the seller charges the buyer is 80 ECUs. When the seller chooses a **low-cost** solution, the **price** the seller charges her for the solution is 50 ECUs.

Therefore, the buyer's **potential profit** in different situations can be summarized as below:

• If the seller chooses a **high-cost** solution, and the buyer's problem is **solved,** then the buyer's **potential profit** is 120 - 80 = 40 ECUs.
• If the seller chooses a **high-cost** solution, and the buyer's problem is **NOT solved,** then the buyer's **potential profit** is 0 - 80 = -80 ECUs.
• If the seller chooses a **low-cost** solution, and the buyer's problem is **solved,** then the buyer's **potential profit** is 120 - 50 = 70 ECUs.
• If the seller chooses a **low-cost** solution, and the buyer's problem is **NOT solved** , then the buyer's **potential profit** is 0 - 50 = -50 ECUs.

The graph below demonstrates the steps described so far and the potential profit of the seller and buyer in each scenario.
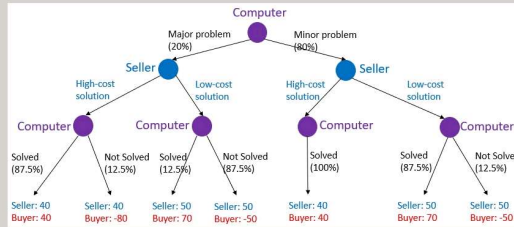
Continue

In each period, if the seller chooses a **low-cost** solution and the problem is **NOT solved,** the buyer can make one more decision. The buyer can choose from the following two options:

• **Demand:** "The seller should compensate me!"
• **Not Demand:** "I do not ask the seller to compensate me."

If the buyer chooses **Demand,** then the buyer first pays 20 ECUs to make the demand and then the seller must transfer 160 ECUs to the buyer. In other words, the buyer's **final profit** in this period = the buyer's **potential profit** - 20 ECUs + 160 ECUs = 90 ECUs, while the seller's **final profit** in this period = the seller's **potential profit** - 160 ECUs = -110 ECUs.

If the buyer chooses **Not Demand,** then there will be no transfer of ECUs between the buyer and the seller. Both the seller's and the buyer's **final profits** are equal to their **potential profits.**

If the seller chooses a **high-cost** solution in this period, no matter whether the problem is solved or not, the buyer is NOT able to make the abovementioned decision, and the seller's and the buyer's final profits are equal to their **potential profits.**

If the seller chooses a **low-cost** solution in this period and the problem is solved, the buyer is NOT able to make the abovementioned decision either, and the seller's and the buyer's **final profits** are equal to their **potential profits.**

The graph below describes the entire procedures and the final profits of the seller and buyer in each period:
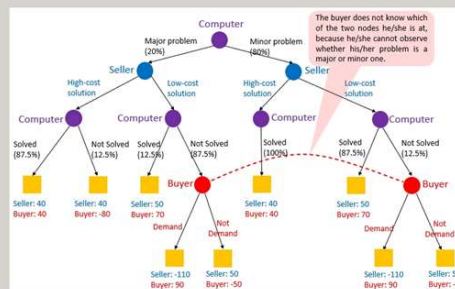
Continue

In each period, each seller will be asked to choose a type of solution for both types of problems in advance (which is called a decision plan), before the type of the buyer's problem is randomly determined by the computer. Each seller will make the following decision plan:

• Please choose which solution type you will use, if the buyer has a major problem:
  - High-cost solution
  - Low-cost solution
•Please choose which solution type you will use, if the buyer has a minor problem:
  - High-cost solution
  - Low-cost solution

Continue

Suppose that a seller's decision plan is that *"if the buyer's problem is a major one, then I choose a high-cost solution; if the buyer's problem is a minor one, then I choose a high-cost solution"*, then the seller would indicate their decision as follows:

> Please choose which solution type you will use, if the buyer has a **major** problem:
> ◉ High-cost solution
> ○ Low-cost solution
>
> Please choose which solution type you will use, if the buyer has a **minor** problem:
> ◉ High-cost solution
> ○ Low-cost solution

Suppose that a seller's decision plan is that *"if the buyer's problem is a major one, then I choose a high-cost solution; if the buyer's problem is a minor one, then I choose a low-cost solution"*, then the seller would indicate their decision as follows:

> Please choose which solution type you will use, if the buyer has a **major** problem:
> ◉ High-cost solution
> ○ Low-cost solution
>
> Please choose which solution type you will use, if the buyer has a **minor** problem:
> ○ High-cost solution
> ◉ Low-cost solution

Suppose that a seller's decision plan is that *"if the buyer's problem is a major one, then I choose a low-cost solution; if the buyer's problem is a minor one, then I choose a high-cost solution"*, then the seller should would indicate their decision as follows:

> Please choose which solution type you will use, if the buyer has a **major** problem:
> ○ High-cost solution
> ◉ Low-cost solution
>
> Please choose which solution type you will use, if the buyer has a **minor** problem:
> ◉ High-cost solution
> ○ Low-cost solution

Suppose that a seller's decision plan is that *"if the buyer's problem is a major one, then I choose a low-cost solution; if the buyer's problem is a minor one, then I choose a low-cost solution"*, then the seller would indicate their decision as follows:

> Please choose which solution type you will use, if the buyer has a **major** problem:
> ○ High-cost solution
> ◉ Low-cost solution
>
> Please choose which solution type you will use, if the buyer has a **minor** problem:
> ○ High-cost solution
> ◉ Low-cost solution

Continue

How buyers make decisions

In each period, each buyer will be asked to make a decision plan of whether to choose **Demand** or **Not Demand** if the seller chooses a **low-cost** solution and the solution **does not solve** the problem, before the type of the buyer's problem is randomly determined by the computer and the seller implements his/her solution decision.

Each buyer will make the following decision:

Please choose from the following two options, if the seller chooses the low-cost solution, and your problem is NOT solved:

• **Demand:** *"The seller should compensate me!"*
• **Not Demand:** *"I do not ask the seller to compensate me."*

Continue

Information available for sellers when making decision

If you are a seller, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
  - The problem type of the buyer you were matched with in that period (i.e., **Major** or **Minor** problem)
  - The solution type you chose (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved the problem or not
  - (If you chose the **Low-cost** solution and the solution **did not solve** the problem) Whether the buyer you were matched with in that period chose **Demand** or **Not Demand**.
  - Your final profit in that period

Please click "Show the example" to see an example of a seller's decision making screen. **The table highlighted with a red rectangle** is the box of the seller's own interaction history.

Show the example

Continue

Information available for sellers when making decision 1/2

If you are a seller, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
   - The problem type of the buyer you were matched with in that period (i.e., **Major** or **Minor** problem)
   - The solution type you chose (i.e., **High-cost** or **Low-cost** solution)
   - Whether the solution solved the problem or not
   - (If you chose the **Low-cost** solution and the solution **did not solve** the problem) Whether the buyer you were matched with in that period chose **Demand** or **Not Demand.**
   - Your final profit in that period

• Compensation situations in previous periods:
   - If in the previous period, there exists at least one seller-buyer pair (including your own pair) in which the seller compensated the buyer (i.e., the seller chose the **Low-cost** solution, the solution did not solve the problem, and the buyer matched with this seller chose **Demand**), then you will receive the following message: **"In the last period, at least one seller compensated his/her buyer."**
   - If in the previous period, there did NOT exist any pair in which the seller compensated the buyer, then you will receive the following message: **"In the last period, no seller compensated his/her buyer."**
   - In addition, you will also see a history of the message you received in each of the previous periods.

Please click "Show the example" to see an example of a seller's decision making screen. **The table highlighted with a red rectangle** is the box of the seller's own interaction history.

Show the example

Continue

Information available for sellers when making decision 2/2

If you are a seller, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
   - The problem type of the buyer you were matched with in that period (i.e., **Major** or **Minor** problem)
   - The solution type you chose (i.e., **High-cost** or **Low-cost** solution)
   - Whether the solution solved the problem or not
   - (If you chose the **Low-cost** solution and the solution **did not solve** the problem) Whether the buyer you were matched with in that period chose **Demand** or **Not Demand.**
   - Your profit in that period

• Compensation situations in previous periods:
   - If in the previous period, there exists at least one seller-buyer pair (including your own pair) in which the seller compensated the buyer (i.e., the seller chose the **Low-cost** solution, the solution did not solve the problem, and the buyer matched with this seller chose **Demand**), then you will receive the following message: **"In the last period, at least one seller compensated his/her buyer."**
   - If in the previous period, there did NOT exist any pair in which the seller compensated the buyer, then you will receive the following message: **"In the last period, no seller compensated his/her buyer."**
   - In addition, you will also see a history of the message you received in each of the previous periods.

Please click "Show the example" to see an example of a seller's decision making screen. **The table highlighted with a red rectangle** is the box of compensation situation history.

Show the example

Continue

Information available for buyers when making decision

If you are a buyer, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
  - The solution type the seller you were matched with in that period chose (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved your problem or not
  - (If the seller chose the **Low-cost** solution and the solution **did not solve** your problem) Whether you chose **Demand** or **Not Demand**.
  - Your final profit in that period

Please click "Show the example" to see an example of a buyer's decision making screen. **The table highlighted with a red rectangle** is the box of the buyer's own interaction history.

Show the example

Continue

Information available for buyers when making decision 1/3

If you are a buyer, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
  - The solution type the seller you were matched with in that period chose (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved your problem or not
  - (If the seller chose the **Low-cost** solution and the solution **did not solve** your problem) Whether you chose **Demand** or **Not Demand**.
  - Your final profit in that period

• The history of the seller you are currently matched with, including:
  - The solution type the seller chose in each of the previous periods (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved the problem or not in each of the previous periods
  - (If the buyer chose the Low-cost solution and the solution did not solve the problem) Whether the buyer chose **Demand** or **Not Demand** in each of the previous periods (if available)

• Compensation situations in previous periods:
  - If in the previous period, there exists at least one seller-buyer pair (including your own pair) in which the seller compensated the buyer (i.e., the seller chose the **Low-cost** solution, the solution did not solve the problem, and the buyer matched with this seller chose **Demand**), then you will receive the following message: **"In the last period, at least one seller compensated his/her buyer."**
  - If in the previous period, there did NOT exist any pair in which the seller compensated the buyer, then you will receive the following message: **"In the last period, no seller compensated his/her buyer."**
  - In addition, you will also see a history of the message you received in each of the previous periods.

Please click "Show the example" to see an example of a buyer's decision making screen. **The table highlighted with a red rectangle** is the box of the buyer's own interaction history.

Show the example

Continue

Information available for buyers when making decision 2/3

If you are a buyer, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
  - The solution type the seller you were matched with in that period chose (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved your problem or not
  - (If the seller chose the **Low-cost** solution and the solution **did not solve** your problem) Whether you chose **Demand** or **Not Demand**.
  - Your final profit in that period

• The history of the seller you are matched with in the current period, including:
  - The solution type the seller chose in each of the previous periods (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved the problem or not in each of the previous periods
  - (If the seller chose the Low-cost solution and the solution did not solve the problem) Whether the buyer chose **Demand** or **Not Demand** in each of the previous periods (if available)

• Compensation situations in previous periods:
  - If in the previous period, there exists at least one seller-buyer pair (including your own pair) in which the seller compensated the buyer (i.e., the seller chose the **Low-cost** solution, the solution did not solve the problem, and the buyer matched with this seller chose **Demand**), then you will receive the following message: **"In the last period, at least one seller compensated his/her buyer."**
  - If in the previous period, there did NOT exist any pair in which the seller compensated the buyer, then you will receive the following message: **"In the last period, no seller compensated his/her buyer."**
  - In addition, you will also see a history of the message you received in each of the previous periods.

Please click "Show the example" to see an example of a buyer's decision making screen. **The table highlighted with a red rectangle** is the box of the history of the seller the buyer is matched with in the current period.

Show the example

Continue

Information available for buyers when making decision 3/3

If you are a buyer, when you are making your decision in each period, the following information will be available to you:

• Your own interaction history in all previous periods, including:
  - The solution type the seller you were matched with in that period chose (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved your problem or not
  - (If the seller chose the **Low-cost** solution and the solution **did not solve** your problem) Whether you chose **Demand** or **Not Demand**.
  - Your final profit in that period

• The history of the seller you are matched with in the current period, including:
  - The solution type the seller chose in each of the previous periods (i.e., **High-cost** or **Low-cost** solution)
  - Whether the solution solved the problem or not in each of the previous periods
  - (If the buyer chose the Low-cost solution and the solution did not solve the problem) Whether the buyer chose **Demand** or **Not Demand** in each of the previous periods (if available)

• Compensation situations in previous periods:
  - If in the previous period, there exists at least one seller-buyer pair (including your own pair) in which the seller compensated the buyer (i.e., the seller chose the **Low-cost** solution, the solution did not solve the problem, and the buyer matched with this seller chose **Demand**), then you will receive the following message: **"In the last period, at least one seller compensated his/her buyer."**
  - If in the previous period, there did NOT exist any pair in which the seller compensated the buyer, then you will receive the following message: **"In the last period, no seller compensated his/her buyer."**
  - In addition, you will also see a history of the message you received in each of the previous periods.

Please click "Show the example" to see an example of a buyer's decision making screen. **The table highlighted with a red rectangle** is the box of compensation situation history.

Show the example

Continue

Feedback at the end of each period

At the end of each period, sellers and buyers will receive the following feedback:

Each <u>seller</u> will receive the following feedback:

• The type of problem your buyer encountered (i.e., **Major** or **Minor** problem)

• The solution type you chose (i.e., **high-cost** solution or **low-cost** solution)

• Whether the solution solved the problem or not.

• (If you chose a **low-cost** solution and the solution did not solve the problem) Whether your buyer chose **Demand** or **Not Demand.**

• Your **final profit.**

Each <u>buyer</u> will receive the following feedback:

• The solution type your seller chose (i.e., **high-cost** solution or **low-cost** solution)

• Whether the solution solved your problem or not.

• (If your seller chose a **low-cost** solution and the solution did not solve your problem) Whether you chose **Demand** or **Not Demand.**

• Your **final profit.**

Continue

Sequence of steps in each period

Here is an overview of the sequence of steps each participant will go through in each period:

1. At the beginning of each period, the computer will randomly match one seller with one buyer (and the matching will be reshuffled in each period).

2. Each seller and buyer make his/her decision plan.

3. After all sellers and buyers submit their decision plans, the computer first rolls a virtual die to determine whether the buyer's problem is a major or minor one. The problem is a major one with a probability of 20% and a minor one with a probability of 80%.

4. Based on the seller's decision plan given the buyer's problem type, the computer implements a high-cost or low-cost solution.
  • For example, if the buyer's problem is a major one, and the decision a seller submitted is *"if the buyer has a major problem then I choose a high-cost solution; if the buyer has a minor problem then I choose a low-cost solution",* then the computer will implement a high-cost solution.

5. The computer determines whether the seller's solution solves the buyer's problem or not based on the probability distribution described below:

	Major problem (20% occurrence)	**Minor** problem (80% occurrence)
High-cost solution	87.5% Solved 12.5% Not Solved	100% Solved 0% Not Solved
Low-cost solution	12.5% Solved 87.5% Not Solved	87.5% Solved 12.5% Solved

6. If and only if the seller's solution is a **low-cost** solution and it **does NOT solve** the buyer's problem, then the computer implements the buyer's decision of whether to ask the seller to compensate or not.

7. Each seller's and buyer's final profit in the current period are determined, which can be described by the graph below.

Show the graph

Continue

As we can see from previous pages, the seller has 4 options while the buyer has 2 options. This makes 4*2=8 possible combinations of options in total, as demonstrated below:

	If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Demand				
Not Demand				

In order to help you have a general impression of how much **final profit** you can earn **on average** for each of the 8 option combinations, we help you calculate the **expected final profit** of each of these 8 option combinations.

In mathematics, the **expected final profit** equals <u>a weighted sum of your payoff in all possible cases, and the weight is the probability of the occurrence of that case</u>.

The table below summarizes the expected final profits of all 8 option combinations.

For example, the first cell tells us that if the seller's decision plan is *"If it is a major problem, then I choose a high-cost solution; if it is a minor problem, then I choose a high-cost solution"* and the buyer's decision plan is *"Demand"* , then the seller's **expected final profit** is 40 and the buyer's **expected final profit** is 37.

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

Please note that this table of expected final profits is only a calculation of how much you can earn **on average** (*across all possible situations*) in each of the 8 option combinations, but NOT how much you can *actually* earn.

Continue

To ensure that you have fully understood the instructions of this experiment, you will be asked to answer several comprehension questions. You have unlimited number of attempts to correctly answer each question, but you have to correctly answer all of them in order to proceed to the experiment. In addition, you will receive 80 ECUs for correctly answering them.

Question 1:

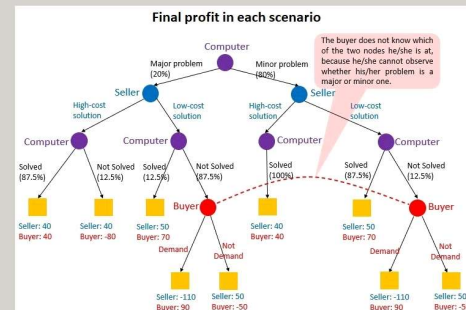Suppose in a certain period, a seller makes the following choices:

Please choose which solution type you will use, if the buyer has a **major** problem:
○ High-cost solution
● Low-cost solution

Please choose which solution type you will use, if the buyer has a **minor** problem:
● High-cost solution
○ Low-cost solution

Also suppose that in the same period, the buyer matched with this seller makes the following choice:

Please choose from the following two options, if the seller chooses the **low-cost** solution and your solution is NOT solved:

● Demand: "The seller should compensate me!"
○ Not Demand: "I do not ask the seller to compensate me."

Suppose that the computer randomly determines that the buyer's problem is a **major** one, and the seller's solution **does NOT** solve the problem.

1.1. How much is the seller's final profit in this period (ECUs)? [   ]
1.2. How much is the buyer's final profit in this period (ECUs)? [   ]

Final profit in each scenario

Submit

Question 2:

Suppose in another period, the seller makes the following choices:

> Please choose which solution type you will use, if the buyer has a **major** problem:
> ○ High-cost solution
> ● Low-cost solution
>
> Please choose which solution type you will use, if the buyer has a **minor** problem:
> ○ High-cost solution
> ● Low-cost solution

Also suppose that in the same period, the buyer matched with this seller makes the following choice:

> Please choose from the following two options, if the seller chooses the **low-cost** solution and your solution is NOT solved:
>
> ○ Demand: "The seller should compensate me!"
> ● Not Demand: "I do not ask the seller to compensate me."

Before the computer randomly determines whether the buyer's problem is a major or minor one and whether the seller's solution solves the buyer's problem:

2.1. How much is the seller's **expected final profit** in this period? ☐

2.2. How much is the buyer's **expected final profit** in this period? ☐

You can use the following table to help you answer this question (and remember that this table will be provided to you when you make your decision in each period).

			Seller's decision plan			
			If Major then High-cost / If Minor then High-cost	If Major then High-cost / If Minor then Low-cost	If Major then Low-cost / If Minor then Low-cost	If Major then Low-cost / If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

Submit

Question 3:

Recall that you are a buyer. Suppose that the 4 sellers are A, B, C and D. Which of the following two statements is true?

○ If I am matched with A in a certain period, then I will be matched with A again with a 100% probability in the next period.

● If I am matched with A in a certain period, then I might be matched with any of A, B, C and D in the next period.

Submit

Question 4:

How many periods will this game be repeated for?

A. This game will be repeated for 60 periods.

B. This game will be repeated for 60 periods for sure, and then starting from Period 61, a virtual die will be rolled at the end of each period. With a probability of 90%, the game will continue to the next period. With a probability of 10%, the game will end.

○ A
○ B

Submit

Question 5:

When a **seller** is making his decision in each period, he/she is able to observe whether any seller on the market compensated his/her buyer in each of the previous periods. Is this true or false?

○ True
○ False

Submit

Comprehension Questions 6/6

Question 6:

Suppose that a certain seller is randomly matched with a certain buyer in a period. When the buyer is making his/her decision, he/she is able to observe the seller's history in each of the previous periods (i.e., the solution type this seller chose, whether the seller solved the problem or not, and the reaction of the buyer matched with this seller in that period, if available) and whether any seller on the market compensated his/her buyer in each of the previous periods. Is this true or false?

○ True
○ False

Submit

Comprehension Questions 7/7

Scenario A:

Suppose all sellers in the market choose the following decision plan in each period:

Please choose which solution type you will use, if the buyer has a **major** problem:
● High-cost solution
○ Low-cost solution

Please choose which solution type you will use, if the buyer has a **minor** problem:
● High-cost solution
○ Low-cost solution

Suppose all buyers in the market choose the following decision plan in each period:

Please choose from the following two options, if the seller chooses the **low-cost** solution and your problem is NOT solved:

● Demand: "The seller should compensate me!"
○ Not Demand: "I do not ask the seller to compensate me."

Scenario B:

Suppose all sellers in the market choose the following decision plan:

Please choose which solution type you will use, if the buyer has a **major** problem:
● High-cost solution
○ Low-cost solution

Please choose which solution type you will use, if the buyer has a **minor** problem:
○ High-cost solution
● Low-cost solution

Suppose all buyers in the market choose the following decision plan:

Please choose from the following two options, if the seller chooses the **low-cost** solution and your problem is NOT solved:

○ Demand: "The seller should compensate me!"
● Not Demand: "I do not ask the seller to compensate me."

Question 1A: In **Scenario A** , how much **total expected profit** can each **seller** earn across 60 periods? _____

Question 1B: In **Scenario B** , how much **total expected profit** can each **seller** earn across 60 periods? _____

Question 2A: In **Scenario A**, how much **total expected profit** can each **buyer** earn across 60 periods? _____

Question 2B: In **Scenario B** , how much **total expected profit** can each **buyer** earn across 60 periods? _____

Hints:

1. Each seller/buyer's total expected profit across 60 periods = 60 x his/her expected final profit in each period (which can be found from the table on the right).

2. Feel free to use the calculator below if needed.

Calculator

[ ] x 60 = 0

Calculate

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

Submit

The experiment will now begin. Please click "I am ready" to proceed.
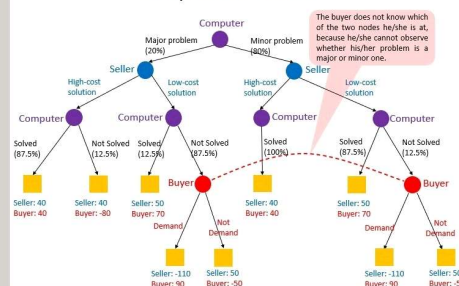
I am ready

You are a buyer.

Please choose from the following two options, if the seller chooses the **low-cost** solution, and your problem is NOT solved:

- ○ Demand: 'The seller should compensate me!'
- ○ Not Demand: 'I do not ask the seller to compensate me.'

My interaction history

My total profit so far: 0 ECUs

Final profit in each scenario

The buyer does not know which of the two nodes he/she is at, because he/she cannot observe whether his/her problem is a major or minor one.

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

OK

You are a seller.

Please choose which solution type you will use, if the buyer has a **major** problem:

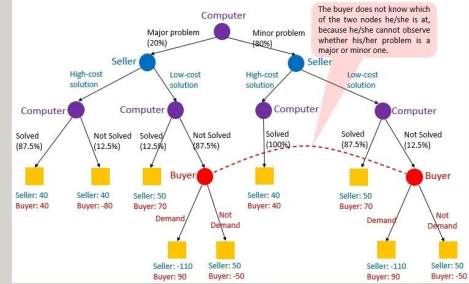- ○ High-cost solution
- ○ Low-cost solution

Please choose which solution type you will use, if the buyer has a **minor** problem:

- ○ High-cost solution
- ○ Low-cost solution

My interaction history

My total profit so far: 0 ECUs

OK

Final profit in each scenario

The buyer does not know which of the two nodes he/she is at, because he/she cannot observe whether his/her problem is a major or minor one.

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

You are a buyer.

Please choose from the following two options, if the seller chooses the **low-cost** solution, and your problem is NOT solved:
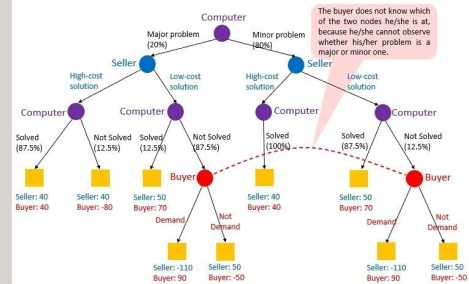
- ○ Demand: 'The seller should compensate me!'
- ○ Not Demand: 'I do not ask the seller to compensate me.'

Compensation situation history

My interaction history

My total profit so far: 0 ECUs

OK

Final profit in each scenario

The buyer does not know which of the two nodes he/she is at, because he/she cannot observe whether his/her problem is a major or minor one.

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

You are a seller.

Please choose which solution type you will use, if the buyer has a **major** problem:
- ○ High-cost solution
- ○ Low-cost solution

Please choose which solution type you will use, if the buyer has a **minor** problem:
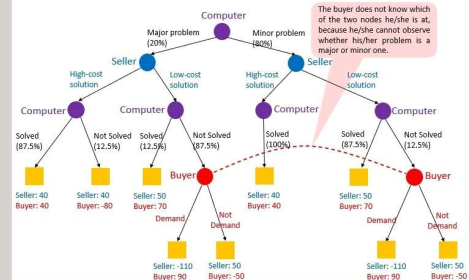- ○ High-cost solution
- ○ Low-cost solution

Compensation situation history

My interaction history

My total profit so far: 0 ECUs

Final profit in each scenario

The buyer does not know which of the two nodes he/she is at, because he/she cannot observe whether his/her problem is a major or minor one.

			Seller's decision plan			
			If Major then High-cost / If Minor then High-cost	If Major then High-cost / If Minor then Low-cost	If Major then Low-cost / If Minor then Low-cost	If Major then Low-cost / If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

OK

Period 1

You are a buyer.

The solution type your seller implemented	Low-cost solution
Whether your problem was solved	Not Solved
(If a low-cost solution was implemented and it failed) Your reaction	Demand
Your final profit in this period (ECUs)	-999

OK

You are a seller.

The buyer's problem type	Minor
The solution type implemented based on your decision	Low-cost solution
Whether the buyer's problem was solved	Not Solved
(If a low-cost solution was implemented and it failed) The buyer's reaction	N/A
Your final profit in this period (ECUs)	-999

OK

Post-experiment Survey 1/3

Please answer the following questions:

If your seller identifies that your problem is a **major** one, what do you think is the most socially appropriate solution type your seller should choose?
- High-cost solution
- Low-cost solution

If your seller identifies that your problem is a **minor** one, what do you think is the most socially appropriate solution type your seller should choose?
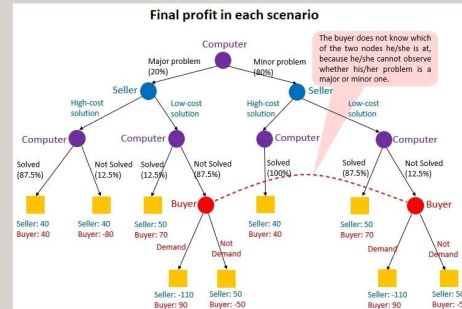- High-cost solution
- Low-cost solution

If your seller chooses a low-cost solution and it fails, what do you think your seller thinks is the most socially appropriate action you should take?
- Demand: 'The seller should compensate me!'
- Not Demand: 'I do not ask the seller to compensate me!'

Final profit in each scenario

			Seller's decision plan			
			If Major then High-cost If Minor then High-cost	If Major then High-cost If Minor then Low-cost	If Major then Low-cost If Minor then Low-cost	If Major then Low-cost If Minor then High-cost
Buyer's decision plan	Demand	Seller's expected final profit	40	32	6	14
		Buyer's expected final profit	37	63	75.5	49.5
	Not Demand	Seller's expected final profit	40	48	50	42
		Buyer's expected final profit	37	49	37	25

Submit

You are presented with the following lottery choices. Please indicate which option you would prefer for each of the ten paired lottery choices.

These payoffs are only hypothetical and will not be made in actual cash. However, please indicate your preferences as if they would be paid out.

- ○ 10% chance of $100, 90% chance of $80
- ○ 10% chance of $190, 90% chance of $5

- ○ 20% chance of $100, 80% chance of $80
- ○ 20% chance of $190, 80% chance of $5

- ○ 30% chance of $100, 70% chance of $80
- ○ 30% chance of $190, 70% chance of $5

- ○ 40% chance of $100, 60% chance of $80
- ○ 40% chance of $190, 60% chance of $5

- ○ 50% chance of $100, 50% chance of $80
- ○ 50% chance of $190, 50% chance of $5

- ○ 60% chance of $100, 40% chance of $80
- ○ 60% chance of $190, 40% chance of $5

- ○ 70% chance of $100, 30% chance of $80
- ○ 70% chance of $190, 30% chance of $5

- ○ 80% chance of $100, 20% chance of $80
- ○ 80% chance of $190, 20% chance of $5

- ○ 90% chance of $100, 10% chance of $80
- ○ 90% chance of $190, 10% chance of $5

- ○ 100% chance of $100, 0% chance of $80
- ○ 100% chance of $190, 0% chance of $5

Submit

Please answer the following survey questions. Your answer will be used for this study only. Individual data will not be exposed.

What gender do you identify most with?
- ○ Male
- ○ Female
- ○ Transgender
- ○ Other

What race do you identify most with?
- ○ White
- ○ Hispanic or Latino
- ○ Black or African American
- ○ Native American or American Indian
- ○ Asian / Pacific Islander
- ○ Other

What year in school are you currently in?
- ○ Freshman
- ○ Sophomore
- ○ Junior
- ○ Senior
- ○ Graduate Student
- ○ Other

What is your major?
- ○ Architecture and Urban Planning
- ○ Art and Design
- ○ Business
- ○ Dental Hygiene
- ○ Education
- ○ Information
- ○ Kinesiology
- ○ Literature, Science, and the Arts (LSA)
- ○ Music, Theatre and Dance
- ○ Nursing
- ○ Pharmacy
- ○ Public Policy
- ○ Social Work
- ○ Other

Submit