

Your Type is:

Instructions

These are the instructions from treatment “5_1”. Instructions for the other treatments were appropriately adjusted.

You are now taking part in an economic experiment. If you read the following instructions carefully, you can, depending on your decisions and of those made by the others, earn a considerable amount of money. It is therefore important that you take your time to understand the instructions.

The instructions which we have distributed to you are for your private information. Please do not communicate with the other participants during the experiment. Should you have any questions please ask us.

During the experiment we shall not speak of Pounds, but of Experimental Currency Units (ECU). Your entire earnings will be calculated in ECU. At the end of the experiment the total amount of ECU you have earned will be converted to Pounds at the rate of **1 ECU = 4 p** and will be immediately paid to you in cash.

At the beginning of the experiment the participants will be randomly divided into groups of four. You will always be in a group with 3 other participants. The groups will remain the same throughout the experiment. This means that you will always interact with the same three participants. The experiment lasts 10 periods and each period is divided in two stages.

The four group members will have different types. In particular, there will be one type A and three type B in every group. The types will remain constant throughout the experiment. The implications of the types are explained below, in the part of the instructions concerning the second stage.

The experiment lasts 10 periods and each period is divided in two stages.

The first stage:

In every period, at the beginning of the first stage, each participant will receive 20 ECU. In the following, we shall refer to this amount as the “endowment”. Your task is to decide how to use your endowment. In particular, **you have to decide how many of the 20 ECU you want to contribute to a project** (from 0 to 20) **and how many of them to keep for yourself**. The consequences of your decision are explained in detail below.

Once all the players have decided their contribution to the project you will be informed about the group’s total contribution, your income from the project and your payoff in this stage. Your payoff from the first stage in each period is calculated using the following formula. If you have any difficulties, do not hesitate to ask us.

$$\begin{aligned} \text{Income at the end of the stage} = & \text{Endowment of ECU} \\ & - \text{Your contribution to the Project} \\ & + 0.4 * (\text{Total contribution of your group to the Project}) \end{aligned}$$

This formula shows that your income at the end of the period consists of two parts:

- 1) The ECU which you have kept for yourself (endowment – contribution)
- 2) The income from the project, which equals to the 40% of the group’s total contribution.

The income of each group member from the project is calculated in the same way. This means that each group member receives the same income from the project. Suppose the sum of the

contributions of all group members is 60 ECU. In this case, each member of the group receives an income from the project of: $0.4 * 60 = 24$ ECU. If the total contribution to the project is 9 ECU, then each member of the group receives an income of: $0.4 * 9 = 3.6$ ECU from the project, regardless of how much they individually contributed to the project.

You always have the option of keeping the ECU for yourself or contributing them to the project. Each ECU that you keep raises your end of period income by 1 ECU. Supposing you contributed this point to the project instead, then the total contribution to the project would rise by 1 ECU. Your income from the project would thus rise by $0.4 * 1 = 0.4$ ECU. However, the income of the other group members would also rise by 0.4 ECU each, so that the total income of the group from the project would be 1.6 points. Your contribution to the project therefore also raises the income of the other group members. On the other hand you also earn an income for each point contributed by the other members to the project. In particular, for each point contributed by any member you earn 0.4 ECU.

In addition to the 20 ECU per period, each participant receives a one-off lump sum payment of 25 ECU at the beginning of this part of the experiment. Note that this lump sum payment should not be used to calculate the “End of period income”. It will only be added to your total income from all the periods at the very end.

The second stage:

At the second stage of each period you will be informed how much each group member contributed individually to the project at the first stage. At this stage you can **reduce or leave equal** the income of **each** member of your group. The other group members can also reduce your income if they wish to.

The ability to reduce the income of the other members depends on each participant’s type.

- Every point that the type **A** participant assigns reduces the receiver’s income by **5** ECU. So if a type A participant assigns to you 2 points, you will lose 10 ECU from your income.
- Every point that a type **B** participant assigns reduces the receiver’s income by **1** ECU. Therefore, if a type B participant assigns to you 2 points, you will lose 2 ECU from your income.

If you distribute points to others you have costs in ECU. Every point you give costs you irrespective of type 1 ECU.

Your income at the end of the period will be given by the following formula:

Type A:

End of Period Income = Income from the first stage

- Number of Total Points Received
 - Number of Points Given to Others
-

Type B:

End of Period Income = Income from the first stage

- $5 * (\text{Number of Points Received from type A})$
-

– Number of Points Received from type B)

– Number of Points Given to Others

Example: Assume you are type B and your income from the first stage was 28 ECU. Then in the second stage you receive one point from the type A participant and one from a type B. In addition, you also assigned 1 point to one of the people in the group. What will your income in the end of the period be? Following the second formula from above, we see that the 28 ECU will be reduced by 4 ECU from A's point and by 1.33 ECU from B's point. Therefore, your income will be 22.67 ECU (i.e. $28 - 4 - 1.33$) from which we also have to subtract one ECU for buying and distributing one point. Your income at the end of the period will then be 21.67 ECU.

Control Questionnaire

1. Each group member has an endowment of 20 ECU. Nobody (including you) contributes any ECU to the project. How high is:
 - a. Your income at the end of the period?
 - b. The income of the other group members.....

2. Each group member has an endowment of 20 ECU. You contribute 20 ECU to the project. All other group members contribute 20 ECU each to the project. What is:
 - a. Your income at the end of the period?
 - b. The income of the other group members?.....

3. Each group member has an endowment of 20 ECU. The other three group members contribute together a total of 30 ECU to the project. What is:
 - a. Your income at the end of the period if you contribute 0 ECU to the project?
.....
 - b. Your income at the end of the period if you contribute 15 ECU to the project?
.....

4. By how many points will your first stage income be reduced if you receive the following points from the type A participant in your group
 - a. 1 point?
 - b. 4 points?
 - c. 10 points?

5. By how many points will your first stage income be reduced if you receive the following points from a type B participant in your group
 - a. 1 point?
 - b. 4 points?
 - c. 10 points?

Control Questionnaire

1. Each group member has an endowment of 20 ECUs. Nobody (including you) contributes any ECUs to the project. How high is:
 - a. Your income at the end of the period? $(20-0)+0.4*0=20$
 - b. The income of the other group members $(20-0)+0.4*0=20$

2. Each group member has an endowment of 20 ECUs. You contribute 20 ECUs to the project. All other group members contribute 20 ECUs each to the project. What is:
 - a. Your income at the end of the period? $(20-20)+0.4*(4*20)=32$
 - b. The income of the other group members? $(20-20)+0.4*(4*20)=32$

3. Each group member has an endowment of 20 ECUs. The other three group members contribute together a total of 30 ECUs to the project. What is:
 - a. Your income at the end of the period if you contribute 0 ECUs to the project? $(20-0)+0.4*30=32$
 - b. Your income at the end of the period if you contribute 15 ECUs to the project? $(20-15)+0.4*(30+15)=23$

4. By how many points will your first stage income be reduced if you receive the following points from the type A participant in your group
 - d. 1 point? 5 ECU.
 - e. 4 points? 20 ECU
 - f. 10 points? 50 ECU

5. By how many points will your first stage income be reduced if you receive the following points from a type B participant in your group
 - g. 1 point? 1 ECU
 - h. 4 points? 4 ECU
 - i. 10 points? 10 ECU