

Behaviour in a Two-Stage Public Goods Experiment

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Abstract: - I investigate whether the adoption of a two-stage public goods framework causes a change in contributions to public goods compared to a standard public goods game. For this purpose, my first treatment (S) is a standard public goods game and represents the baseline treatment. The second treatment (D) is a two-stage public goods game. In each stage, agents allocate their endowments between a private good and a public good. The results show that subjects contribute more to the public good in the S treatment than in the D treatment. In addition, agents under the D treatment evenly divide their limited endowments between both public goods, regardless of differences in the marginal per capita returns of the two goods.

Key-words: two-stage public goods game, experiments, voluntary provision.

1 Introduction

I present an experiment in which individuals repeatedly play two consecutive public goods games. For this purpose, the first treatment (S) is a standard public goods game and represents the baseline treatment. The second treatment (D) is a two-stage public goods game, where, in each stage, agents allocate their endowments between a private good and a public good. The two public goods differ only in the marginal per capita returns (MPR) accruing to the two agents. In particular, in treatment D, the MPR of the public good in the first stage is higher than that of the public good in the second stage. The two public goods are related because the endowment in the second stage depends on decisions made in the first stage. While [1] implement a framework that allows for carryover of an individual's returns between stages within a period, I am not aware of any prior experiment that allows agents to contribute to different public goods in each of two stages. My work shares some features with several papers on two-game experiments¹. These

experiments investigate the effects of tendencies towards cooperation or defection on subsequent social behaviour. Although my experiment does not allow for a sequence of two or more different games, I examine whether tendencies towards cooperation shown in the first stage are sustained in the second stage.

As described above, in the D treatment, subjects can contribute to two public goods. This feature is also investigated by [6]. In one of their treatments, subjects allocate their endowments between a private good, an anonymous public good, and a broadcast public good. Only if the broadcast public good is chosen will subjects know the exact contributions and physical appearances of the other group members before contributing. Although there is no difference in the MPRs among the three goods, [6] find that contributions to the broadcast public good are significantly higher than contributions to the anonymous good.

In this study, I test two hypotheses. The first states that the levels of cooperation reached in the second stage of the D treatment (D2) should be lower than in the standard public goods treatment (S). This is suggested by the experimental literature investigating the effects of repetition and confusion on contribution levels to public goods.

¹ For example, [2] distinguishes between “nice” and “stingy” subjects, using a dictator game, and then finds that “nice” players usually choose to cooperate when paired with other “nice” players in a prisoner's dilemma game. In [3], subjects play two different versions of the prisoner's dilemma game; the result is a declining level of cooperation in the second game, regardless of the results of the earlier game. [4] have participants first play an asymmetric prisoner's dilemma game and then a trust game; the study shows the possibility of spillover effects

between decision tasks. Finally, [5] run a prisoner's dilemma game and a modified trust game, where subjects play both roles; the researchers find that cooperative individuals in the prisoner's dilemma games are more trusting in the second game.

On the one hand, it is well-known that cooperation breaks down with repetition [7, 8]. However, [9] find puzzling evidence regarding the role of experience in public goods games. They study the effects of repetition on contributions to public goods in a two-stage game, implementing both the strategy-elicitation method and the direct-response version of the game, to test the validity of the results. Their results show that experience is a relatively weak factor, and strategic thinking is a relatively strong factor, in the decline in contributions.

On the other hand, several papers point to the effect of a reduction in confusion, which occurs when agents repetitively perform the same task, on allocations to public goods [10, 11]. In particular, [10] presents an experiment intended to separate the effects of kindness and confusion on public goods contributions. For this purpose, this experiment reinforces the controls that exclude incentives for kindness, leaving confusion as the only explanation for cooperative behaviour. [10] is thus able to compare the decisions of subjects in the treatment controlling for kindness with those of subjects who can act either out of confusion or kindness, in order to determine the fraction of cooperation due to each motive. [10]'s results show that, on average, about half of all cooperative decisions can be characterised as arising from confusion.

My first hypothesis is also supported by several works showing that the presence of heterogeneous endowments lower contributions to public goods, compared to the case of homogeneous endowments [8, 12, 13, 14, 15]. In my experiment, endowments in the S treatment are homogeneous, whereas in D2, endowments may differ across agents. Hence, repetition and endowment heterogeneity may work together to decrease contributions to public goods in D2 compared with the S treatment.

The second hypothesis states that subjects should contribute more in the first stage of the D treatment (D1) than in the second stage (D2). The positive effect of higher MPR on public goods contributions is empirically confirmed by the meta-analysis of public goods experiments conducted by [14]. In particular, as the marginal payoff to a subject from contributions to the public good relative to the private good increases, significantly larger allocations are observed². In addition, the difference

² An alternative interpretation can be given in terms of efficiency concerns [16]. In other words, agents should contribute all or most of their endowments to the public good in D1 rather than in D2 because of the higher MPR available.

in endowments between the two stages of the D treatment may influence individuals' contributions to public goods in the same way as suggested in the first hypothesis.

The data confirm my first hypothesis, showing that levels of cooperation in D2 are significantly lower than in the S treatment. Thus, the combined effects of a reduction in confusion and endowment heterogeneity significantly affect individuals' contributions to public goods.

In contrast, the second hypothesis is rejected by my results. In spite of the empirical findings on the effect of differences in MPR on cooperation, agents contribute equally small amounts to both public goods in the two stages of the D treatment. This result is due to the presence of reciprocal subjects, who allocate small amounts to public goods in D2 as a response to the low contributions of other group members in the previous stage, although they forego higher payoffs in doing so [17, 18, 19].

2 Experimental Design and Hypotheses

2.1 The Design

The experimental setting involves two treatments, each lasting 10 periods. The first treatment is a standard public goods game with participants divided into five groups of four players each. All subjects are endowed with six tokens. They decide on the allocation of their endowment between a private good, A (x_i), and a public good, B (g_i). Each token allocated to A (x_i) earns one unit of Experimental Currency (EC) for the subject. Each token allocated to B (g_i) earns $0.3g_i$ for each member of the group. Accordingly, each subject receives the following payoff,

$$\pi_i = x_i + 0.3 \sum_{j=1}^4 g_j \quad (1)$$

$$s.t. x_i + g_i = 6$$

The second treatment is organised as a two-stage public goods game, where the second stage of the game is identical to the S treatment, differing only in the initial endowment. In D1, subjects decide whether to allocate their initial endowment of six tokens between a private good, C (y_i), and a public good, E (h_i). They are informed that the payoff from C (y_i), together with a fixed amount of six tokens, will constitute the endowment of each participant, available at the beginning of D2. Each token allocated to E (h_i) gives $0.3h_i$ to each member of the

group. Accordingly, each subject receives the following final payoff,

$$\pi_i = x_i + \left(0.4 \sum_{j=1}^4 h_j + 0.3 \sum_{j=1}^4 g_j \right) \quad (2)$$

s.t. $y_i + h_i = 6$ and $x_i + g_i = 6 + y_i$

In equation (2), the term in parentheses represents earnings accruing equally to each member of the group, from both E (h_i) and B (g_i).

To summarize, there are two treatments, each lasting ten periods. I run each treatment with five groups of four subjects each, implementing a fixed matching protocol. The S treatment is a standard public goods game. In contrast to the S treatment, the D treatment is organised as a two-stage public goods game. In particular, the first stage of the D treatment is a standard public goods game, whereas the second stage may differ from the S treatment in terms of subjects' endowments, although both treatments have the same structure.

The experiment was conducted at the University of Catania. A total of 80 subjects were recruited from among a population of students from a wide range of fields, such as economics, law and political science. Each student participated in only one session of the experiment. For each treatment, I ran two sessions³. I obtained ten entirely independent observations from each of 40 subjects participating in the S treatment and ten independent observations from each of 40 subjects participating in the D treatment. The staff of the Centro Informazione Giuridica of the University of Catania developed the experimental software used in the study. Before beginning the experiment, the instructions were read aloud and explained in detail to subjects⁴. Any communication between participants was forbidden. Subjects typed their decisions directly into the computer, at their own pace. At the end of each treatment, subjects were paid anonymously in cash, at an exchange rate of 0.10 euros per EU earned. On average, the subjects earned 16.50 euros, including a 5 euro show-up fee. Each treatment lasted between 40 and 60 minutes.

³I checked for framing effects by conducting the treatments in both a neutral (40 subjects) and a cultural context (40 subjects) but failed to find any significant differences between average contributions in the two settings. Hence, I decided to aggregate the data from the two treatments. For a detailed description of cultural framing, see [20].

⁴See the Appendix for the instructions for both treatments.

2.2 Hypotheses

According to the standard game-theoretic approach, in each period, fully rational subjects should choose the free-riding strategy, independently of the adoption of a two-stage public goods framework in which differing MPRs accrue to agents in the different stages. However, several experimental studies suggest that subjects often deviate from this Nash equilibrium. On this basis, I test two hypotheses.

Hypothesis 1. Contributions to the public good in the second stage of the D treatment are lower than those in the S treatment.

This hypothesis is based on the well-established results of several experimental studies showing that contribution levels in a public goods game tend to decrease with repetition [7, 8] and that a reduction in confusion occurs when agents repetitively perform the same task [10, 11]. At the same time, this hypothesis is also supported by experimental results on the role of endowments in individuals' contributions. These results show that the presence of heterogeneous endowments decreases contributions to public goods, compared to cases where endowments are homogeneous [8, 12, 13, 14, 15]. In the present experiment, endowments in the S treatment are homogeneous, whereas in D2, endowments differ across agents (assuming that subjects make different contributions in D1). Thus, repetition and endowment heterogeneity may work together to decrease contributions to the public good in D2 compared to S.

My experiment also allows me to test whether there are significant differences in levels of contributions to public goods available in the two stages of the D treatment. In particular, the difference between MPRs accruing to agents in the two stages of the D treatment should affect contribution levels [21, 22].

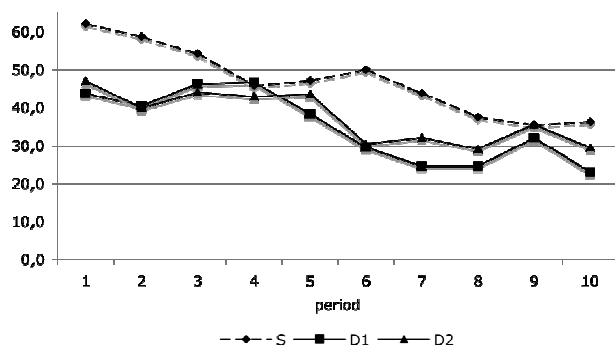
Hypothesis 2. Contributions to the public good in the first stage of the D treatment are higher than those in the second stage of the D treatment.

This hypothesis is based on the empirical evidence presented in [14], showing that as the marginal payoff that a subject obtains from contributions to the public good increases, relative to that obtained from contributions to the private good, significantly larger allocations are observed. Thus, subjects should contribute more to the public good in D1 than in D2 because of the higher MPR available in the first stage. Also, in this case, the potential difference in endowments between the two stages of

the D treatment may influence individuals' contributions to public goods.

3 Results

Figure 1 shows the patterns of contributions in each treatment as a percentage of the endowment⁵. Contributions to the public good in treatment S are higher than in both stages of the D treatment, in nearly all periods⁶. On average, the level of contributions is 47.1% in the S treatment, 34.5% in D1, and 37.5% in D2⁷, with all treatments showing significantly decreasing trends over time⁸. Moreover, the final outcomes in both the D1 and D2 treatments differ significantly⁹ from the Nash equilibrium prediction of complete free-riding.



The non-parametric Mann-Whitney U test (MWU) finds significant differences between contributions to the public good in treatments S and D2 ($p=0.019$)¹⁰. This result confirms hypothesis 1. As suggested

⁵ The levels of contributions in D2 are weighted according to the different endowments available to each subject.

⁶ The only two exceptions are the contribution levels in the fourth period of D1 and the ninth period of D2.

⁷ Note that those levels of cooperation accord perfectly with other experimental results on public goods [7, 8].

⁸ The Spearman correlation ρ s are significant, with $p < 0.01$ in all treatments.

⁹ I ran a simple OLS regression for each treatment, with individual contributions to the public good as the dependent variable and robust standard errors [23]. In all three cases, the coefficients are significantly different from zero at the 5% level. I also adopted a censored Tobit regression to test the robustness of the results. Regardless of the specification used, the results proved to be robust in sign, magnitude and statistical significance of the coefficients.

¹⁰ I also ran the MWU test on the first- and last-period observations, finding significant differences in the first case ($p=0.004$) but not the second ($p=0.172$). Moreover, the MWU test finds significant differences between contributions to the public good in treatments S and D1

by [10, 11], repetition of the same task, as occurs in the D treatment, reduces confusion, and thus contribution levels, compared with the S treatment.

In addition, heterogeneous endowments in the D treatment lower contributions to public goods compared to the case of homogeneous endowments in the S treatment [8, 12, 13, 14, 15]. Hence, both forces cause a decrease in contributions to the public good in D2 compared to S.

With respect to contributions to public goods in the two stages of the D treatment, it is notable that agents allocate their endowments evenly between the two public goods, regardless of differences in MPRs. Thus, the data reject hypothesis 2¹¹. In light of this result, I do not find support for the empirical findings of [14] regarding the effects of different MPRs on public goods allocations.

Alternatively, this result can be explained in terms of reciprocity. As suggested by several experimental studies on the role of reciprocity, subjects reward kind acts and punish unkind acts of other agents, even if it is costly for them to do so [18, 19]. In the present experiment, agents contributed small amounts of their endowments to the public good in D2, as a response to the low contributions to the public good of the other group members in D1, although they thereby sacrificed higher profits [17, 24]. Figure 2 describes this relationship between individual and group allocations to public goods in the two stages of the D treatment. In particular, I present a scatter diagram showing average individual contributions to the public good in D2 as a function of average contributions to the public good of the other group members in D1. Figure 2 shows a positive relationship between the two variables, as suggested by the upward-sloping trend line. Thus, subjects increase their contributions to the public good in D2 as a response to higher group contribution levels in D1. Also, Spearman's correlation ρ between the two variables is positive and significant ($p=0.003$). However, the positive relationship between own contribution in D2 and others' contributions in D1 could also be due to heterogeneity across groups, an explanation that would undermine the interpretation in terms of reciprocity.

($p=0.018$). However, I am aware that the different MPRs from the public good, implemented in the two treatments, reduce the relevance of the comparison between S and D1.

¹¹ Given that the same individuals interact in the two stages of the D treatment, the appropriate test is the Wilcoxon Signed-Rank test. The p-value for the WRS test is $p=0.12$.

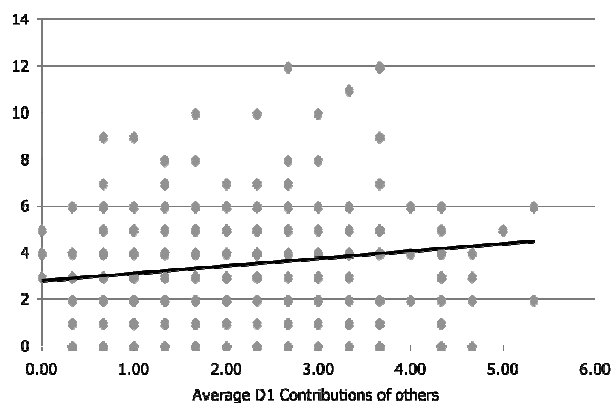


Fig.2 - Reciprocity across the stages of the D treatment

A more robust procedure would be to calculate a “reciprocity coefficient” for each group. A measure of reciprocity is obtained for each group by computing the correlation coefficient between own D2 contribution and others’ average D1 contribution for each individual (based on the ten periods) and then averaging these within each group. The “reciprocity coefficients” can thus be compared with 0 (absence of reciprocity) using a sign test. In a one-sided sign test, positive signs are found to be significantly more frequent than negative signs ($p=0.01$). Hence, the test confirms our previous result, justifying the interpretation of the positive relationship between own contribution in D2 and others’ contributions in D1 in terms of reciprocity.

In view of this result, I checked the correlation between the allocations to the public goods available in both stages of the D treatment over the ten periods. For each subject in the D treatment, I calculated Spearman’s ρ for that individual’s allocations to the public goods in the two stages. I then applied the sign test to each Spearman’s ρ thus obtained to test whether the positive and negative signs are evenly distributed. The data do not allow for rejection of the null hypothesis that half of these correlations are positive and half are negative ($p=0.5$).

In contrast, when I focused specifically on those subjects who contributed small amounts to both public goods and checked the correlation between allocations to public goods in both stages of the D treatment, the sign test rejected the null hypothesis that half of these correlations are positive and half are negative ($p=0.03$). This confirms that, in this case, the allocations to both public goods are positively correlated, as suggested by reciprocity.

To quantify the effects detected by the non-parametric tests discussed above, I ran a statistical

analysis with individual contributions to the public good in D2 as the dependent variable¹². Table 1 displays the results of the regression. Explanatory variables include the average contribution of other group members in D2, lagged one period ($AvOthers_{t-1}$), and a time trend (Trend). I apply a random effects model to obtain panel data estimates¹³, with clustering of data at the group level, so that standard errors are robust, in accordance with [23].

Table 1- Regression - Dependent Variable: Individual Contribution to the Public Good in D2

Explanatory Variables	Coefficient
Constant	3.384 (0.498)
$AvOthers_{t-1}$	0.195** (0.079)
Trend	-0.109*** (0.040)
R^2	0.033
N	360

The symbol ** indicates that the coefficient is significant at the 5% level. The symbol *** indicates that the coefficient is significant at the 1% level. The standard errors are robust (White, 1980).

The regression shows that individual contribution levels in D2 are significantly and positively affected by the average contribution of other group members (0.19), confirming the role of reciprocity [24]. In addition, I test the influence of the time trend on individuals’ decisions to contribute to the public good. The regression reported in Table 1 shows this effect to be highly significant and negative (-0.10). Thus, approaching the end of D2, we observe a constant decline in contributions to the public good.

¹² Contributions to the public good are expressed in terms of number of tokens allocated to the public good.

¹³ To test the robustness of my results, when compared with an alternative specification, such as the fixed effects model, I performed the Hausman specification test to test the null hypothesis of no systematic difference in coefficients between the two models. The test failed to reject the null hypothesis ($\chi^2=0.94$). I also adopted different specifications of my regression in order to test the robustness of the results. Thus, I ran both an OLS regression with group clustering and a censored Tobit. Regardless of the specification used, my results proved to be robust in terms of sign, magnitude and statistical significance of the coefficients.

4 Concluding Remarks

The aim of this study was to investigate whether adoption of a two-stage public goods game framework would cause a change in contributions to public goods, compared with a standard public goods game. At present, I am not aware of any other experiment where individuals repeatedly play two different public goods games consecutively. The design allowed us to test two hypotheses.

The first hypothesis stated that cooperation levels in D2 would be lower than those in the S treatment. The data confirmed this hypothesis. This result can be ascribed both to reduction in confusion, due to the two-stage setting that allows for repeated playing of the two public goods games, and to endowment heterogeneity in D2, which contrasts with endowment homogeneity in the S treatment.

The second hypothesis stated that individuals in the D treatment would contribute more in D1 than in D2, a hypothesis rejected by the data. Here we found that, instead of fully contributing to the public good with the higher MPR, individuals allocated small, equal amounts to the public good in both stages of the D treatment. This result can be explained in terms of reciprocity. Specifically, individuals contributed small amounts to the public good in D2 as a response to small contributions of other group members in the previous stage.

5 Appendix

5.1 Instruction set – S treatment

You are taking part in an experiment on group and individual decision-making. You will be assigned to a group of 4 people. You will remain in the same group throughout the experiment.

The instructions are simple. Depending on your decisions and the decisions made by the other members of your group, you can earn a considerable amount of money. The money you earn will be paid to you, in cash, at the end of the experiment. The funds for this study have been provided by the Royal Holloway College.

If any of the instructions are unclear, or if you have any questions, please attract the attention of the experimenter by raising your hand. Please do not communicate with any other participants from this point onward during the experiment.

The Experiment

This experiment consists of 10 decision rounds.

The amount of money you earn will be determined by decisions made by you and the other

3 members of your group. Your profit will be measured in Experimental Currency (EC), which, at the end of the experiment, will be changed into Euros at the following exchange rate: 1 EC = 0.1 Euro.

In each decision round, you and the other 3 members of your group will each be given 6 tokens. Each player will choose how to allocate his/her tokens between two options: Project A and Project B. These will now be explained in turn.

Project A

Each token you allocate to Project A will earn you 1 EC.

Example.

Suppose you put 3 tokens into Project A. Then, your earnings from Project A will be 3 EC.

Project B

Your earnings from Project B will depend on the total number of tokens that you and the other 3 members of your group allocate to Project B.

Each token in Project B will earn 0.30 EC for each member of the group, not just the members who allocated it.

Example.

Suppose you decide to put 3 tokens into Project B, and the other three members of your group allocate a total of 12 tokens to Project B. This makes for a total of 15 tokens.

Your earnings from Project B will thus be $15 \times 0.30 \text{ EC} = 4.50 \text{ EC}$. Each of the other three members of your group will also earn 4.50 EC from Project B.

To Summarize:

In each decision round, you will earn:

1 EC times the number of tokens you allocate to Project A **PLUS** 0.3 EC times the total number of tokens allocated to Project B by everyone in your group.

After each decision round, you will be able to see your earnings from that round on the screen. You will also be told the total number of tokens that your group invested in Project B. You will not be able to learn the individual decisions or earnings of any of the other participants.

If you have any more questions, please ask them before the experiment begins.

5.2 Instructions - D Treatment

You are taking part in an experiment on group and individual decision-making. The instructions are simple. If you follow them carefully and make good

decisions, you might earn a considerable amount of money. The money you earn will be paid to you, in cash, at the end of the experiment. The funds for this study have been provided by the University of Catania.

If any of the instructions are unclear, or if you have any questions, please attract the attention of the experimenter by raising your hand. Please do not communicate with any other participants from this point onward during the experiment.

The Experiment

This experiment consists of TWO SEQUENCES of decision rounds. Each sequence contains 10 decision rounds. You will be assigned to a group of 4 people. The amount of money you can earn will depend on decisions that you and the other 3 members of your group make. Your profit will be measured in Experimental Currency (EC), which, at the end of the experiment, will be changed into Euros at the following exchange rate: 1 EC = 0.1 Euro. After each decision round, you will be reassigned to a new group of 4 participants. The 4 group members will never have been members of the same group in past rounds.

SEQUENCE I (DECISION ROUNDS 1-10)

You and the other 3 members of your group will each be given 6 tokens. You will choose how to allocate your tokens between two options: Project A and Project B. These will now be explained in turn.

The Project A

Every token you allocate to Project A will earn you a return of 1 EC.

Example.

Suppose you put 3 tokens in Project A. Then, your earnings from Project A will be 3 EC.

Example.

Suppose you put 6 tokens in Project A. Then, your earnings from Project A will be 6 EC.

Example. Suppose you put 0 tokens in Project A. Then, your earnings from Project A will be 0 EC.

Project B

Your earnings from Project B will depend on the total number of tokens that you and the other 3 members of your group allocate to Project B. The more the group as a whole allocates to Project B, the more each member of the groups earns.

Each token allocated to Project B will earn 0.30 EC for each member of the group, not just the member who allocated it.

Example.

Suppose you decide to put 3 tokens into Project B, while the other 3 members of your group allocate a total of 12 tokens to Project B. This makes for a total of 15 tokens. Your earnings from Project B will thus be $15 \times 0.30 \text{ EC} = 4.50 \text{ EC}$. The other 3 members of your group will also each earn 4.50 EC from Project B.

To Summarize:

In each decision round of Sequence I, you will earn: 1 EC times the number of tokens you allocate to Project A **PLUS** 0.3 EC times the total number of tokens allocated to Project B by your whole group.

SEQUENCE II (DECISION ROUNDS 11-20)

In this sequence, each decision round consists of TWO STAGES.

STAGE I

You and the other 3 members of your group will each be given 6 tokens. You will choose how to allocate your tokens between two options: Project C and Project E. These will now be explained in turn.

Project C

Every token you decide to put into Project C will be added to your endowment at the beginning of phase II. In other words, allocating tokens to Project C corresponds to having a larger endowment available to you at the beginning of phase II of the same decision round.

Example.

Suppose you decide to put 3 tokens into Project C. Then, your endowment at the beginning of phase II will be higher by 3 tokens.

Project E

Your earnings from Project E will depend on the total number of tokens that you and the other 3 members of your group allocate to Project E. The more tokens the group as a whole allocates to Project E, the more tokens each member of the group earns.

Each token invested in Project E will earn 0.40 EC for each member of the group, not just the member who allocated it.

The amount of money you earn from Project E during each decision round will be added to your total earnings at the end of stage II of each decision round.

Example.

Suppose you decide to allocate 3 tokens to Project E, while the other 3 members of your group together allocate a total of 12 tokens to Project C. This makes

for a total of 15 tokens. Your earnings from Project E will thus be $15 \cdot 0.40 \text{ EC} = 6 \text{ EC}$. The other 3 members of your group will also each earn 6 EC from Project E.

STAGE II

You and the other 3 members of your group will be given 6 tokens PLUS the number of tokens you have allocated to Project C during Stage I.

Example.

Suppose you decide to allocate 3 tokens to Project C. Then, your endowment at the beginning of stage II will be 6 tokens (initial endowment in stage II) + 3 tokens (from Project C) = 9 tokens.

You will choose how to allocate your tokens between two options: Project A and Project B. The two choices are exactly the same as in sequence I.

To Summarize:

In each decision round of Sequence II, you will earn: 1 EC times the number of tokens you allocate to Project A PLUS 0.3 EC times the total number of tokens allocated to Project B by your group as a whole PLUS 0.4 EC times the total number of tokens allocated to Project E by your group as a whole.

Example.

Suppose you invest 4 tokens in Project E, while the other 3 members of your group together invest 9 tokens in Project E. This makes for a total of 13 tokens invested in Project E.

Then, you allocate 3 tokens to Project A and 5 tokens to Project B, while the other 3 members of your group together allocate 12 tokens to Project B. This makes for a total of 17 tokens invested in Project B.

Your total earnings from this decision round will thus be $3 \text{ EC} + 13 \cdot 0.4 \text{ EC} + 17 \cdot 0.3 \text{ EC} = 13.30 \text{ EC}$.

Your Results

After each decision, your earnings from that decision will be posted on the screen. You will also be told the total number of tokens that your group invested in Project E and in Project B. You will be unable to learn the individual decisions or earnings of any of the other participants.

If you have any additional questions, please ask! The experiment will now begin!

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