Online Appendix to

At the root of the North-South cooperation gap in Italy Preferences or beliefs?

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Appendix A: Experimental Instructions

Instructions for Experiment 1[1]

Welcome. The goal of this study is to understand how people take decisions. Starting from now and till the end of the study, no form of communication with the other participants is allowed. Please switch off your mobile phones. You have earned € 4 for showing-up on time. During the study, you will be able to earn additional money, depending on your choices and the choices of the other participants.

Part 1: Instructions

Tokens and payments. All the earnings for this first part will be expressed in tokens. Tokens will be converted at the end of the study at the rate of € 1=3 tokens. Your earnings for this part will be paid to you in cash and anonymously at the end of the study; other participants will not be informed about your earnings.

Group formation. In this part, you will be assigned to a group of four people. Groups will be formed randomly by the computer. Nobody will be informed about the identity of the other people in the group.

Decisions to make. You have to decide how to use 20 tokens. You can put the 20 tokens in your personal account or invest them – all or part of them – in a common project. Every token not invested in the common project will be automatically put in your personal account.

Your earnings from the personal account. For every token you put in the personal account, you earn exactly one token. For instance, if you put all 20 tokens in your personal account – i.e., you invest 0 in the common project – you get exactly 20 tokens. Instead, if you put 6 tokens in your personal account, you get 6 tokens from the account. There could be additional earnings coming from the common project.

Your earnings from the common project. In contrast with the personal account, everything you invest in the common project generate some earnings for all the group members. The earnings from the common project will be divided equally among all group members. Of course, you will also benefit from the tokens invested in the common project by you and by the other members of the group. More precisely, you earnings from the project are computed as follows:

Your earnings from the common project= Sum of the investments in the common project x 0.4

Let consider some example:

- If the sum of your investments and the investments of the other group members is equal to 60, everyone in the group – you included – earns 24 tokens from the common project. That is, $60 \times 0.4 = 24$

- If the sum of your investments and the investments of the other group members is equal to 10, everyone in the group – you included – earns 4 tokens from the common project. That is, $10 \times 0.4 = 4$

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[1]The original instructions and screen shots were in Italian and are available upon request from the authors.

Your total earnings. Your total earnings will be equal to the sum of the earnings obtained from your personal account and from the common project.
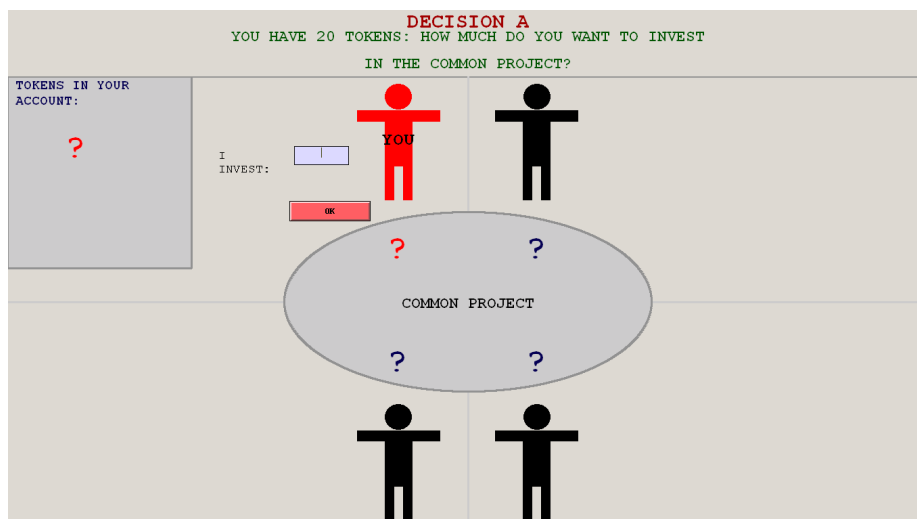
Your total earnings = Earnings from the private account + Earnings from the common project
Your total earnings = (20 - Investment in the common project) + (Sum of the investments in the common project x 0.4)

Before proceeding, we ask you to answer a few questions. The answers to these questions won't influence your earnings. If you have any question or doubt, please rise you hand and one of us will come to your desk to answer.

$$\Longrightarrow \text{------- } new\ page \text{ -------} \Longleftarrow$$

How to proceed. In this part, you will have 20 tokens and you will have to decide how many tokens to put in your private account and how many to invest in the common project. Each participant, will have to make two decisions – decision A and B.

Figure A-1: *Decision A*

- **Decision A.** You have to decide how many tokens, out of 20, you want to invest in the common project. A screen like the one in Figure A-1 will be displayed: you have to enter an integer between 0 and 20 in the gray field. That number corresponds to the money you intend to invest in the common project. A confirmation box will appear as soon as you make your decision and tap OK. Please, try to enter a number and press OK. You should be able to see the confirmation box and the amount you invested in the common project (central part of the screen). You should also be able to see how much you put in your personal account (upper-left part of the screen).

- **Decision B.** After Decision A, you will see a screen like the one in Figure A-2. In each cell of the table there is a possible (rounded) average investment by the other three members of your group. The cell in the upper-left corner represents the case in which none of the other group members have invested in the common project. The cell in the bottom-right corner represents the case in which all of the other group members have invested 20 tokens in the common project. For every

cell, you have to enter an integer between 0 and 20. That number corresponds to the money you intend to invest in the common project if the average investment by the other group members is the one indicated in that cell. In Decision B, you can vary your investment level in the common project based on the average investment by the other group members. Please notice that you have to make 21 decisions, one for each cell. You have to say how much you want to invest in the common projects if the others have invested on average 0, 1, 2, 3 etc. Once you have made all 21 decisions, you have to tap OK (bottom part of the screen) to confirm.

Figure A-2: *Decisione B*

Earnings. A random draw will determine if your payment will depend on Decision A or B. You won't know which decision will be relevant when deciding. It is hence in your best interest to pay attention to both decisions. At the end of today's session, one member of each group will be randomly selected. Decision B will be implemented for the selected participant, while Decision A will be implemented for the others. Let consider a few example together to better understand how your payments will be computed.

Example 1. Consider the following scenario. Please bear in mind that it is just an example to better understand how you will be payed.

- **You have** been selected and your Decision B will be implemented. It follows that Decision A will be implemented for the other 3 members of your group;

- The investments by the other 3 group members in Decision A are: 0, 2, and 4 tokens;

- The average investment of the non-selected group members is equal to 2 tokens: $(0 + 2 + 4)/3 = 2$;

- In Decision B you stated that you want to invest 1 token if the others invested 2 on average;

- Therefore, the total investment in the common project is: $0 + 2 + 4 + 1 = 7$ tokens;

- Your earnings from the common project are: $7 \times 0.4 = 2.8$ tokens;

- Your total earnings are: 19 tokens from your personal account (you invested 1, so you have 19 left) plus 2.8 tokens from the common project, for a total of 21.8 tokens;

- Consider instead the following: in Decision B, you have decided to invest 19 tokens in the common project. The total investment in the common project is: $0 + 2 + 4 + 19 = 25$ tokens

- In this case, your earnings from the common project are $25 \times 0.4 = 10$ tokens;

- Your total earnings are: 1 token from your personal account (you have invested 19, so you are left with 1) plus 10 tokens from the common project, for a total of 11 tokens.

Example 2. Consider the following scenario. Please bear in mind that it is just an example to better understand how you will be payed.

- **You have not** been selected and your Decision A will be implemented. It follows that for one of the other 3 group members Decision B will be implemented;

- In Decision A, you have decided to invest 16 tokens and the other 2 non-selected members of your group have invested 18 and 20;

- The average investment of the non-selected group members is equal to 18 tokens: $(16+18+20)/3 = 18$;

- The selected participant stated that he/she wants to invest 1 token if the others invested 18 on average;

- Therefore, the total investment in the common project is: $16 + 18 + 20 + 1 = 55$ tokens;

- Your earnings from the common project are: $55 \times 0.4 = 22$ tokens;

- Your total earnings are: 4 tokens from your personal account (you invested 16, so you have 4 left) plus 22 tokens from the common project, for a total of 26 tokens;

- Consider instead the following: in Decision B, the selected person have decided to invest 19 tokens in the common project. The total investment in the common project is: $16 + 18 + 20 + 19 = 73$ tokens;

- In this case, your earnings from the common project are $73 \times 0.4 = 29.2$ tokens;

- Your total earnings are: 4 token from your personal account (you have invested 16, so you are left with 4) plus 29.2 tokens from the common project, for a total of 33.2 tokens.

Is there any question?

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Part 2: Instructions

The decision. You will face 10 situations; in each situation, you have to decide between an amount of money today and a larger amount in 4 weeks. You can see the 10 situations on the screen and in Figure A-3. Each situation requires to decide between two options:

- **Option A:** a bank transfer of 100 Euro to be executed **today**;

- **Option B:** a bank transfer of 100 Euros or more to be exectued in **4 weeks** from now.

Payment. If you chose Option A, the bank transfer will be executed **today**, before midnight. If you chose Option B, the money will be wired in **4 weeks** from today, before the midnight of the due day. From the moment the transfer is wired, it usually takes about two day before you can dispose of the money on your bank account. The lag is the same for both options. Therefore, the money won't be

Figure A-3: *Choice between A and B*

ROW	Option A TODAY	Choose A or B		Option B IN 4 WEEKS	Interest rate (yearly)
1	100 Euro	A	B	100 Euro	0 %
2	100 Euro	A	B	102 Euro	26 %
3	100 Euro	A	B	105 Euro	65 %
4	100 Euro	A	B	108 Euro	104 %
5	100 Euro	A	B	111 Euro	143 %
6	100 Euro	A	B	114 Euro	183 %
7	100 Euro	A	B	117 Euro	222 %
8	100 Euro	A	B	120 Euro	261 %
9	100 Euro	A	B	123 Euro	300 %
10	100 Euro	A	B	126 Euro	339 %

available on your account the very same day the transfer is made.

Every situation corresponds to a row in the decision table. For each row, you must indicate if you prefer Option A or B. For instance, in the first row you must say if you prefer 100 Euros today (Option A) or 100 Euros in 4 weeks (Option B). In the second row, you must say if you prefer 100 Euros today (Option A) or 102 Euros in 4 weeks (Option B). In the last row, you must say if you prefer 100 Euros today (Option A) or 126 Euros in 4 weeks (Option B). Next to each row, you can see the interest rate –computed on a yearly base– for that situation.

Your earnings. Once everyone is finished with the task, the computer will randomly select one person in this room and the number of the selected desk will appear on the screen. Only the selected person will be paid for this part, the other participants will get nothing for this part. The amount of the transfer will depend on a second random draw. The computer will randomly draw one of the 10 situations (row 1 to 10 in the table). The selected participant will hence receive a bank transfer for the amount he/she had chosen in the selected row. Consider the following example. Row number 4 is randomly selected:

- If the selected person has chosen Option A, he/she will receive a 100 Euros transfer today;

- If the selected person has chosen Option B, he/she will receive a 108 Euros transfer in 4 weeks.

The earnings for this part are added to the ones from the first part.

Is there any question? Please rise your hand if you have any question and one of us will come to your desk to answer.

Instructions for Experiment 2[2]

Welcome. This study is financed by the European Commission and the University of Bologna. The goal of the study is to understand how people take decisions. During the study, you will be able to earn money, depending on your choices and the choices of the other participants. Your earnings will be expressed in tokens and converted at the rate of 1 Euro = 2 tokens at the end of the study. To the amount you will earn during the study, you have to add 4 Euros for showing-up on time. You will be paid at the end of this session in private and in cash; others participants will not be informed about your earnings.

From now and till the end of the study, no form of communication with the other participants is allowed. Please switch off your mobile phones.
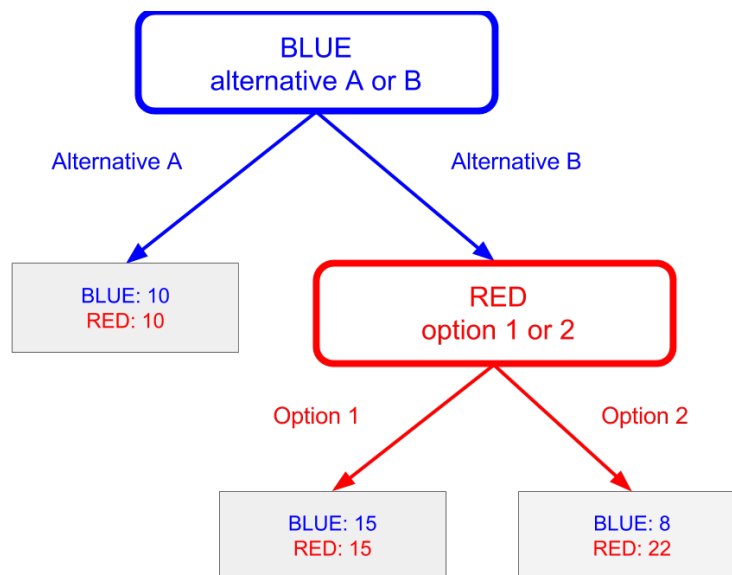
The study comprises two parts. I am about to read the instructions for the first part, please follow them carefully.

Part 1: Instructions

Participants in this room will be randomly assigned to one of two roles. Half of the people in this room will be BLUE players and the other half will be RED players. Pairs will be formed randomly and will comprise one BLUE and one RED player. You won't be given any information about the identity of the other person in your pair.

BLUE and RED have to make different decisions; see Figure below.

Figure A-4: *Earnings table*

If your role is BLUE. You have two alternatives: A and B.

- Alternarive A (on the left) grants 10 for sure.

- Alternative B (on the right) grants either 8 or 15, depending of RED' choice.

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[2]The original instructions and screen shots were in Italian and are available upon request from the authors.

If your role is RED.   You must choose between two options: 1 and 2 (see Figure A-4). If alternative A is implemented, then your choice is not relevant and you earn 10. If alternative B is implemented, your choice will have consequences for your earnings and the ones of BLUE.

- Option 1 yields 15 to both you and BLUE;

- Option 2 yields 22 to you and 8 to BLUE.

Your task if your role is RED.   You have to choose between option 1 and 2. At the time of your choice, you don't know which alternative – A or B – will be implemented.

Please, look at the screen. You will have to complete the following statement:

If alternative B is implemented, **I choose option** _____.

You have to tap on your preferred option to make your decision.

Your task if your role is BLUE.   You have to choose under which conditions you prefer alternative B over alternative A.

Alternative A yields you 10 for sure. In case you select alternative B, you earnings depend on the choice of RED. If you are paired with a RED choosing option 1, you earn 15. If you are paired with a RED choosing option 2, you earn 8. Therefore, the lower the number of REDs choosing option 1, the more likely that you will earn 8 instead of 15.

If none of the REDs choose 1 (0%), you know that you will earn 8 tokens for sure if you choose alternative B. If all REDs choose 1 (100%), you know that you will earn 15 tokens for sure if you choose alternative B. If a RED every 5 chooses 1 (20%), you could be paired with a RED that chose 1 or 2. In this case, you have a 20% probability of being paired with a RED who chose 1 and a 80% probability to be paired with a RED who chose 2.

Please look at the screen. You will have to complete the following sentence:

I prefer **alternative B** *if at least* _____ **percent of the REDs choose option 1** *(please enter a number between 0 and 100).*

Please move the triangle to answer. Make some trials: drag the triangle with the mouse or with your fingers and observe how your answer changes. For your convenience, you can also use the + and − buttons at the sides of the bar.

Once you have selected the desired number, please press confirm.

Important remarks.   BLUE does not know the actual faction of RED players choosing 1 and has no means to influence this fraction. This fraction will depend on the number of REDs that choose 1. BLUE just indicate under which circumstances he/she prefers alternative B: that is, how large the fraction of REDs choosing option 1 has to be in order for him/her to prefer alternative B.

Earnings   After all REDs and BLUEs have made their decision, the actual percentage of RED choosing option 1 is computed. This information will only be visible on BLUEs' screen. In each pair, the actual percentage will be juxtaposed to the minimum one required by BLUE.

- If the **actual percentage** is **smaller** than the minimum percentage required by BLUE, alternative A is be implemented. Both BLUE and RED earns 10 tokens each.

- If the **actual percentage** is **larger** than the minimum percentage required by BLUE, alternative B is implemented. The earnings also depend on the choice made by RED as shown in Figure A-4.

Examples.   Consider the following situation. BLUE prefers alternative B if at least 50% of REDs choose option 1. Which alternative is implemented if it turns out that 20% of RED has chosen option 1? Alternative A is implemented as the actual percentage (20%) is smaller than 50%. In this case BLUE has a sure earnings of 10.

Which alternative is implemented if it turns out that 83% of REDs have chosen option 1? Alternative B is implemented as the actual percentage (83%) is smaller than 50%. In this case BLUE earns 15 with probability 83% and 8 with probability 17%

Is there any question? Please rise your hand if there is a question and we will come to your desk to answer it. Before proceeding, please answer a quiz to make sure everyone has correctly understood the instructions.

$$\Longrightarrow \text{------ } new \ set \ of \ instructions \text{ ------} \Longleftarrow$$

Part 2: Instructions

In this part, you are asked to provide an estimate about decisions made by other people who took part in a series of previous studies. These studies were conducted in different cities with participants with different age, gender and employment status.
I am about to read the instructions we used in these previous studies. It is important that you carefully follow these instructions and fully understand them.

Beginning of the original instructions

People in this room are randomly divided in groups of four; nobody can know the identity of the other members of the group.
The screen displays your group: you are the person in red.
What is your task? Each member of the group is endowed with 20 tokens that have to be divided between a common project and his wallet. You can see four red buttons on the screen. You can decide to:

- put 0 tokens in the common project and keep 20 tokens in your wallet;

- put 6 tokens in the common project and keep 14 tokens in your wallet;

- put 14 tokens in the common project and keep 6 tokens in your wallet;

- put 20 tokens in the common project and keep 0 tokens in your wallet.

As an example with no consequences for your earnings, please press the button PUT 0 AND KEEP 20. A box to CONFIRM or CHANGE your choice has appeared on the screen; please, press CONFIRM.

After everyone has confirmed his choice, you can see:

- the tokens kept in the wallet by each member of the group;

- the tokens put in the common project by each member of the group;

- the total number of tokens the group has put in the common project.

How are your earnings computed?

- you earn the tokens you kept in your wallet;

- the total number of tokens in the project is doubled and divided equally among the four members of the group.

Look at the top-left part of the screen; as you can see, in the present example you earn the 20 tokens you kept in your wallet. In addition, you earn 20 tokens from the common project. Why? Because:

- you put 0 tokens in the common project, while the other people put 20, 14, and 6 tokens, for a total of 40;

- the 40 tokens are doubled for a total of 80;

- the 80 tokens are equally shared; therefore, you earn 20 form the common project; that is, 80 divided by 4.

Earnings for the other members of the group are computed alike. Please, remember that this is just an example.
Earnings from the common project are the same for each member of the group: is it just a coincidence? No it is not; even though the amount of tokens put in the project by each member is different, the total amount is always shared equally.
Can you know how much has been put in the common project by each member of the group? Yes, you can know the amount. Consider the tokens keep in the wallet, as reported next to each person:

- if the person kept 20 tokens in his wallet, he put 0 tokens in the common project;

- if the person kept 14 tokens in his wallet, he put 6 tokens in the common project;

- if the person kept 6 tokens in his wallet, he put 14 tokens in the common project;

- if the person kept 0 tokens in his wallet, he put 20 tokens in the common project.

In this part there are 8 rounds with the same rules. In the upper-left part of the screen you can see the number of the current round. At the beginning of every round, new groups of four people are formed at random.
To sum up, in every round:

- you are endowed with 20 tokens;

- you have to decide how to allocate the tokens between your wallet and the common project;

- the tokens put in the common project by the group are doubled and then divided equally among the four members of the group;

- your earnings are equal to the sum of what is in your wallet and the tokens from the common project.

Earnings are summed from round to round. *[Is everything clear?]*
Before starting, please answer a few questions.

End of original instructions

Before describing your task and how your earnings are computed, please answer the same quiz we administered to the participants who took part in the previous experiments.

Your task. At the beginning of this part of the study, the computer will randomly draw two participants from the previous study – the one we just read the instructions.

For every selected person, you will be asked to estimate how many tokens this person has contributed to the common project. We ask for the average over the 8 rounds.

Your answer has to be an integer number between 0 and 20.

Key question: How many token the selected person has contributed (on average) to the common project?

We run sessions in different cities. We used these instructions and paid participants based on their choices. In each city, we recruited about 80-90 participants, both male and females, between 18 and 90 years old. We recruited participants with different employment status: workers, unemployed, housewives, and retired. The composition of the participants to these previous studies is similar to the one of the Italian population with respect to gender, age and employment status. That means, for instance, that about half of the participants were females, as they represent about half of the Italian population.

You will have to provide your estimate of the tokens contributed to the common project by the selected person, without knowing his/her gender, age, and employment status. For the selected person, you will only get to know the province where the study was conducted: this information will be displayed on the upper part of the screen. Please keep in mind that the participants were born and resident in the province where the study was run.

Once you will have submitted the first estimate, we will move to the estimate for the second person. Once more, you will be asked to estimate how many tokens this person has contributed to the common project – we ask for the average over the 8 cycles. You will only get to know the city where the study including the selected person was run.

Table A-1: *Earnings Table*

Distance from the actual average	Your earnings (in tokens)
0 o 1 token	26
2 tokens	22
3 tokens	17
4 tokens	10
5 tokens	1
6 tokens or more	0

Your earnings. Your earnings can vary between 0 and 26 tokens depending on the accuracy of your estimate. The closer you get to the actual average number of tokens put in the common pool by the selected person, the higher your earnings. Please see Table A-1. You earn 26 tokens if your estimate is identical to the actual contribution or if it departs from the actual number by at most 1 token (from above or below). If, for instance, your estimate departs from the actual contribution by 4 tokens, you earn 10. If your estimate departs by 6 or more tokens you earn nothing. You will be paid only for one of the two estimates; the computer will randomly determine if you will be be paid for the first or the second estimate. You will know which of the two estimates will be paid only after having made both decisions; it is hence in your interest to pay attention to both decisions. The earnings from this part will be added to the ones from the previous part.

Please rise you hand if you have any question and I will come to your desk to answer.