

# Online Appendix: Experimental Materials

## Coordination via Assurance:

### A Lab-in-the-Field Threshold Public Goods Experiment

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# Instructions for RBM (translated from Chinese)

## Overview

This is an experiment in economic decision-making and also a game of pedagogical research. The experiment is very simple.

## The experimental materials:

Answer card: We have to collect it every time we finish a period.

Short questionnaire: Please sign your name first.

## Notes:

1. Don't talk to other people throughout the experiment, as it will affect your "reward" and that of others.
2. If you have any questions, please raise your hand at any time, and I will be happy to assist you.
3. Test teamwork: Incomplete contribution cards will invalidate other students' contribution cards in your group.

## How to make money:

At the beginning of each period, each team member will receive a "virtual experiment fund (25 yuan)". You decide how much of this virtual money to contribute to a "collaborative project" and fill in your contribution value on the contribution card. In the end, the net income per person is determined by the result of the fundraising. The virtual net income you earn in today's experiment will be converted into cash and sent to you. Your reward is equal to 10 yuan (your attendance fee) plus the total amount of payoff you receive in 6 periods times 0.2. (For farmers: Your reward will be converted into equivalent commodities such as washing powder and soaps. For high school students: Your reward will be converted into equivalent souvenirs such as stationeries.)

## Procedure:

The experiment consists of 6 periods. At the beginning of each period, you decide how much of your virtual fund 25 yuan to contribute to a group project. If the total amount of money raised meets or exceeds the cost of the project (500), fundraising succeeds; everyone gets a return (the return of other group members may be different from yours, with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20), and your payoff equals your return minus your contribution. Otherwise, fundraising fails, and you will receive a bonus as a percentage of your contribution.

## **Period 1**

In this period, if the fundraising fails, you will receive a bonus equal to 60% of your contribution. If the fundraising succeeds, you get a return directly from the project, with no additional bonus.

Overview of experimental procedure:

- You have to decide how much of your initial fund to contribute to this “collaborative project”.
- We will calculate whether the project can be implemented according to the total contribution of your group.
- If the total amount of money raised meets or exceeds the cost of the project, everyone gets a return (the return of other group members may be different from yours, with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20). Your net income from this period is your return minus your contribution.
- If your group’s total contribution does not meet the cost of the project, you will receive a bonus equal to 60% of your contribution.
- The more you contribute, the more likely the project can be implemented.

**Examples:**

**Example 1 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	0.6*your contribution	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>10</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	520 > 500, fundraising succeeds
Your net income	RMB <b><u>6</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 2 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>20</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	0.6*your contribution	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>10</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	520 > 500, fundraising succeeds
Your net income	RMB <b><u>10</u></b>	Net income = your return- your contribution OR Net income = your bonus

**Example 3 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	$0.6 \times \text{your contribution}$	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>17</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	$520 > 500$ , fundraising succeeds
Your net income	RMB <b><u>-1</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 4 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	0.6*your contribution	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>1</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	520 > 500, fundraising succeeds
Your net income	RMB <b><u>15</u></b>	Net income = your return- your contribution OR Net income = your bonus

**Example 5 (fundraising fails):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	0.6*your contribution	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>10</u></b>	
The total contribution of your group	RMB <b><u>450</u></b>	450 < 500, fundraising fails
Your net income	RMB <b><u>6</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 6 (fundraising fails):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	0.6*your contribution	The more you contribute, the more bonus you get. Please refer to right side of the contribution card.
How much do you decide to contribute?	RMB <b><u>1</u></b>	
The total contribution of your group	RMB <b><u>450</u></b>	450 < 500, fundraising fails
Your net income	RMB <b><u>0.6</u></b>	Net income = your return - your contribution OR Net income = your bonus

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 4-1).

**Period 2**

Let us repeat the procedure as last period. Please note that your return has changed.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 4-2).

**Period 3**

Note: In this period, the bonus ratio when fundraising fails has decreased (30% of your contribution).

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 5-1).

**Period 4**

Let us repeat the procedure as last period.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 5-2).

**Period 5**

Note: In this period, the bonus ratio when fundraising fails has decreased (10% of your contribution).

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 6-1).

**Period 6**

Let us repeat the procedure as last period.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 6-2).

All 6 periods are over. Now we will calculate your total income for today based on the results of the experiment. During this process, please fill out a simple questionnaire. Thank you!

# Instructions for APM (translated from Chinese)

## Overview

This is an experiment in economic decision-making and also a game of pedagogical research. The experiment is very simple.

## The experimental materials:

Answer card: We have to collect it every time we finish a period.

Short questionnaire: Please sign your name first.

## Notes:

1. Don't talk to other people throughout the experiment, as it will affect your "reward" and that of others.
2. If you have any questions, please raise your hand at any time, and I will be happy to assist you.
3. Test teamwork: Incomplete contribution cards will invalidate other students' contribution cards in your group.

## How to make money:

At the beginning of each period, each team member will receive a "virtual experiment fund (25 yuan)". You decide how much of this virtual money to contribute to a "collaborative project" and fill in your contribution value on the contribution card. In the end, the net income per person is determined by the result of the fundraising. The virtual net income you earn in today's experiment will be converted into cash and sent to you. Your reward is equal to 10 yuan (your attendance fee) plus the total amount of payoff you receive in 6 periods times 0.2. (For farmers: Your reward will be converted into equivalent commodities such as washing powder and soaps. For high school students: Your reward will be converted into equivalent souvenirs such as stationeries.)

## Procedure:

The experiment consists of 6 periods. At the beginning of each period, you decide how much of your virtual fund 25 yuan to contribute to a group project. If the total amount of money raised meets or exceeds the cost of the project (500), fundraising succeeds; everyone gets a return (the return of other group members may be different from yours, with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20), and your payoff equals your return minus your contribution. Otherwise, fundraising fails, and if your contribution is no less than a certain amount, you will get a bonus equal to that amount.

### **Period 1**

In this period, if the fundraising fails, you will receive a bonus equal to 10 if your contribution is no less than 10, or you will not receive any bonus if your contribution is less than 10. If the fundraising succeeds, you get a return directly from the project, with no additional bonus.

Overview of experimental procedure:

- You have to decide how much of your initial fund to contribute to this “collaborative project”.
- We will calculate whether the project can be implemented according to the total contribution of your group.
- If the total amount of money raised meets or exceeds the cost of the project, everyone gets a return (the return of other group members may be different from yours, with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20). Your net income from this period is your return minus your contribution.
- If your group’s total contribution does not meet the cost of the project, and your contribution is no less than 10, you will receive a bonus equal to 10. Otherwise, you will not receive any bonus.
- The more you contribute, the more likely the project can be implemented.

**Examples:****Example 1 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b>10</b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b>10</b>	
The total contribution of your group	RMB <b>520</b>	$520 > 500$ , fundraising succeeds
Your net income	RMB <b>6</b>	Net income = your return - your contribution OR Net income = your bonus

**Example 2 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>20</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b><u>10</u></b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b><u>10</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	$520 > 500$ , fundraising succeeds
Your net income	RMB <b><u>10</u></b>	Net income = your return - your contribution OR Net income = your bonus

### Example 3 (fundraising succeeds):

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b><u>10</u></b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b><u>17</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	$520 > 500$ , fundraising succeeds
Your net income	RMB <b><u>-1</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 4 (fundraising succeeds):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b><u>10</u></b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b><u>1</u></b>	
The total contribution of your group	RMB <b><u>520</u></b>	$520 > 500$ , fundraising succeeds
Your net income	RMB <b><u>15</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 5 (fundraising fails):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b><u>10</u></b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b><u>10</u></b>	
The total contribution of your group	RMB <b><u>450</u></b>	$450 < 500$ , fundraising fails
Your net income	RMB <b><u>10</u></b>	Net income = your return - your contribution OR Net income = your bonus

**Example 6 (fundraising fails):**

Project description	Number	Annotation
Cost of the project	RMB 500	Total funding should be no less than the cost of the project for implementation
The total number of people in your group	50	
Your initial capital	RMB 25	This is the maximum amount you can contribute per period
If the project is implemented, the return you can get	RMB <b>16</b>	The return of other group members may be different from yours (with 20% of the group members receiving each of the possible returns: 12, 14, 16, 18, and 20)
If the project fails to be implemented, you can get a bonus based on your contribution	RMB <b><u>10</u></b>	You will receive this bonus if your contribution is no less than 10. Otherwise, you receive no bonus.
How much do you decide to contribute?	RMB <b><u>1</u></b>	
The total contribution of your group	RMB <b><u>450</u></b>	$450 < 500$ , fundraising fails
Your net income	RMB <b><u>0</u></b>	Net income = your return - your contribution OR Net income = your bonus

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 4-1).

**Period 2**

Let us repeat the procedure as last period. Please note that your return has changed.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 4-2).

**Period 3**

Note: In this period, if the fundraising fails, you will receive a bonus equal to 12.5 if your contribution is no less than 12.5, or you will not receive any bonus if your contribution is less than 12.5. If the fundraising succeeds, you get a return directly from the project, with no additional bonus.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 5-1).

**Period 4**

Let us repeat the procedure as last period.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 5-2).

**Period 5**

Note: In this period, if the fundraising fails, you will receive a bonus equal to 16.7 if your contribution is no less than 16.7, or you will not receive any bonus if your contribution is less than 16.7. If the fundraising succeeds, you get a return directly from the project, with no additional bonus.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 6-1).

**Period 6**

Let us repeat the procedure as last period.

Based on the above examples and your current return, please fill in your contribution choice on the contribution card (marked with 6-2).

All 6 periods are over. Now we will calculate your total income for today based on the results of the experiment. During this process, please fill out a simple questionnaire. Thank you!

# Questionnaire (translated from Chinese)

Your ID: \_\_\_\_\_

## Questionnaire

1. Please indicate to what extent you agree with the statement, “Even if I am not sure whether other members of the group are contributing to the group project, I am willing to contribute some money to benefit myself and the other group members.”

- (1) Strongly agree;    (2) Agree;    (3) Neutral;  
(4) Disagree;    (5) Strongly disagree

2. Please indicate to what extent you agree with the statement, “I will only contribute money to benefit myself and the other group members if I know that other members of the group are also contributing to the project.”

- (1) Strongly agree;    (2) Agree;    (3) Neutral;  
(4) Disagree;    (5) Strongly disagree

3. In this experiment, did you at least once contribute more money than your return for the period? (Please tick)

- No. Please directly answer question 5 and subsequent questions →  
 Yes. Please answer question 4 and subsequent questions →

4. What motivated you to contribute more than your return for the period? Please choose the reason that most applies to your situation: (Please tick)

- I made a bad decision. I didn't fully understand the rules of the experiment.  
 I think that the successful implementation of this group project will benefit the whole group.  
 I simply feel good about the successful implementation of the group project.  
 I was trying to increase the success rate of that period to encourage other group members to contribute more later.  
 Other (please specify) \_\_\_\_\_.

5. Please indicate to what extent you agree with the statement, “This type of contribution-based bonus scheme encourages cooperation.”

- (1) Strongly agree;    (2) Agree;    (3) Neutral;  
(4) Disagree;    (5) Strongly disagree

6. Please indicate to what extent you agree with the statement, “This type of contribution-based bonus scheme incentivizes people to get the bonus rather than implement the project.”

- (1) Strongly agree; (2) Agree; (3) Neutral;  
(4) Disagree; (5) Strongly disagree

7. Please indicate to what extent you agree with the statement, “This type of bonus scheme works in reality.”

- (1) Strongly agree; (2) Agree; (3) Neutral;  
(4) Disagree; (5) Strongly disagree

8. Suppose we match you with another person in this training program. You get an envelope with 100 bills of RMB1. You can take whatever you want from the envelope. After you leave, your counterpart will come and take the rest. How much do you want to take? \_\_\_\_\_ Yuan

9. Suppose that you have just won a lottery and received ¥1,500. You now have a chance to buy a new lottery ticket: a 40 percent chance of winning ¥2,000, and a 60 percent chance of getting nothing. How much of the ¥1,500 would you like to pay for the new lottery ticket? (Please tick)

- (1) More than ¥ 1000; (2) ¥ 1000; (3) ¥ 800; (4) ¥ 600;  
(5) ¥ 400; (6) ¥ 200; (7) ¥ 0

10. Your year of birth: \_\_\_\_\_

11. Your gender: (1) female; (2) male

**For farmers only<sup>1</sup>:**

12. Your level of education:

- (1) Elementary school (or below); (2) Middle school; (3) Professional high school; (4) High school; (5) College; (6) Other (please specify) \_\_\_\_\_

15. Total income (¥) of your household from agriculture (both crops and land) in 2015:

- (1) Less than 5,000; (2) 5,001-10,000; (3) 10,001-15,000; (4) 15,001-20,000; (5) 20,001-30,000; (6) 30,001-40,000; (7) 40,001-50,000; (8) 50,001-60,000; (9) 60,000 or more (please specify) \_\_\_\_\_

16. Total income (¥) of your household from sources other than agriculture in 2015:

- (1) Less than 5,000; (2) 5,001-10,000; (3) 10,001-15,000; (4) 15,001-20,000; (5) 20,001-30,000; (6) 30,001-40,000; (7) 40,001-50,000; (8) 50,001-60,000; (9) 60,000 or more (please specify) \_\_\_\_\_

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<sup>1</sup> For questions specific to farmers / college students and high school students, we only include those relevant to this paper here.

20. Has your village raised funds to build roads, aqueducts or set up agricultural mutual cooperatives in the last three years (Please select all that apply):

(1) Roads; (2) Aqueducts; (3) Recreational facilities; (4) Sewage facilities (e.g., dry toilet renovation, sewage treatment); (5) Mutual cooperatives; (6) Other (please specify)

\_\_\_\_\_

**For college students and high school students only:**

13. How much money do you have at your disposal each month for living expenses, excluding tuition and accommodation fees? \_\_\_\_\_

14. What are your parents' approximate total monthly income before taxes (from all sources)? \_\_\_\_\_