

Supplementary materials for the Zimbabwean Risk Pooling Game

Treatments 1, 2, and 3

Abigail Barr

Not for publication

These supplementary materials contain the scripts used during the experimental sessions. The scripts for the presentations to all the participants grouped together are presented first followed by the scripts used during the one-on-one meetings. The decision card can be found towards the end of the materials followed by some captioned photos.

Scripts

To the group as a whole by way of introduction

Do any of you recall the games involving money that we brought to your village last year? *[Wait for some responses.]* Well, here we are again with another set of games. This year we are going to play two games. We are going to play the first game today. Each of you will go one at a time and meet with one of us *[point to the research assistants]* to learn the game and then play it for a first time. When everyone has played and received their winnings we will meet as a group again and I will tell you about the second game. Then we will leave. We will come back tomorrow to play the second game after you have had a chance to discuss it amongst yourselves.

So, today we will call you one-by-one to meet with one of us. When you are finished with us and have collected your winnings from *[researcher's name]*, please go and sit over there. *[Point to where they should sit.]* We do not mind if you talk among yourselves while you are waiting for your turn to play. We also do not mind if you talk amongst yourselves once you have played. But we would ask those who have played to not talk to those who are still waiting. It is important that in today's game everyone makes his or her own decision with no help from anyone else. The game is simple and with 4 (or 5) of us working with you it should not take too long.

See below for scripts for one-on-one interviews in which gamble choices were made and outcomes realized.

Description of the second game to be presented to the group after everyone has played the first game *[For Treatments 1, 2, and 3]*

[Research assistants will hand out copies of the card to the players.]

So, now all of you have played the first game. Tomorrow's game is going to be the same except that, if you wish, you can form sharing groups. Let me explain how a sharing group works.

Suppose that all of you decide to form one big sharing group. Then, when each of you plays the game tomorrow, instead of giving you your winnings straight away, we would wait until the end. Then, we would add all of your winnings up and share them out equally. You would get your winnings from *[researcher's name]* as before, but everyone would get the same amount. Everyone would get an equal share of the total winnings. Is everyone clear? Shall I repeat what I have said?

Of course, some of you may not want to be part of a sharing group. That is fine. You can play in just the same way as today. You would toss the coin and get the amount of money shown on the card, although we would ask you to wait until the end of the meeting like everyone else before collecting it. For those who decided to join a sharing group, we would add up all their winnings and share the total

out equally among them. People who choose not to be in a sharing group would not get any of the winnings belonging to people who choose to be in a sharing group. Is everyone clear? Do you want me to repeat anything?

Also, instead of making one big group you may want to make several small groups. That too would be fine. All you have to do is tell us who is in which groups when you arrive tomorrow. We would then do a separate calculation for each group; for each group we would add up the members' winnings and share them equally among the members. Is everyone clear?

[For Treatment 1, now go to examples.]

[Treatment 2 continues with...] Finally, we are aware that some of you may change your mind. You may decide to join a sharing group, but once you have tossed the coin and found out your own personal winnings, you may decide that you would prefer not to share. In case this happens, after each of you have tossed the coin, we will ask you whether you want to stay in your sharing group. If you say 'yes' your winnings get added up with those of the other members of your group and shared out equally. If you say 'no' you will get the amount of money on the card, but you will have to wait until the end like everyone else to get paid. You will have to wait until the end because otherwise people will know that you have changed your mind. If you change your mind we will keep it a secret and we have organized the game so that you too can keep it a secret if you wish. **[Now go to examples.]**

[Treatment 3 continues with...] Finally, we are aware that some of you may change your mind. You may decide to join a sharing group, but once you have tossed the coin and found out your own personal winnings, you may decide that you would prefer not to share. In case this happens, after each of you have tossed the coin, we will ask you whether you want to stay in your sharing group. If you say 'yes' your winnings get added up with those of the other members of your group and shared out equally. If you say 'no' in your meeting with one of us and then, when everyone is back together after their meetings, you confirm your decision by raising your hand when we ask if anyone wishes to leave their groups, you will get the amount of money from your coin toss as it appears on the card. If you do not raise your hand, your winnings will be added up with those of the other members of your group and shared out equally. **[Now go to examples.]**

Examples

I am going to work through some examples on the board now, but does anyone want me to repeat anything I have said first? Feel free to make notes while I am writing.

Imagine that 10 people decide to form a sharing group. First, let us look at what their winnings would most likely be.

Suppose that they each chose option A. Then they would each win \$100, all the \$100s would be added up to make \$1,000, and they would each get equal shares of \$100. So, in this case, the sharing group makes no difference.

But suppose that they each chose option E. With there being 10 of them, the most likely thing is that for 5 of them the coin will land yellow side up and for 5 of them the coin will land blue side up. So, 5 of them would win \$20 and 5 of them would win \$380. Adding all these winnings up would give \$2,000 and then sharing this out equally would mean that each person gets \$200.

If they each chose B, the most likely outcome after the sharing would be that each gets \$140.

If they chose C, the most likely outcome after the sharing would be that each gets \$160.

If they chose D, the most likely outcome after the sharing would be that each gets \$180.

And if they chose F, the most likely outcome after the sharing would be that each gets \$200.

If they choose a mixture the most likely outcome after the sharing would be that each gets between \$100 and \$200. Does anyone have any questions? Remember that this year you have time to discuss the game amongst yourselves.

[Treatment 1 stops here. Ask if there are any more questions before we go.]

[For Treatments 2, and 3 continue with...]

Now, let me show you what happens when a person changes his or her mind and leaves the sharing group. Suppose everyone in the group of 10 chose D and that for 5 of them the coin landed blue side up and for 5 of them it landed yellow side up. If no one changed his or her mind, each person would get \$180.

But what if one of the people who got a blue coin decided that they wanted the \$300 on the card? They would get the \$300, and we would share the winnings of the other 9 people out equally: they would each get \$167. The more people who got blue coins who decided to leave the sharing group the lower will be the shared winnings of those who decide to stay in.

On the other hand, if people who got the yellow side decided to leave the group, the shared winnings for those who decided to stay in would go up.

[Treatments 2 and 3 stop here. Ask if there are any more questions before we go.]

Script for one-on-one meetings, first day

Before we start can you tell me which of these two amounts of money is larger? [*Point to 2 amounts of money on the card, record the outcome.*]

Today's game is a bit like the decision that you as a farmer have to make every year when it is time to plant your maize. There are lots of seed varieties on the market. Some give very good yields in good years but very bad yields in bad years. Some are more drought resistant. They give a reasonable yield in either a good or a bad year. However, they will not give a very good yield in a good year. You as a farmer have to decide whether to take the risk and plant a variety that will give you a good income, but only in a good year, or to play it safe and take a moderate income regardless of what happens. Deciding which variety to plant is like playing a game of chance.

In today's game I am going to ask you to make a similar sort of decision, although it is not going to be about seed varieties. This is what we are going to do.

1. First, I am going to describe six options to you.
2. Second, we are going to work through some examples together.
3. Third, you are going to make your choice.
4. Fourth, we are going to find out your winnings.
5. And finally, you are going to go to [*researcher's name*] to collect your winnings.

Take a look at this card (presented at below). It shows the six options that you have to choose between [*point and count, 1, 2, 3, 4, 5, 6*]. Whichever option you choose, your winnings are going to be decided by us playing a game of Chijigaro (which-hand-is-it-in). I am going to put this blue counter and this yellow counter in my hand like this. Then I am going to put my hands together behind my back and shake the counters like this. Then I am going to make sure that there is one counter in each hand and put them in front of you like this. Then you have to pick one. If you pick the hand with the blue counter in you win the amount of money shown on the blue side of the picture. If you pick the hand with the yellow counter in you win the amount of money shown on the yellow side of the picture.

Before we go any further, which do you think is more likely, that you find the blue counter or the yellow counter? [*Correct answer - neither, they are equally likely. Record their answer. If they got it wrong, explain correct answer to them.*]

[*While teaching the game refer to the card all the time. Point to the appropriate images on the card and make sure that the player is looking, seeing, and concentrating.*]

So, if you choose option B and then the coin lands blue side up you win \$190. If you choose option B and then the coin lands yellow side up you win \$90.

If you choose option C and then the coin lands blue side up you win \$240. If you choose option C and then the coin lands yellow side up you win \$80.

If you choose option D and then the coin lands blue side up you win \$300. If you choose option D and then the coin lands yellow side up you win \$60.

If you choose option E and then the coin lands blue side up you win \$380. If you choose option E and then the coin lands yellow side up you win \$20.

If you choose option F and then the coin lands blue side up you win \$400. If you choose option F and then the coin lands yellow side up you win nothing.

If you choose option A and then the coin lands blue side up you win \$100. If you choose option A and then the coin lands yellow side up you win \$100. So, in option A you win \$100 whatever happens.

So, now let us work through some examples together.

1. First, imagine that you choose D. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is \$60 (\$300).*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$300 (\$60).*]
2. Now, imagine that you choose F. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is nothing (\$400).*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$400 (nothing).*]
3. Now, imagine that you choose A. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is \$100.*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$100.*]
4. Now, imagine that you choose C. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is \$80 (\$240).*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$240 (\$80).*]
5. Now, imagine that you choose E. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is \$20 (\$380).*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$380 (\$20).*]
6. Now, imagine that you choose B. Then you toss the coin [*get them to toss the coin*]. The yellow (blue) side is facing up so you win how much? [*Correct answer is \$90 (\$190).*] And what if the blue (yellow) side was facing up, how much would you win then? [*Correct answer is \$190 (\$90).*]

Now it is time for you to make your choice. Which option do you pick, A, B, C, D, E, or F? [*Record their answer.*]

Now play Chijigaro. [*Record the outcome.*]

So, you have won \$.... I will write that amount on this piece of paper. [*Write their winnings on the form.*] Now take it to [*researcher's name*] and (s)he will pay you.

Thank you.

Script for one-on-one meetings on *second day*

So, which option do you want today, A, B, C, D, E, or F? [*Record their answer.*]

Now let's play Chijigaro. [*Record the outcome.*]

So, you have won \$....













[*Then, if this is Treatment 1, tell them to go and sit down (see below). If this is Treatment 2 or 3 and if they are in a sharing group ask...*]

Do you want to stay in your sharing group, or do you want to leave the group? [*Record their answer.*]

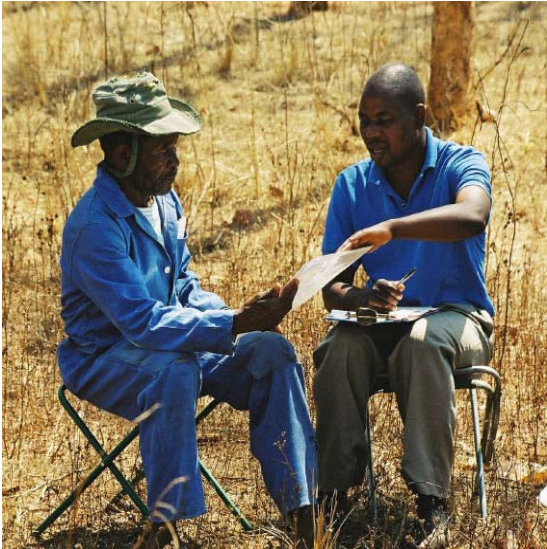
Now go and sit with your fellow villagers until we are ready to make the payments.

Thank you.

Decision card

<p>A</p>  <p>\$100</p>  <p>\$100</p>	<p>B</p>  <p>\$90</p>  <p>\$190</p>
<p>C</p>  <p>\$80</p>  <p>\$240</p>	<p>D</p>  <p>\$60</p>  <p>\$300</p>
<p>E</p>  <p>\$20</p>  <p>\$380</p>	<p>F</p>  <p>\$400</p>  <p>\$0</p>

Photos of a one-on-one meeting



The gamble choice is explained using the decision card

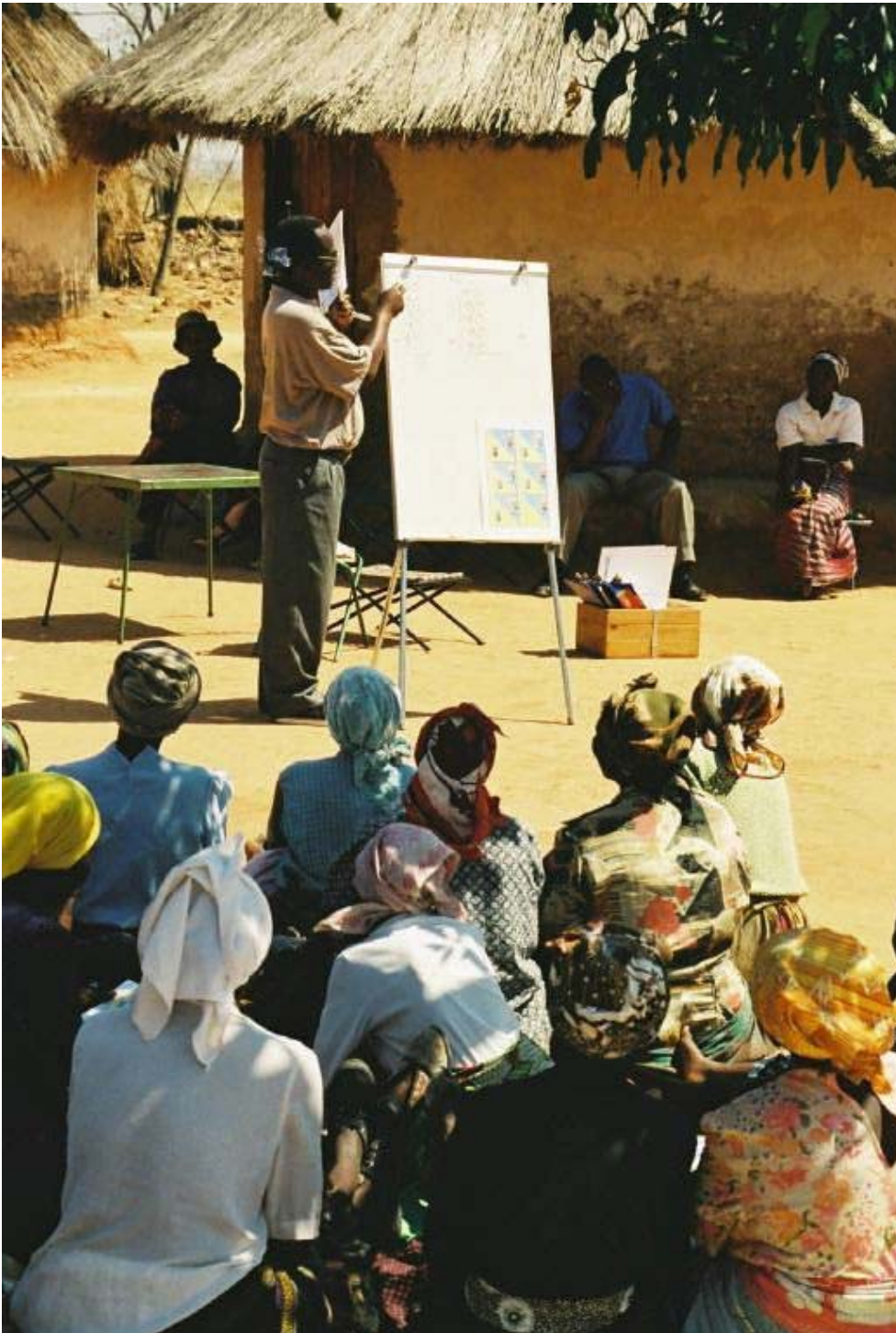


The participant makes his choice



The RA and the participant play Chijigaro

Photo of a presentation to all the participants in a particular session



The presenter is going through one of the examples of how grouping and sharing affect winnings. (Note that the session also included male participants - they are sitting to the right of the women out of frame - an example of the observed tendency for men and women to assort in sub-Saharan Africa.)