

INSTRUCTIONS

This is an experiment in the economics of strategic decision making. The Department of Economics at Texas A&M University has provided funds for this research. If you follow the instructions and make appropriate decisions, you can earn an appreciable amount of money. At the end of today's session, you will be paid in private and in cash.

It is important that you remain silent and do not look at other people's work. If you have any questions, or need assistance of any kind, please raise your hand and an experimenter will come to you. If you talk, laugh, exclaim out loud, etc., you will be asked to leave and you will not be paid. We expect and appreciate your cooperation.

There are twelve participants in today's experiment. In today's experiment you will be asked to make decisions in each of 16 independent markets. In each market, you will be grouped with three other participants. The amount of money you earn in each market will depend on the decision you make, and the average of the decisions made by the three other participants grouped with you in that market. Your total earnings for today's experiment will be determined by adding up the earnings from each of the 16 markets. We will call the average of the numbers chosen by the other three participants in your group the **Market Statistic**.

Example 1. Suppose the other participants in your group choose the numbers 25, 15, and 20, respectively. Then, the Market Statistic for your group would be computed by adding up the numbers

$$25 + 15 + 20 = 60$$

and then dividing by three:

$$60 / 3 = 20$$

Example 2. Suppose the other participants in your group choose the numbers 65, 5, and 95, respectively. Then, the Market Statistic for your group would be computed by adding up the numbers

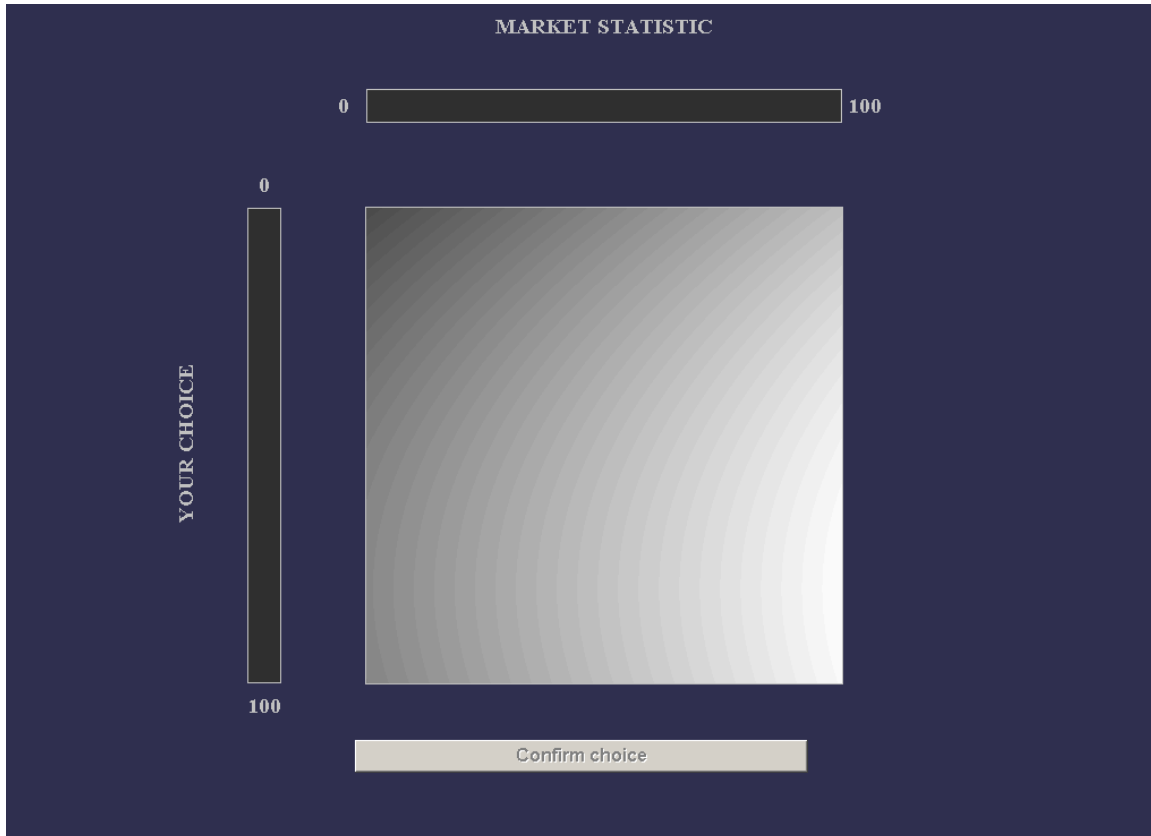
$$65 + 5 + 95 = 165$$

and then dividing by three:

$$165 / 3 = 55$$

THE DECISION SCREEN

Your earnings in each market will depend on the number you choose (**Your Choice**) and the Market Statistic. The exact way in which your earnings depend on these quantities will be different in each market. The relationship between Your Choice, the Market Statistic, and your earnings in each market will be displayed on the Decision Screen. The Decision Screen is designed to allow you to explore the consequences of possible scenarios. We will now discuss how to use this screen in formulating your decision in each market.



The Decision Screen contains the following elements:

1. A horizontal bar along the top with the label **MARKET STATISTIC**;
2. A vertical bar along the left side with the label **YOUR CHOICE**;
3. A central box, the **Earnings Box**, which depicts how your earnings will depend on Your Choice and the Market Statistic in the current market;
4. A confirmation button at the bottom of the screen.

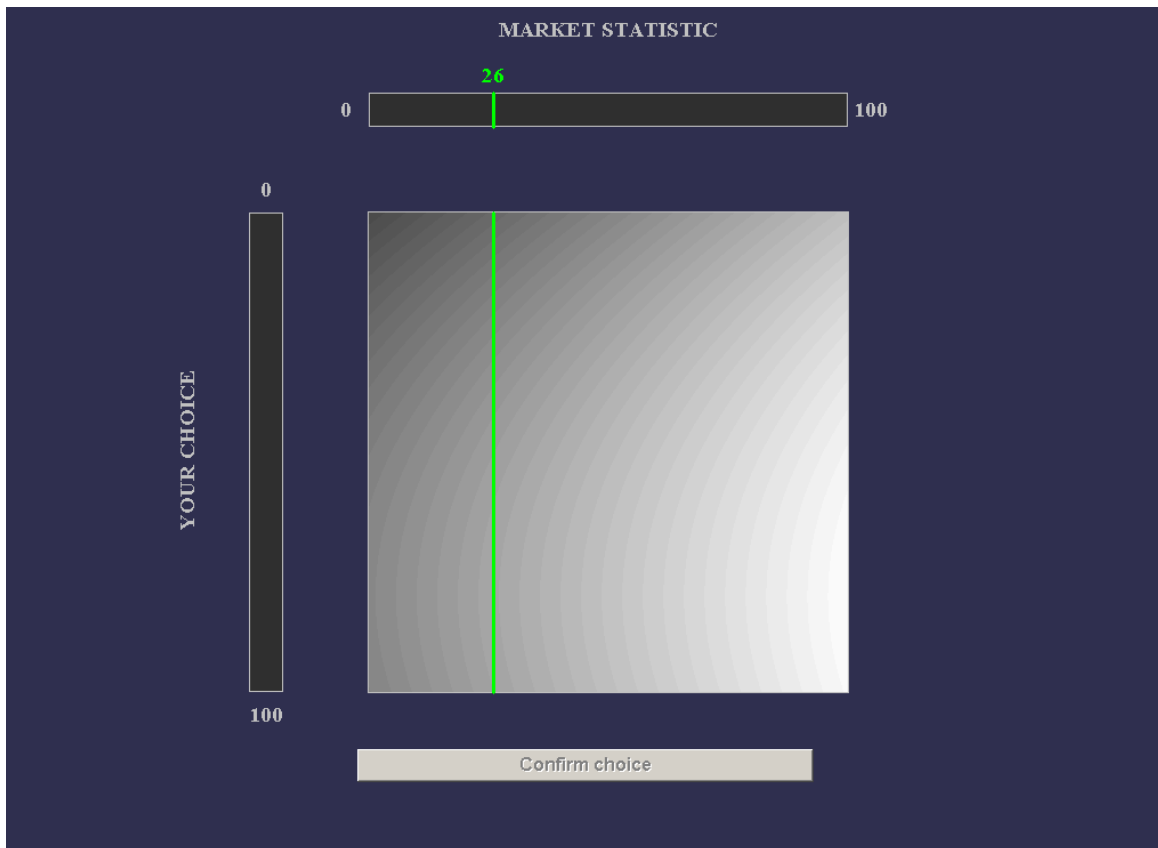
We will now explain how these elements work together.

MARKET STATISTIC BAR

The bar located at the top of the screen is labeled **MARKET STATISTIC**. Before you make Your Choice in each market, you can use this bar to investigate hypothetical values of the Market Statistic.



When you click in this Market Statistic Bar, a green vertical line will appear in the bar, as well as in the Earnings Box directly below. By moving your mouse left and right, you can select any value between 0 and 100 as a hypothetical value of the Market Statistic. Click the mouse a second time to set a hypothetical value for the Market Statistic. In the next screenshot, a hypothetical Market Statistic of 26 has been selected.



YOUR CHOICE BAR

In the experiment, your earnings depend on your choice and the Market Statistic. You can use the vertical bar labeled YOUR CHOICE to determine what your earnings would be for each possible value of Your Choice, given any hypothetical Market Statistic.

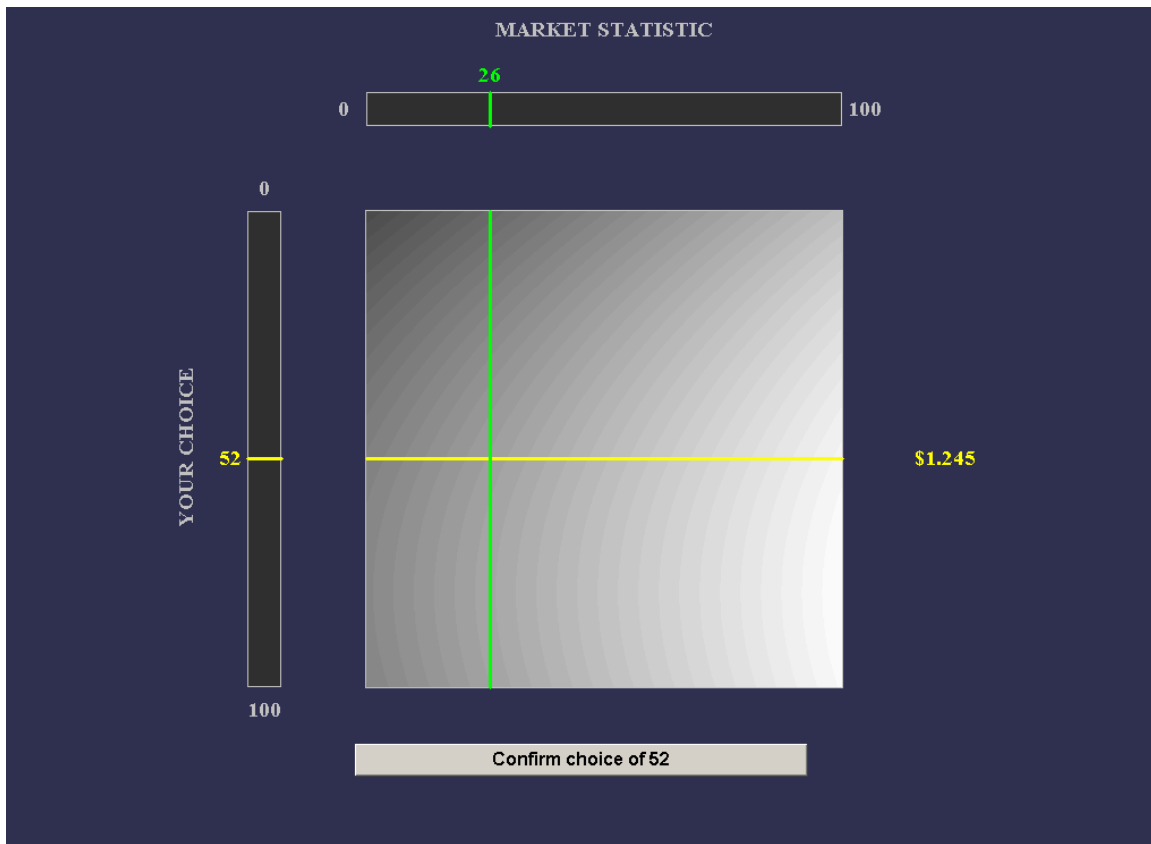


When you click on the bar labeled YOUR CHOICE, a yellow horizontal line appears in the bar. A yellow horizontal line also appears in the Earnings Box to the right.

If a Market Statistic has been selected in the MARKET STATISTIC BAR, to the right of the Earnings Box will appear the earnings associated with your selection for Your Choice and your selection for the hypothetical Market Statistic. By moving your mouse up and down, you can read off the earnings associated with all of your feasible choices and the currently-selected hypothetical Market Statistic. Notice that, in the Earnings Box, higher earnings are associated with lighter shades and lower earnings are associated with darker shades. Click the mouse a second time to select a value for Your Choice.

In the next screenshot, a value of 52 has been selected for Your Choice. For the example market shown, this combination of 52 for Your Choice and 26 for the Market Statistic would result in earnings of \$1.245.

Remember that you do not set the Market Statistic; the Market Statistic is determined by the average of the choices of the other three participants in that market.



Your selection of Your Choice at this stage is not final. You can return to the Market Statistic Bar and Your Choice Bar as many times as you want while formulating your choice. For instance, if you now click again on the Market Statistic Bar and move the mouse left and right, you can read off the earnings associated with changes in the hypothetical Market Statistic and the value of Your Choice that is currently selected. We will explain in a minute how to finalize and confirm your choice for a market.

You can also set a value for Your Choice without first selecting a hypothetical Market Statistic. If you do so, three question marks will appear to the right of the value you have chosen to remind you that your earnings will also depend on the Market Statistic selected by the other three participants in your group.

EARNINGS BOX

The central box on the screen depicts graphically how your earnings in a market will depend on Your Choice and the Market Statistic, determined by the average of the choices of the other three participants in your group. Recall that lighter shades correspond to higher earnings, and darker shades to lower earnings.



You can also use the Earnings Box to explore possible earnings scenarios by simultaneously changing the hypothetical Market Statistic and Your Choice. When you click in the Earnings Box and move your mouse up and down and left and right, you can simultaneously move the vertical green line representing the hypothetical Market Statistic and the horizontal yellow line representing Your Choice, and read off the your corresponding earnings. Clicking the mouse a second time in the Earnings Box selects the displayed value as Your Choice.

SUMMARY OF THE DECISION SCREEN

In summary, the difference in the three active boxes is in what they control. Clicking on the horizontal Market Statistic Bar allows you to change the hypothetical Market Statistic, while leaving the value of your choice unchanged. Clicking on the vertical Your Choice Bar allows you to change the value of your choice by moving the green line up or down with the mouse while leaving the value of the hypothetical Market Statistic unchanged. Clicking in the Earnings Box allows you to change both values simultaneously.

CONFIRMING YOUR CHOICE

When you click in either the vertical Your Choice Bar or the Earnings Box, you set a hypothetical value for Your Choice represented by the horizontal yellow line. When you are ready to set that hypothetical value of Your Choice as the choice you want to make in that market, click on the button labeled Confirm located below the Earnings Box. This button will display the value you have selected for Your Choice. If this is the value of Your Choice you wish to select, proceed by clicking on the confirmation button. If not, you can change Your Choice by using the Earnings Box or the Your Choice.

DETERMINING EARNINGS

In this experiment there will be 16 markets. Each market will have a different relationship between Your Choice, the Market Statistic, and your earnings. However, within each given market, the earnings for each participant will be determined in the same way. To take the example constructed earlier, the value selected for Your Choice was 52, and the hypothetical Market Statistic was 26. In this scenario, your earnings would be \$1.245 for the market. This relationship would be true for all participants in that market. In other words, in each market, the other participants in that market will be making their decisions using a Decision Screen with the same Earnings Box as you see on your screen.

After you have confirmed Your Choice for a market, you will be shown the Decision Screen for the next market, with a different relationship among Your Choice, the Market Statistic, and your earnings. Each market is independent, in that earnings for each market are determined only by the choices participants make in that market, and not in any other markets. Once all participants have made their choices for each of the 16 markets, all participants will be shown the results of the markets, including Your Choice for each of the markets, the Market Statistic for each of the 16 markets, and your earnings for each of the markets. Your total earnings for the experiment will be determined by adding up your earnings from each of the 16 markets.

QUESTIONNAIRE

We will now pass out a questionnaire to make sure that all participants understand how to calculate earnings for given values of the Market Statistic and Your Choice. Please fill out the questionnaire now. Do not put your name on the questionnaire. Raise your hand when you are finished and we will collect it. If there are any mistakes on any questionnaire, I will go over the relevant part of the instructions again.

SUMMARY

- There are 12 participants in today's experiment. There will be 16 markets in which you will make a decision. In each market, participants will be selected at random into one of three groups, each with 4 participants. The groups are determined independently in each market, so you are equally likely to be in the same group as any other participant in any given market.
- In each market, every participant will choose from the set 0, 1, ..., 99, 100. The value of Your Choice and the value of the Market Statistic, determined by the average of the choices of the other three participants in your group, will determine your earnings for that market. The specific way in which choices and Market Statistics determine earnings will be different in each market.
- You make a choice by (i) selecting a value between 0 and 100 for using the Your Choice Bar and/or the Earnings Box, (ii) clicking the mouse a second time, to select your choice and restore your cursor, and then (iii) clicking on the button labeled Confirm to enter and confirm your choice for the market.
- Your earnings for the session will be the sum of your earnings in each of the 16 markets. Your earnings will be paid to you privately and in cash immediately at the end of the session.

We have completed the instructions. Again, it is important that you remain silent and do not look at other people's work.

If you have a question, please raise your hand, and an experimenter will come to assist you. If there are no questions, the experiment will begin.