

## **E. Fehr, G. Kirchsteiger and A. Riedl (1993), "Does fairness prevent market clearing? an experimental investigation", Quarterly Journal of Economics**

The instructions given to the subjects were, of course, written in German. As already mentioned, we framed the experiments in goods market terms. The employers are called buyers, the workers are called sellers, the wage is called price, etc. Notice that buyers and sellers were located in separate rooms.

### **General Instructions** (for both market sides)

The experiment you will participate in is part of a research project financed by the Austrian Science Foundation. It is used to analyze the decision behavior in markets. The instructions are simple, and if you read them carefully and make appropriate decisions, you can earn a considerable amount of money. At the end of the whole experiment, all the profits you have made by your decisions will be added up and paid to you in cash. The experiment you will participate in consists of two stages. In the first stage six of you act as buyers, and nine of you as sellers. In the second stage, the sellers will determine the value of the goods for the buyers (for details of the second stage see below). We have distributed two kinds of instructions-information for the buyers, and information for the sellers, respectively. This information is for private use only - you are not allowed to reveal this information to anyone. Furthermore, you will find at the end of these instructions a second sheet (sheet 2) that is used to document your decisions. Insert your buyer or seller number there.

### **Specific Instructions for Sellers**

At the market, a good is traded, and each seller sells the same good. A seller can sell this good to any buyer, and a buyer can buy it from any seller. The market is organized in the following way: we open the market for a trading period (a "trading day"), and each trading day lasts three minutes. Every buyer can offer a price that will be relayed to us by telephone.<sup>16</sup> We list these offers on the blackboard, and you can accept one of these offers. If, e.g., a price of 50 is offered and you as seller number 5 want to accept this offer, you just say: "Number 5 sells for 50.," In this case, the transaction is concluded. The good is sold to the buyer who made the offer of 50. The buyer will not know your identity. He will just know that his offer is accepted. You have to note your accepted price on sheet 2.

You can sell one unit of the good on each trading day. Therefore, the trading day ends for you after the acceptance of an offer. Note also that each buyer can buy, at most, one unit of the good per trading day. Each seller may accept an offer or not, but the sellers cannot make counteroffers. After three minutes the trading day ends, and the second stage of the experiment is conducted. After this, a new trading day is opened. In total there will be twelve trading days. At the second stage of the experiment, you can fix the value the good will have for the buyers. Buyers receive a certain amount of experimental money (reselling price) from us for each unit that they have bought. This reselling price is noted in the middle of sheet 2.

The profit of a buyer (measured in experimental money) is the difference between the reselling price and the price at which he has bought the good from you. If "your" buyer has bought the good for 205 and the reselling price is 405, he makes a profit of  $405 - 205 = 200$  (measured in experimental money). How much one unit of experimental money is worth for "your" buyer depends on you. By the choice of a conversion rate, you decide how much real money "your" buyer gets from us for one unit of experimental money. If you choose, e.g., the rate 0.5, your buyer gets AS 100 for 200 units of

experimental money. Which conversion rates you are allowed to choose, is noted on the lower part of sheet 2. You have to write down your decision on the upper part of sheet 2. Do not announce your decision publicly.

You, as a seller, have two kinds of costs: production costs and "decision costs." The latter are associated with your decision about the conversion rate. Of course, you incur costs only in case of a deal. If you do not trade on a certain day, your costs are zero for this day. Production costs are noted on the upper part of sheet 2. Decision costs depend on your choice of the conversion rate. The higher the conversion rate you decide to give to "your" buyer, the greater are your decision costs. The costs, which are associated with the conversion rate, are noted on the lower part of sheet 2.

Your profit paid in AS is given by the formula: profit = price - production costs - decision costs. If, for example, you sell your good for 175, while your production costs are 100, and you choose a conversion rate of 0.6 which leads to decision costs of 5, your profit is given by  $175 - 100 - 5 = 70$ . Do you have any questions?

### Sheet 2 (for sellers)

Seller number:

Trading day:

conversion rate	
price (1)	
production costs (2)	26
decision costs (3)	
profit (4) = (1) – (2) – (3)	

reselling price of the buyers: 126

profit of the buyer = (reselling price - price)\*conversion rate

Feasible conversion rate (CR) and associated decision costs (DC)

CR	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
DC	0	1	2	3	4	5	6	7	8	9

### Specific Instructions for Sellers

At the market, a good is traded, and each seller sells the same good. A seller can sell this good to any buyer, and a buyer can buy it from every seller. The market is organized in the following way: we open the market for a trading period (a "trading day"), and each trading day lasts three minutes. As a buyer you can offer a price that must be divisible by 5, for example, prices like 15, 60, 80, 275 are

allowed, but prices like 48, 67, 124, 83 are not. These offers will be announced to the sellers by us over the telephone. The sellers will not know your identity, that is, your buyer number; they will only know the price offered. If a seller accepts your offer, all buyers are informed about this acceptance. In this case, an agreement is concluded, and the good is bought by you at the offered price. During each trading day you can buy one unit of the good. Therefore, a trading day ends for you when your offer is accepted. Note also that each seller can sell one unit of the good per day at most. If your offer is not accepted, you are free to change your offer, that is, to make a new offer. But the new price you offer must be higher than all the prices that have not been accepted. Each seller may accept an offer or not, but he cannot make a counteroffer.

After three minutes the day ends, and you cannot buy any more of a good. Then the second stage of the experiment will be conducted. After this, a new trading day is opened. On the whole, there will be twelve trading days. In the second stage of the experiment, the seller who has sold the good to you on this day can fix the value that the good will have for you. You as a buyer get a certain amount of experimental money (reselling price) from us for each unit you have bought. This reselling price is noted in the upper part of sheet 2. Your profit (measured in experimental money) is the difference between the reselling price and the price at which you have bought the good. If you bought the good for 205 and the reselling price is 405, you make a profit of  $405 - 205 = 200$  (measured in experimental money). How much one unit of experimental money is worth to you depends on "your" seller. By the choice of a conversion rate, he decides how much real money you receive from us for one unit of experimental money. Which conversion rates he is allowed to choose are noted on the lower part of sheet 2. If he chooses, for example, the rate 0.5, you will get AS 100 for 200 units of experimental money.

Sellers have two kinds of costs: production costs and decision costs. The latter are associated with the decision about the conversion rate. Production costs are noted in the middle of sheet 2, and decision costs on the lower part of sheet 2. As you can see from sheet 2, the higher the conversion rate "your" seller chooses, the greater are his decision costs. The profit of the sellers paid in AS is given by the formula:  $\text{profit} = (\text{price} - \text{production costs} - \text{decision costs})$ . Suppose, for example, that you have bought the good for 175. The production costs of the seller are 100, and he chooses a conversion rate of 0.6 (which is associated with decision costs of 5), the profits of "your" seller are given by  $175 - 100 - 5 = 70$  AS. Do you have any questions?