Online Appendix B: Instructions for
"Communication in Vertical Markets: Experimental Evidence"

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Basic Instructions

Welcome to our experiment! In the next hour you will make decisions at a computer. One thing is important right from the start: please be quiet during the entire experiment and please do not talk to your neighbors. The experiment runs over 15 rounds.

In the experiment we will use a fictitious currency called ECU. In the beginning you will get a starting capital in ECU. During the experiment you can earn some real money, but losses are also possible.

After the last round, you will be paid 1 euro for every 40 ECU you earned during the experiment. Concerning the payment, there is strict anonymity with respect to the other participants as well as with respect to us. We will record no data in connection with your name.

What is the experiment about? The experiment is about decision making in a market with one producer and two retailers. Some of you will make decisions for a producer, others for a retailer. You will be a producer or a retailer for all 15 rounds of the experiment. Consumers in the market are simulated by the computer program. You will be told whether you are a producer or a retailer at the beginning of the experiment. Currently, you are all reading the same instructions.

Note that in every round the producer-retailer groups change.

The basic market structure is the following, the producer produces a product which he sells to the retailers. The retailers resell the product to the final consumers in their stores.

What are you supposed to do as a producer or retailer? A producer has to decide how many units of the product he wants to sell at which price to the two retailers. This decision has the form of an offer to the retailers: each retailer is offered a specified quantity (integer) of the product at a

specified total price. The producer may also decide to offer a quantity of zero of the product to one or both retailers. The starting capital for the producer is 60 ECU.

If a retailer receives an offer, he has to decide either to accept the offer or to reject it. If he accepts the offer, he receives the number of units of the product specified in the offer and has to pay the total price. If he rejects the offer, he does not receive the product and does pay anything to the producer. The starting capital for the retailer is 200 ECU.

What price do retailers get for the product in their stores? The market price paid by the consumers is determined by the computer program in the following way. The market price per unit depends on the total quantity supplied together by both retailers. The following relationship between the quantity supplied and the market price holds.

Total quantity	Market price
1	60
2	50
3	30
4	18
5	5
6 or more	0

The table reads as follows. In the left column, one finds the total quantity of the product supplied by both retailers. For each total quantity there is exactly one market price. Take an example: Suppose retailer 1 received 2 units from the producer and retailer received 1 unit. As the total number of units is 3, the market price per unit is 30 ECU.

Retailers' revenues are the number of units supplied (that is, bought from the producer) multiplied by the market price. In the example, retailer 1 has revenues of 2×30 ECU = 60 ECU, while retailer 1 has revenues of 1×30 ECU = 30 ECU.

Retailers' stores are run without cost. The profit of a retailer is thus the revenues minus the payment to the producer.

Suppose that, in the example, retailer 2 agreed to pay 35 ECU for the 1 unit he received. Then he would actually make a loss of 5 ECU. If he agreed to pay only 5 ECU, a profit of 25 ECU would result.

Also the producer produces without cost. The producer's profit is thus simply the payments of the two retailers.

Which information do you get? Each retailer knows only his own offer but not the offer of the other retailer. Each retailer is told his own profit at the end of each round. The producer is told whether or not the retailers accepted the offers at the end of each round. The producer is informed about his own profit and the profit of the two retailers at the end of each round.

Additional Instructions for *Two Chat*

Before the producer and the retailers make their decisions, you have the possibility to communicate. The producer may write messages via a chat window to retailer 1 and to retailer 2. Both retailers may communicate with the producer , but they cannot write to each other; the retailers cannot observe what the producer and the other retailer talked about.

You are able to communicate at the beginning of every round and the time is restricted to 90 seconds in the first 5 rounds and 60 seconds after that.

Additional Instructions for *Three Chat*

Before the producer and the retailers make their decisions, you have the possibility to communicate. All of the three market participants may write messages in a chat window. Both the producer and the retailers may send messages and the other two market participants can read these messages. If, for example, retailer 1 sends a message, retailer 2 as well as the producer can read and answer it. You cannot write only to one of the other two market participants.

You are able to communicate at the beginning of every round for 60 seconds.

Additional Instructions for *Choose Chat*

Before the producer and the retailers make their decisions, you have the possibility to communicate. On the one hand communication between the producer and one of the retailers is possible whereas the other retailer cannot observe the conversation. That means the manufacturer may write to retailer 1 as well as retailer 2 via a chat window on the left and on the right hand side on the screen, respectively. In these chat windows both retailers may communicate with the producer, but they cannot write to each other; the retailers cannot observe what the producer and the other retailer talked about.

On the other hand it is possible to communicate with all of the three market participants. Both the producer and the retailers may send messages and the other two market participants can read these messages. If, for example, retailer 1 sends a message, retailer 2 as well as the producer can read and answer it. In this chat window you cannot communicate with only one of the other two market participants.

The producer may communicate via three different chat windows. The conversation among all three market participants takes place in the chat window in the middle of the screen. Via the chat window on the left- and right-hand side the manufacturer can communicate separately with retailer 1 and retailer 2, respectively. Retailers have two different chat windows. They can communicate either in a threesome in the middle chat window or separately with the manufacturer on the left and right hand side of the screen. (You can see the three different variants below.)

You are able to communicate at the beginning of every round for 90 seconds.