

APPENDICES FOR ONLINE PUBLICATION AS SUPPLEMENTARY MATERIAL

Appendix A. Laboratory experiment instructions

Welcome and thank you for participating in this experiment. In this experiment you can earn money. The specific amount depends on your decisions and the decisions of other participants. From now on until the end of the experiment, please do not communicate with other participants. If you have any questions, please raise your hand. An experimenter will come to your place and answer your question privately. In the experiment we use ECU (Experimental Currency Unit) as the monetary unit. 200 ECUs are worth 1 Euro.

At the beginning of the experiment all participants are endowed with an amount of 1000 ECU. Profits during the experiment will be added to this account, losses will be deducted. At the end of the experiment, the balance of the account will be converted from ECUs into Euros according to the conversion rate announced above, and paid out in cash.

The experiment lasts for 60 rounds. In each round, participants will be matched into groups of four participants. One of these participants is the *seller*, the other three participants are *buyers*. The composition of the group, and in which rounds you are a seller and in which rounds you are a buyer will be randomly determined by the computer. The seller offers one good which, if produced in 100% quality, costs him 100 ECUs to produce. Each of the potential buyers is assigned a valuation for the good, which lies between 100 and 300 ECUs. The valuation represents the value of the good for the buyer if he receives it in 100% quality (more about quality will be said below). The valuations of the three buyers will be newly randomly drawn in each round. When drawing a valuation, every integer value between 100 and 300 has the same probability to be selected.

Each round consists of three steps: in the “auction stage” the three potential buyers may bid for the item offered by the seller. In the “transaction stage” the seller receives the price which has to be paid by the auction winner, and decides about the quality of the good he will deliver. In the “feedback stage” both buyer and seller may give feedback on the transaction, which is then made available to traders in later rounds. In the following we explain the procedures of the three stages in detail.

Auction stage. In the first stage in each round, each of the potential buyers may submit a maximum bid for the good:

1. Your maximum bid is the maximum amount you'd be willing to pay for winning the auction. If you do not want to participate in the auction, submit a maximum bid of 0. If you want to participate, submit a maximum bid of at least 100 ECUs, which is the minimum price. (Your maximum bid must not exceed the current amount on your account.)
2. The bidder who submits the highest maximum bid wins the auction. The price is equal to the second highest bid plus 1 ECU. Exceptions: The price is equal to 100 ECU if only one potential buyer submits a bid. The price is equal to the maximum bid of the auction winner, if the two highest maximum bids are the same (in this case, the bidder who has submitted his bid first wins the auction).
3. You may think of the bidding system as standing in for you as a bidder at a live auction. That is, the system places bids for you up to your maximum bid, but using only as much of your bid as is necessary to maintain your highest bid position. For this reason, the price cannot exceed the second highest bid plus 1 ECU.

The winner of the auction must pay the price to the seller and proceeds to the transaction stage. All other potential buyers earn an income of 0 ECU in this round.

Transaction stage. The seller receives the price and then determines the quality of the good. The quality must be between 0% and 100%. Each quality percent costs the seller 1 ECU. Thus, the costs for the seller for selling the good are 0 ECU if the quality is 0%, and 100 ECU if the quality is 100%. The value of the good for the buyer who has won the auction equals the quality of the good times his valuation for the good. Thus the value of the good for the buyer is 0 ECU if the quality is 0%, and equal to his valuation if the quality is 100%.

In equations:

The payoff for the Seller in this round equals: Auction price – Quality [%] * 100

The payoff for the auction winner in this round is: Quality [%] * Valuation – Auction price

Feedback stage

Baseline {The feedback stage consists of one or two steps: After the transaction both the buyer and the seller decide whether or not they want to submit a feedback on the transaction. Submitting a feedback costs 1 ECU. The feedback can be either “negative“, “neutral“, or “positive“. If both transaction partners submit feedback, or none of them submits feedback, then the feedback stage ends at this point.

If only one transaction partner submits feedback, then the other transaction partner is informed about this feedback. The transaction partner who has not submitted feedback yet has another chance to submit feedback. Again, submitting feedback costs 1 ECU, and the feedback can be either “negative“, “neutral“, or “positive“.

After the feedback stage the round ends. If a participant becomes a seller in one of the following rounds, the feedbacks he received in earlier rounds as a buyer or a seller will be presented in the following way: “YY (XX%)“, where YY is equal to the number of positive feedbacks minus the number of negative feedbacks, and XX is the share (in percent) of positive feedbacks in all feedbacks. }

Blind {After the transaction both the buyer and the seller decide whether or not they want to submit a feedback on the transaction. Submitting a feedback costs 1 ECU. The feedback can be either “negative“, “neutral“, or “positive“. The feedback giving of buyer and seller takes place simultaneously.

After the feedback stage the round ends. If a participant becomes a seller in one of the following rounds, the feedbacks he received in earlier rounds as a buyer or a seller will be presented in the following way: “YY (XX%)“, where YY is equal to the number of positive feedbacks minus the number of negative feedbacks, and XX is the share (in percent) of positive feedbacks in all feedbacks.}

DSR: { The feedback stage consists of one or two steps: After the transaction both the buyer and the seller decide whether or not they want to submit a feedback on the transaction. Submitting a feedback costs 1 ECU. The feedback can be either “negative“, “neutral“, or “positive“. Additionally, the buyer (and only the buyer) may submit an additional rating. (This is only possible if he also submits a normal feedback. The additional rating allows the buyer to give feedback on the following scale:

The quality was satisfactory.

I strongly disagree I disagree Undecided I agree I strongly agree
(1) (2) (3) (4) (5)

There are no additional costs for the additional rating. If both transaction partners submit feedback, or none of them submits feedback, then the feedback stage ends at this point. If only one transaction partner submits feedback, then the other transaction partner is informed about the “negative”/”neutral”/”positive” feedback; but the seller is *not* informed about the content of the additional rating submitted by the buyer. The transaction partner who has not submitted feedback yet has another chance to submit feedback. Again, submitting feedback costs 1 ECU, and the feedback can be either “negative“, “neutral“, or “positive“.

After the feedback stage the round ends. If a participant becomes a seller in one of the following rounds, the feedbacks he received in earlier rounds as a buyer or a seller will be presented in the following way: “YY (XX%)“, where YY is equal to the number of positive feedbacks minus the number of negative feedbacks, and XX is the share (in percent) of positive feedbacks in all feedbacks. The additional ratings which a participant received as a seller in earlier rounds will be presented in the following form: “on average X.X, based on XXX additional ratings”.}

Before you start with the experiment you will take part in two trial rounds. In the first trial round you are a buyer, in the second trial round you are a seller. The other buyers/the seller will be simulated by the computer in these trial rounds. The trial rounds have no consequences for your earnings.

Appendix B. List of field data sets

Dataset	Source	Data	Timeframe	Observations
1	eBay (self-collected from eBay webpage)	Transaction data and associated feedback Individual feedbacks of all involved traders	Nov/Dec 2006 From beginning until May 2007	722,929 transactions 78,045,630 feedbacks under FB1.0 7,060,819 feedbacks under FB2.0
2	eBay	Transaction data and associated feedback, including (publicly unobservable) individual detailed seller ratings	June 2007	573,567 transactions
3	Mercado Livre, eBay China, others (self-collected)	Transaction data and associated feedback	June 2006	28,435 transactions
4	RentACoder.com (self-collected)	Transaction data and associated feedback	2004-2007	192,392 transactions
5	Amazon (self-collected)	Recent feedback data from 10,000 sellers	until 2007	320,609 recent feedbacks

See <http://ben.orsee.org/supplements> for a complete description of how these field datasets were created.

Appendix C. Additional tables and figures

TABLE 8: DETERMINANTS OF FEEDBACK GIVING,
PROBIT COEFFICIENT ESTIMATES OF MARGINAL EFFECTS (dy/dx)
(ROBUST STANDARD ERRORS CLUSTERED ON MATCHING GROUP, ROUNDS 1 TO 50)

Dep var	Buyer gave feedback	
	Coeff	(StdErr)
<i>Blind</i>	-0.090 **	(0.038)
<i>DSR</i>	0.004	(0.048)
Round	-0.002 **	(0.001)
Price	-0.0002	(0.0002)
Quality	-0.002 ***	(0.001)
S FScore	0.006 *	(0.003)
N	2283	
Restricted LL	-1226.2	

Note: *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively. S FScore stands for the feedback score of the seller.

TABLE 9: CONTENT AND TIMING OF MUTUAL FEEDBACK
IN EXPERIMENTAL *BASELINE* TREATMENT

Mutually positive feedback				Only seller gave problematic FB			
		Seller gave in stage				Seller gave in stage	
		1	2			1	2
Buyer gave	1	137	79	Buyer gave	1	7	6
in stage	2	16		in stage	2		
Only buyer gave problematic FB				Mutually problematic feedback			
		Seller gave in stage				Seller gave in stage	
		1	2			1	2
Buyer gave	1	59	3	Buyer gave	1	24	108
in stage	2	11		in stage	2	8	

Note: Numbers in cells represent absolute numbers of observations in treatment *Baseline*. 'Problematic' includes negative and neutral feedback.

TABLE 10: BUYER'S DETAILED SELLER RATINGS (DSR) CONDITIONAL ON
BUYER'S CONVENTIONAL FEEDBACK (CF) UNDER FEEDBACK 2.0 [%]

Buyer's CF	DSR Category	DSR given	DSR Score				
			1	2	3	4	5
Negative (1.9%)	Description	67.2	58.7	15.4	11.9	7.4	6.6
	Communication	71.3	70.9	11.7	10.1	5.0	2.3
	Shipping time	63.8	47.4	8.5	17.6	15.8	10.8
	Shipping costs	64.5	39.1	10.5	26.6	16.1	7.6
Neutral (1.2%)	Description	78.7	11.6	20.0	25.5	20.8	22.0
	Communication	79.2	16.3	16.2	27.9	24.6	14.9
	Shipping time	77.2	20.1	13.1	20.4	22.2	24.3
	Shipping costs	77.5	9.7	10.3	31.1	30.8	18.2
Positive (96.8%)	Description	72.4	0.4	0.8	3.3	14.0	81.5
	Communication	71.8	0.6	0.9	4.1	16.3	78.2
	Shipping time	71.6	0.9	1.7	5.7	15.3	76.4
	Shipping costs	71.3	0.8	1.9	8.5	23.3	65.5

FIGURE 8: SCREENSHOT OF NEW FEEDBACK SUBMISSION PAGE ON EBAY

Leave Feedback

We've made some important changes to Feedback.
 In addition to leaving an **overall Feedback rating** for each transaction, buyers can rate sellers on specific aspects of the transaction.
 Each buyer's individual detailed seller ratings will **not** be seen by the seller. Learn more about our new optional **detailed seller ratings**.

Find a transaction
 Enter a User ID or item #

You can leave Feedback for 1 transaction.

Viewing transactions 1-1 Show **All Items**

Prof-Mini-Stativ für Photo und Videokameras aus Metall ()

Seller: (26678)
 Ended: Jun-27-07 11:54:03 PDT

Rate the overall transaction. This Feedback will be public.

Positive
 Neutral
 Negative
 I will leave Feedback later

Please explain: 80 characters left

Rate the details of the transaction. These individual ratings will not be seen by the seller.

How accurate was the item description? ★★★★★
 How satisfied were you with the seller's communication? ★★★★★
 How quickly did the seller ship the item? ★★★★★
 How reasonable were the shipping and handling charges? ★★★★★

Sellers will not see your individual ratings.
 Only the average of all buyer ratings can be seen by the seller.
 Click on the stars to select your ratings.

DSR

Once you leave Feedback, you cannot edit or retract it.

CF

DSR

FIGURE 9: SCREENSHOT OF NEW FEEDBACK PROFILE PAGE ON EBAY

Feedback Profile

(9856)
 Member since Nov-17-03 in United States

[Contact member](#) | [View items for sale](#) | [View seller's Store](#)

More options: [View ID History](#) | [Add to Favorite Sellers](#) | [View eBay My World](#) | [View Reviews & Guides](#)

<p>Feedback Score: 9856</p> <p>Positive Feedback: 99.1%</p> <p>Members who left a positive: 9944</p> <p>Members who left a negative: 87</p> <p>All positive Feedback: 11130</p> <p>Find out what these numbers mean</p>	<p>Recent Feedback Ratings (last 12 months)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>1 month</th> <th>6 months</th> <th>12 months</th> </tr> </thead> <tbody> <tr> <td>Positive</td> <td>528</td> <td>2675</td> <td>5701</td> </tr> <tr> <td>Neutral</td> <td>19</td> <td>66</td> <td>226</td> </tr> <tr> <td>Negative</td> <td>6</td> <td>19</td> <td>48</td> </tr> </tbody> </table>		1 month	6 months	12 months	Positive	528	2675	5701	Neutral	19	66	226	Negative	6	19	48	<p>Detailed Seller Ratings (since May 2007)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Criteria</th> <th>Average rating</th> <th>Number of ratings</th> </tr> </thead> <tbody> <tr> <td>Item as described</td> <td>★★★★★</td> <td>1815</td> </tr> <tr> <td>Communication</td> <td>★★★★★</td> <td>1795</td> </tr> <tr> <td>Shipping time</td> <td>★★★★★</td> <td>1807</td> </tr> <tr> <td>Shipping and handling charges</td> <td>★★★★★</td> <td>1806</td> </tr> </tbody> </table>	Criteria	Average rating	Number of ratings	Item as described	★★★★★	1815	Communication	★★★★★	1795	Shipping time	★★★★★	1807	Shipping and handling charges	★★★★★	1806
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CF DSR