

Appendix

Reciprocity through ratings:

An experimental study of bias in evaluations

Simon D. Halliday*

Jonathan Lafky†

A Theory Appendix

To characterize rater behavior we need only compare utilities when $r = G$ versus $r = \emptyset$ and when $r = B$ versus $r = \emptyset$. To see this, observe first that the requirement for a rater to give a positive rating rather than a negative rating is

$$\alpha(a) \cdot \pi + \beta \cdot q - c > \alpha(a) \cdot 0 + \beta \cdot E(k) - c$$

Or equivalently

$$\alpha(a) \cdot \pi + \beta \cdot (q - E(k)) > 0 \tag{1}$$

Compare this to the condition for giving a positive rating rather than no rating:

$$\alpha(a) \cdot \pi + \beta(q - E(k)) > 2c \tag{2}$$

The sum of the rater's concern for seller and concern for the buyer must simply be positive in the first case, but must larger than $2c$ in the second case. In other words, equation 2 implies equation 1. This means that, as the rater's utility (the sum of the α and β terms) falls, the condition to switch to $r = \emptyset$ will always bind before the condition to switch to $r = B$. Thus to understand when the rater will give $r = G$ we need only consider $r = G$ versus $r = \emptyset$.

A nearly identical argument shows that, as the sum of the α and β terms rises, the condition for the rater to switch from $r = B$ to $r = \emptyset$ will always bind before the condition for switching from $r = B$ to $r = G$.

*Smith College Department of Economics, Pierce Hall 107, 21 West St, Northampton, MA, 01062, shalliday@smith.edu, Phone: (413) 585-3529

†Corresponding Author. Carleton College Department of Economics, Northfield, MN 55057. jlafky@carleton.edu. Phone: (507) 222-4103

B Additional Regressions

TABLE A1: Amount transferred by seller, restricted by treatment.

	(1)	(2)	(3)	(4)
	Tobit Free	OLS Free	Tobit Costly	OLS Costly
Quality	0.130 (0.118)	0.117 (0.106)	0.220** (0.100)	0.206** (0.0886)
Female	-3.308*** (1.065)	-3.023*** (0.948)	0.438 (0.836)	0.233 (0.729)
Age	-0.198 (0.314)	-0.187 (0.284)	-0.0841 (0.245)	-0.0616 (0.209)
Constant		10.88* (5.447)		4.632 (4.339)
N	45	45	87	87
Adjusted R^2		0.160		0.0303

Standard errors in parentheses

Censoring at 0: 5 (Free) and 13 (Costly), Censoring at 16: $n = 1$ (Costly).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE A2: Probability that buyer follows rater recommendations.

	(1)	(2)	(3)	(4)
	OLS	Probit	OLS	Probit
Cost	-0.0457 (0.104)	-0.0442 (0.101)	-0.0549 (0.0600)	-0.0528 (0.0615)
Female	0.142 (0.0891)	0.141* (0.0848)	0.0258 (0.0610)	-0.00212 (0.0493)
Age	0.0177 (0.0136)	0.0205 (0.0186)	0.0316 (0.0204)	0.0280* (0.0161)
Received Any Rating ($r \neq \emptyset$)	-0.0343 (0.0987)	-0.0347 (0.0961)		
Positive Rating ($r = G r \neq \emptyset$)			0.861*** (0.0566)	0.444*** (0.0692)
Constant	0.101 (0.305)		-0.590 (0.427)	
N	132	132	74	74
Adjusted R^2	-0.000589		0.702	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE A3: Rating type estimated by ordered probit without interaction terms.

	(1)	(2)	(3)	(4)
	Coefficients	Do not Choose	No Rating	Choose
Cost	0.241 (0.248)	-0.0708 (0.0738)	-0.000892 (0.00713)	0.0717 (0.0721)
Quality	0.0419 (0.0261)	-0.0123* (0.00747)	-0.000155 (0.00130)	0.0125* (0.00759)
Transfer	0.139*** (0.0325)	-0.0410*** (0.00837)	-0.000516 (0.00429)	0.0415*** (0.00857)
Female	0.00507 (0.200)	-0.00149 (0.0588)	-0.0000188 (0.000712)	0.00151 (0.0595)
Age	0.00815 (0.0651)	-0.00240 (0.0192)	-0.0000302 (0.000348)	0.00243 (0.0194)
Cutoff 1	0.807 (1.441)			
Cutoff 2	2.131 (1.450)			
<i>N</i>	132	132	132	132

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE A4: Rating type estimated by ordered probit with interaction terms.

	(1) Coefficients	(2) Do not Choose	(3) No Rating	(4) Choose
Cost	1.047 (0.990)	-0.302 (0.272)	-0.00956 (0.0317)	0.311 (0.281)
Quality	0.0451 (0.0559)	-0.0130 (0.0158)	-0.000412 (0.00138)	0.0134 (0.0162)
Transfer	0.229** (0.0935)	-0.0660*** (0.0232)	-0.00209 (0.00683)	0.0681*** (0.0249)
Female	0.0293 (0.200)	-0.00845 (0.0577)	-0.000268 (0.00175)	0.00872 (0.0593)
Age	0.0215 (0.0644)	-0.00620 (0.0185)	-0.000197 (0.000874)	0.00640 (0.0191)
Quality×Cost	0.000296 (0.0596)	-0.0000852 (0.0172)	-0.00000270 (0.000546)	0.0000879 (0.0177)
Amount Received×Cost	-0.127 (0.0973)	0.0365 (0.0261)	0.00116 (0.00391)	-0.0376 (0.0275)
Cutoff 1	1.733 (1.884)			
Cutoff 2	3.062 (1.925)			
<i>N</i>	132	132	132	132

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$