Online Appendix for: "Bargaining with confirmed proposals: an experimental analysis of tacit collusion in Cournot and Bertrand duopolies"

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A Instructions

A.1 Instructions tratment *Bertrand Symmetric*

Welcome to the LEEN (Laboratoire d'Economie Expérimentale de Nice)!

You are going to take part in an experiment. In this experiment, you have the possibility to get money. You will get 5 euros of show-up fee, plus a payoff that will depend on your choices and on the choices of another subject during the experiment. This payoff is expressed in euros.

In this experiment there are two types of players: "PROPOSER" players and "RESPONDENT" players. At the beginning of the experiment, each of you will be randomly assigned to be either a PROPOSER or a RESPONDENT. Half of the players will be PROPOSERS, the other half will be RESPONDENTS. You will be informed of your role directly on your screen. You will be randomly paired with another participant also present in the room (a PROPOSER with a RESPONDENT) for a series of periods. During all the experiment and during all the periods, you will always be paired with the same participant. The roles, PROPOSER and RESPONDENT, will be reversed in

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each even period of the experiment.

The possible choices and payoffs for each period are as in the following matrix:

		Other player			
		A	B	C	D
You	A	(5 ; 5)	(10 ; 0)	(10 ; 0)	(10 ; 0)
	B	(0 ; 10)	(8 ; 8)	(16 ; 0)	(16 ; 0)
	C	(0 ; 10)	(0 ; 16)	(9 ; 9)	(18 ; 0)
	D	(0 ; 10)	(0 ; 16)	(0 ; 18)	(8 ; 8)

No matter your role, your choice is represented by a row on the left of this table, A, B, C or D, and the choice of your partner by a column on the top of this table, A, B, C or D. Given your choice and the choice of your partner, the first value in each box represents your payoff, while the second value represents the payoff of the participant you are associated with.

The task consists in making decisions during several periods. The number of periods is not fixed in advance.

At the beginning of the first period, the PROPOSER must announce to the RESPONDENT the choice he/she wishes to make. The PROPOSER has a maximum time of 80 seconds to announce his/her choice. The RESPONDENT must then respond by announcing the choice he/she wishes to make, as a response to the choice announced by the PROPOSER. The RESPONDENT has a maximum time of 80 seconds to announce his/her choice. At the end of the period, the PROPOSER must choose to either CONFIRM or WITHDRAW his/her proposal and the consequent counter-proposal of his/her RESPONDENT. The PROPOSER has a maximum time of 20 seconds for either confirming or withdrawing. If he/she accepts, the game ends with the two players earning the payoffs corresponding to the previously announced choices (the payoffs indicated in the matrix,

corresponding to their confirmed choices). If he/she withdraws, a new period, in which the PROPOSER and RECIPIENT roles are exchanged, begins.

The number of periods is not fixed in advance, since the game may continue until a PROPOSER accepts a proposal and the consequent counter-proposal of his/her RESPONDENT. However, for practical reasons, a limit of 90 minutes is imposed. In case of no agreement within the 90 minutes limit, the two subjects leave the experiment with a payoff of 0 euros each (plus the 5 euros of show-up fee).

Once the game is over, please remain seated and wait for an experimenter to escort you out of the room for payment.

Before starting the experiment, we ask you to fill in a short questionnaire.

Your decisions and answers will be anonymous and used only for academic research purposes (conference papers, scientific publications).

We kindly ask you to turn off your cell phone during the whole experiment. If you have any questions or if you encounter any technical problems, please do not hesitate to ask the experimenter for help.

A.2 Instructions treatment *Bertrand Asymmetric*

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The possible choices and payoffs for each period are as in the following matrix:

		Other player			
		A	B	C	D
You	A	(5 ; 5)	(10 ; 0)	(10 ; 0)	(10 ; 0)
	B	(0 ; 10)	(8 ; 8)	(16 ; 0)	(16 ; 0)
	C	(0 ; 10)	(0 ; 16)	(9 ; 9)	(18 ; 0)
	D	(0 ; 10)	(0 ; 16)	(0 ; 18)	(8 ; 8)

No matter your role, your choice is represented by a row on the left of this table, A, B, C or D, and the choice of your partner by a column on the top of this table, A, B, C or D. Given your

choice and the choice of your partner, the first value in each box represents your payoff, while the second value represents the payoff of the participant you are associated with.

The task consists in making decisions during several periods. The number of periods is not fixed in advance.

At the beginning of the first period, the PROPOSER must announce to the RESPONDENT the choice he/she wishes to make. The PROPOSER has a maximum time of 80 seconds to announce his/her choice. The RESPONDENT must then respond by announcing the choice he/she wishes to make, as a response to the choice announced by the PROPOSER. The RESPONDENT has a maximum time of 80 seconds to announce his/her choice. At the end of the period, the PROPOSER must choose to either CONFIRM or WITHDRAW his/her proposal and the consequent counter-proposal of his/her RESPONDENT. The PROPOSER has a maximum time of 20 seconds for either confirming or withdrawing. If he/she accepts, the game ends with the two players earning the payoffs corresponding to the previously announced choices (the payoffs indicated in the matrix, corresponding to their confirmed choices). If he/she withdraws, a new period, with the same roles as the previous one, begins.

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The possible choices and payoffs for each period are as in the following matrix:

		Other player			
		A	B	C	D
You	A	(5 ; 5)	(7.5 ; 6)	(10 ; 6)	(12.5; 5)
	B	(6 ; 7.5)	(8 ; 8)	(10 ; 7.5)	(12 ; 6)
	C	(6 ; 10)	(7.5 ; 10)	(9 ; 9)	(10.5 ; 7)
	D	(5 ; 12.5)	(6 ; 12)	(7 ; 10.5)	(8 ; 8)

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second value represents the payoff of the participant you are associated with.

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B Questionnaire

1. How old are you?
2. What is your gender?
   - Female
   - Male
3. What is your occupation?
   - Student
   - Employed
   - Unemployed
   - Retired
   - Other
4. If you are a student, what is your field of study?
   - Economics and Management
   - Social Sciences
   - Arts and Humanities
   - Engineering Sciences
   - Medical Studies
   - Other
5. What is your level of education?
   - Middle school
   - High school
   - Bac+2 (bachelor degree, 2 years after high school)
   - Bac+3 (bachelor degree, 3 years after high school)
   - Bac+5 (master degree, 5 years after high school)
   - Post-graduate degree (PhD or other)
6. How many economic experiments have you previously attended?

7. Are you a person who generally trust people? On a scale from 0 to 10, how much do you trust people in general (0 meaning "I do not trust people at all" and 10 meaning "I fully trust people")?

   0 1 2 3 4 5 6 7 8 9 10

8. Are you a person who generally likes to take risks? On a scale from 0 to 10, how much are you ready to take risks (0 meaning "I do not want to take any risk" and 10 meaning "I am fully ready to take risks")?

   0 1 2 3 4 5 6 7 8 9 10

9. A bat and a ball cost 1.10 euros in total. The bat costs 1.00 euro more than the ball. How much does the ball cost?

10. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

11. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?