Bargaining in the Shadow of Uncertainty

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Overview

This replication package includes

1. Data files
    a. data.2019.04.12.xlsx this data file contains the data from the main bargaining game from all the sessions and all the treatments
    b. risk.xlsx the data contains the data from the risk elicitation task from all the sessions and all the treatments
    c. chatdata_48and96.xlsx this data contains chats from the following treatments Majority 24 (all sessions), Unanimity 24 (all sessions), Majority 48 (all sessions), Unanimity96 (sessions 3 and 4) – all these treatments were conducted using the oTree software
    d. session1_070212.chatswithmembers.xlsx this is the file that contains chats from Unanimity 48 sessions 1 and 2 (the sessions run with the Multistage program)
    e. session1_070213.chatswithmembers.xlsx this is the file that contains chats from Unanimity 48 sessions 3 and 4 (the sessions run with the Multistage program)
    f. session1_070215.chatswithmembers.xlsx this is the file that contains chats from Unanimity 96 sessions 1 and 2 (the sessions run with the Multistage program)
    g. majorityChats.xlsx this is the file that shows how the two independent coders coded the chats in the majority treatments
    h. unanimityChats.xlsx this is the file that shows how the two independent coders coded the chats in the unanimity treatments

2. prepareBargaining.do this STATA do file takes the raw data described in 1a and 1b and prepares the bargaining and risk dta files, merges the two into the same dta file and produces the file called alldata.dta, which is the main file used in the analysis.

3. prepareChat.do this STATA do file takes the raw chat data (1c – 1f), incorporates the coders evaluation of the chat data (1g – 1h) and merges it with alldata.dta; the final file is called alldata_withchatcoded_ready.dta.

4. Replication.do file, which produces all the Tables and Figures presented in the paper as well as the statistical analysis of the data.

5. figures.xlsx is the Excel file containing the values used to create Figures 1 and 2 presented in the paper and these two figures. These values were generated by the Replication.do file.

The replication code should take about 2-3 minutes to run.

Data Availability and Provenance

Experiments were conducted at the University of California in San Diego in July – September 2018. Subjects were recruited from a database of undergraduate students of UCSD. All 4 sessions for Unanimity 48 treatment and the first two sessions for Unanimity 96 treatment were conducted using Multistage program. After that, the Multistage program collapsed due to expiring libraries containing functions that the program used and we moved to oTree software. The remaining sessions are conducted using oTree software. The presentation of the game and the interface in the two softwares (Multistage and oTree) was kept the same. All data for this study are included in the data files described above.

Statement about Rights

We certify that we have legitimate access to, permission to use, and permission to distribute the data used in this manuscript.

Details and Data Description

The data is contained in the files alldata.dta, alldata_withchatcoded_ready.dta, KappaMajority.dta, and KappaUnanimity.dta is available in the paper's Inter-university Consortium for Political and Social Research archive at http://doi.org/XXXX.

alldata.dta file contains choices made by participants in the bargaining game in all six treatments. Each row represents one subject in one bargaining stage of one bargaining game (synonym to round) in a particular session of a particular treatment. This file contains the following variables:

- sessioncode = uniquely identifies a session
- votingtreatment = majority or unanimity
- pietreatment = 24 (deterministic), 48 or 96
- piesize = size of budget for current bargaining stage
- round = goes from 1 to 12 (12 repetitions of the bargaining game)
- bargainground = the current stage of the bargaining game
- group = unique group identifier for a particular group playing the bargaining game
- memberid = unique identifier for a subject within a session
- membernumber = 1, 2, or 3 (identifies members of the same group)
- proposer = indicates the member number of the proposer in this stage
- ownshare = the share to the current player in the proposal
- share1 – share3 = shares of all members in a group (in the proposal)
- ownvote = vote for the current proposal

- vote1 – vote3 = votes of all members in a group
- delay = the indicator for proposer delaying without making a proposal
- terminatedearly = the indicator that takes value of one if the game was terminated early because of discounting draw
- id = unique identifier across all the data for a subject
- m24, m48, m96, u24, u48, u96 = indicators for each treatment
- totalyes = the number of yes votes in the group for the current proposal
- pass = takes value 0 when the proposal fails, 1 when the proposal passes, and missing if there was a delay
- treatment = name of the treatment
- unanimity = indicator variable for unanimity treatments
- session = 1, 2, 3, or 4
- uniquesession = unique identifier for a session within a treatment (numerical value)
- playerinvested25 = amount of points invested in the risky project for risk elicitation 1 task (prob of success is 50% and return of 2.5 times invested)
- playerinvested30 = amount of points invested in the risky project for risk elicitation 2 task (prob of success is 40% and return of 3 times invested)
- participantcode = unique non-numerical code for participants in oTree sessions (missing for Multistage sessions)

alldata_withchatcoded_ready.dta contains all the same variables as alldata.dta file and some additional variables:

- multiplier = takes value 2 for 48 treatments and 4 for 96 treatments
- valueq1 – valueq11 = takes values 0 or 1 depending on whether the first coder thought that a particular topic came up in the chat (missing if there was no chat)
- agreev1 – agreev11 = takes value of 1 if the coders agreed and 0 if the coders disagreed (missing if there was no chat)
- memberidmax = the maximal number of id
- memberid1 – memberid3 = id members of the three people in the same group
- groupbis = alternative way of naming the groups for Multistage sessions
- totaldelay = takes the value 1 if the proposer delayed or the proposal was rejected
- relevant_talk = takes the value of 1 if the chat contained relevant to the game conversations
- didnottalk = indicator for the group that have not engaged in chats
- *talk = indicator variables that take value 1 if the topic * came up in the chat, where * = discussion about big pie, equality, agreement to delay, threat to vote no if the proposal is unequal, threat to vote no if the proposer tries to pass small budget, risk of termination, equality in the

minimum winning coalition, unequal distribution within the minimum winning coalition

Computational Requirements

The analysis is entirely conducted in STATA 18. The computational resources required to run the software are trivial and the entire analysis should take only a few minutes.

Description of Programs

All of the analysis of the data reported in the paper, except for Figures 1 and 2, which were generated in Excel, were performed with STATA 18. The entire analysis is documented and organized chronologically by section of the paper in the file Replication.do.

Instructions to Replicators

To run the analysis, start with running prepareBargaining.do and prepareChats.do files. In prepareBargaining.do, put the appropriate path to the directory in which you are working in lines 1 and 206. In prepareChat.do file, put the appropriate path to the directory in which you are working in lines 1, 37, 47, 60, 174, 202, 216, 245, 257, 285 , 299, 303, 324, 511, 527, 530, 548, 551, 557, 580, 590, 613, 624, 651, 661, 686, 696, 723, 733, 759, 769, 782, 788, 790, 796, 804, 811, 821, 828, 838, 843, 846, 870.

Then run Replication.do file to generate all the statistical analysis and the data reported in Tables and Figures. In this file, change the path in line 8.

Run segments of the code in order to replicate results from the paper.

The code to produce the paper's figures are found on the following lines of Replication.do:

- Figure 1: lines 80 - 82 (the figure is generated in tab Fig1 in figures.xlsx)
- Figure 2: lines 110 - 117 (the figure is generated in tab Fig2 in figures.xlsx)
- Figure 3: lines 257 - 285
- Figures 4 - 12: screenshots/not empirical
- Figure 13: lines 560 - 584

The code to produce the paper's tables are found on the following lines of Replication.do:

- Table 1: lines 14 - 28
- Table 2: lines 184 - 228
- Table 3: lines 320 - 363
- Table 4: lines 371 - 400

- Table 5: lines 421 - 451
- Table 6: lines 460 - 495
- Table 7: lines 501 - 510
- Table 8: lines 523 - 554
- Table 9: lines 594 – 607
- Table 10: lines 614 - 667
- Table 11: lines 676 - 694
- Table 12: lines 701 - 719
- Table 13: lines 726 - 755

References

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