Regulation of Organ Transplantation and Procurement: A Market Design Lab Experiment

Replication Files: README

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First, we encourage researchers to use the software for the "Transplant Game" for replication and further research purposes. Please find the code here: https://www.tinyurl.com/ChanRothTransplantGame

Next, find below the data and STATA code to replicate the results in the paper.

The datasets are labeled as follows:

- Main experiment: "August17ChanRoth.dta"
- Replication experiment with alternative parameters: "December8ChanRoth.dta"
- Pilot data: "game_state_pilot_data.dta"

For privacy reasons and compliance with IRB requirements, we have dropped the Prolific IDs and exact time stamp for all the participants (each pair of players can be identified by a Room ID "room", these IDs are randomly generated when participants are randomly paired up in our experiment, see Transplant Game software above) in these data files.[1]

To replicate the tables in the paper, set the appropriate local directory where you saved the dta files for each of the following STATA do files, and then run the code below to generate the tex files to re-produce the tables:

- Table I: Summary Statistics and Balance Checks: "Chan_Roth_Table1"
- Table II: Impact on Jar Recovery Rates and Missed Opportunities for Beneficial Recoveries: "Chan_Roth_Table2"
- Table III: Impact on Recovered Jar Quality, Discard Rates, and Discards that could have Benefited Urn(s): "Chan_Roth_Table3"
- Table IV: Impact on Mixing ("Transplant") Rate, and Mixings that Gave an Urn Worse Odds for Blue: "Chan_Roth_Table4"

[1] This was achieved by STATA command "drop player1name player2name player1_lastseen player2_lastseen finish_code_player1 finish_code_player2". player1name are player2name are the Prolific IDs, player1_lastseen and player2_lastseen recorded the exact time stamp of game play, and finish_code_player1 and finish_code_player2 contains the Prolific ID and was used for payment purposes.

- Table V: Impact on Expected Bad Outcomes (Red Balls Drawn) Based on Actual Mixing Behavior: "Chan_Roth_Table5"
- Table VI: Summary Statistics and Balance Checks for Alternative Sample: "Chan_Roth_Table6"
- Table VII: Impact on Jar Recovery Rates and Missed Opportunities for Beneficial Recoveries for Alternative Sample: "Chan_Roth_Table7"
- Table VIII: Impact on Recovered Jar Quality, Discard Rates, and Discards that could have Benefited Urn(s) with Alternative Sample: "Chan_Roth_Table8"
- Table IX: Impact on Mixing ("Transplant") Rate, and Mixings that Gave an Urn Worse Odds for Blue from Alternative Sample: "Chan_Roth_Table9"
- Table X: Impact on Expected Bad Outcomes (Red Balls Drawn) Based on Actual Mixing Behavior from Alternative Sample: "Chan_Roth_Table10"
- Table A1: Impact on Bad Outcomes (Red Balls Drawn): "Chan_Roth_TableA1"
- Table A2: Impact on Bad Outcomes (Red Balls Drawn) for the "Healthiest" (Urns with ≥ 90% Blue Balls) and "Sickest" (Urns with ≤ 10% Blue Balls): "Chan_Roth_TableA2"
- Table A3: Impact on Bad Outcomes (Red Balls Drawn) for those NOT "Healthiest" (Urns with ≥ 90% Blue Balls) or "Sickest" (Urns with ≤ 10% Blue Balls): "Chan_Roth_TableA3"
- Table A4: Differences in Average Number of Blue Balls for Urns (Patients) and Jars (Kidneys) for Those Transplanted and Percentage Low Quality Jars Accepted: "Chan_Roth_TableA4"
- Table A5: Impact on Bad Outcomes (Red Balls Drawn) for Alternative Sample: "Chan_Roth_TableA5"
- Table A6: Impact on Bad Outcomes (Red Balls Drawn) for the "Healthiest" (Urns with ≥ 90% Blue Balls) and "Sickest" (Urns with ≤ 10% Blue Balls) with Alternative Sample: "Chan_Roth_TableA6"
- Table A7: Impact on Bad Outcomes (Red Balls Drawn) for those NOT "Healthiest" (Urns with ≥ 90% Blue Balls) or "Sickest" (Urns with ≤ 10% Blue Balls) with Alternative Sample: "Chan_Roth_TableA7"
- Table A8: Differences in Average Number of Blue Balls for Urns (Patients) and Jars (Kidneys) for Those Transplanted and Percentage Low Quality Jars Accepted with Alternative Sample: "Chan_Roth_TableA8"
- Table A9: Impact on Jar Recovery Rates and Missed Opportunities for Beneficial Recoveries: "Chan_Roth_TableA9"
- Table A10: Impact on Recovered Jar Quality, Discard Rates, and Discards that could have Benefited Urn(s): "Chan_Roth_TableA10"
- Table A11: Impact on Mixing ("Transplant") Rate, and Mixings that Gave an Urn Worse Odds for Blue: "Chan_Roth_TableA11"
- Table A12: Impact on Expected Bad Outcomes (Red Balls Drawn) Based on Actual Mixing Behavior: "Chan_Roth_TableA12"

(Please note a few places where manual adjustment might be required. STATA's esttab rounds fives down, for e.g., 0.0415 is rounded to 0.042, we corrected those. None of this rounding

affects the outcomes. Also, because the model numbers (1) (2) etc. are part of the regression output, it cannot be separated from the individual titles to fit the grouping titles. In the code, the model numbers are flipped to be on the bottom of the header, while in the paper they are placed at the top of the header for better aesthetics. Finally, while Tables 9-12 pool the data from 4 pilots, the code above generates a separate tex file table for each panel in the Tables so that the user can focus on just one individual pilot if desired, the user can also just stack them and obtain the exact Tables 9-12.)

Finally, the permutation test results reported in Section 4.3 and Section 4.4 were done using the STATA command “permute” with reps(50000) seed(123), and the Mann-Whitney U test reported in the footnotes in the same sections were done using the STATA command “ranksum”.