Replication Files for Artemov, Che, and He (JPE Micro, Forthcoming)

Description of the package

The package contains one file (README.pdf, this file) and four folders:

- "data": All data are simulated and will be saved in this folder.
- "figures": All figures in the paper will be created and save in this folder.
- "programs": It contains all the programs to create the tables and figures in the paper.
- "tables": All tables except Table 1 in the paper will be created and save in this folder.

Software Requirements

Matlab. The code was last run on R2022a.

Runtime Requirements

Approximate time needed to reproduce the analyses on a standard (2022) desktop machine: 30 minutes to 1 hour.

Description of programs/code

All programs are in the folder "programs". There are 13 files. The main code is main.m. It runs the following:

1. p0_paths.m: It sets up and add the paths to different folders.
2. p1_data_simulation.m: It simulates and describes the data. It runs the following two files:
    - p1_1_data_construct_mistakes.m
    - p1_2_data_description.m
    - Line 458 creates Figure E1 and saves it in the "figures" folder with the filename fig_E1_cutoffs.eps.

3. p2_summary.m: It summarizes the data and saves tab_2.csv in the "tables" folder for Table 2 in the paper. Line 212 saves the table.

4. p3_estimation.m: This program completes the estimation. It saves tab_E1.csv in the "tables" folder for Table E1 in the paper. Line 323 saves the table.

5. p4_rank_reversal.m: This file creates Figure 2 in the paper. Line 58 saves fig_2_rank_reversal.eps in the folder "figures".

6. p5_plot_est.m: This file plots the three panels in Figure 1 for the estimation results. Line 43 saves fig_1_1.eps, fig_1_2.eps, and fig_1_3.eps in the "figures" folder.

7. p6_counterfactuals.m: It runs the counterfactuals and saves the results.

    - Line 592 saves the three panels in Figure 3 in the "figures" folder and names them as fig_3_CF_cutoffs_1.eps, fig_3_CF_cutoffs_2.eps, and fig_3_CF_cutoffs_2.eps.

    - Line 661 saves panel A of Figure 4 in the "figures" folder with the filename fig_4_CF_assign_AA.eps.

    - Line 1040 save panel B of Figure 4 in the "figures" folder with the filename fig_4_CF_wel_AA.eps.

    - Line 694 saves panel A of Figure E2 in the "figures" folder with the filename fig_E2_CF_assign_nAA.eps.

    - Line 1097 saves panel B of Figure E2 in the "figures" folder with the filename fig_E2_CF_assign_nAA.eps.

    - Line 977 saves panel A of Table E2 in the "tables" folder with the filename tab_E2_CF_wel_AA.csv.

    - Line 978 saves panel B of Table E2 in the "tables" folder with the filename tab_E2_CF_wel_nAA.csv.

Various programs use the following three functions that are saved in the "programs" folder:

- func_DA.m: This is the deferred acceptance algorithm.

- func_LL.m: This is the log likelihood functions for the estimation.

- func_parfor_progress.m: It monitors the parallel computing progress in the estimation part, p3_estimation.m.

Instructions to Replicators

1. Download the package and store the files in one folder in the format that you download them in.

2. Change the current folder of Matlab to the one that contains main.m (in the package, it is “programs).

3. Run main.m. The code should produce some files and save them in the following folders.

    - “data”: 2 files

    - “figures”: 24 files (It is actually 12 figures, but each figure is saved in two formats, .jpg and .eps.)

    - “tables”: 4 files.

References

Artemov, Georgy, Yoen-Koo Che, and YingHua He. "Stable Matching with Mistaken Agents." *Journal of Political Economy Microeconomics* (Forthcoming). https://arxiv.org/pdf/2207.13939.pdf