Replication package for:

Does Cognitive Reflection Relate to Preferences and Socio-Economic Outcomes?

Frank M. Fossen, Levent Neyse, Carsten Schröder

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Overview

The replication package allows replication of the results reported in the paper (including the appendix). It consists of two parts. The program scripts and spreadsheets, along with mock data, are available for download from JPE Micro's Dataverse site at Harvard's Dataverse. The corresponding real data (SOEP) are available at the Reanalysis Archive of the SOEP.

Data access

The SOEP data are provided by the German Institute for Economic Research (DIW Berlin). The SOEP providers support and facilitate replication of research results. The data used in this analysis have been archived specifically for the purpose of replication of this paper using the "Reanalysis Archive of the SOEP" service of the SOEP providers. All researchers worldwide can access these data. Because the SOEP data are subject to data protection legislation, researchers must sign a contract with the SOEP providers first (free of charge). Data access is usually established within a few days.

You can find more information about the SOEP and data access here:

Research Data Center SOEP:

https://www.diw.de/en/diw_01.c.678568.en/research_data_center_soep.html

Reanalysis Archive of the SOEP:

https://www.diw.de/en/diw_01.c.604159.en/reanalysis_archive_of_the_soep.html

If you have questions, please contact the SOEPhotline (email: soepmail@diw.de, phone: +49 30 89789-292).

Mock data

The Data folder in JPE Micro's Dataverse contains mock data as placeholders. The mock data files have the original file names and variable names, but the variables contain random values. The mock data allow you to run the program files, and results will be produced, but of course these results are not meaningful in any way. For replication or any analysis, it is essential to download the real SOEP data (see above) and to replace all data files in the Data folder with the real data files. To prevent confusion, all the mock data files are labelled with "This is mock data with random values, NOT real SOEP data!". Open a data file in Stata and type "describe" to see the label.

Folders

The replication package contains the following three folders:

- Data: In JPE Micro's Dataverse, this folder contains the mock data files. Replace them with the real SOEP data files requested from the Reanalysis Archive of the SOEP for this paper. These files are: cognit.dta, h.dta, inno.dta, Inno20_Zeitmarken_ISACH.dta, p.dta, paus_2020.dta, pgen.dta, and ppfad.dta. The replication code also uses this folder to save one generated data file (SOEPIS2020prep.dta).
- Do-Files: Contains the program code (three Stata do-files: 00_master.do, 01_prepare_SOEPIS2020.do, and 02_estim_CRT.do).
- Results: The results will be saved here.
- Spreadsheets: Two Excel files containing formulas to produce Figures 1 and A3 and Table A6 (Effect_sizes.xlsx and PSP-rep_CRT_outcomes.xlsx).

Replication steps

To run the replication, follow these steps:

- Replace the mock data in the Data folder with the real SOEP data from the Reanalysis Archive of the SOEP.
- Adapt the file paths in 00_master.do according to your individual environment.
- Run 00_master.do in Stata.
    - You may need to install some ado files (mhtreg, rwolf, …).
    - We used Stata 18.0 MP 4-core to run the analysis.

Output

After running the analysis, you will find the generated tables and figures here:

- Main figures and tables:
    - Fig. 1: Effect_sizes.xlsx in the Spreadsheets folder, worksheet "Figures", p=0.005
    - Tab. 2: 02_estim_CRT.log in the Results folder ("Descriptive statistics (Tab. 2)")
    - Tab. 3: 02_estim_CRT.log in the Results folder ("Correlation matrix")
    - Tab. 4-6: mainResults.rtf in the Results folder; the p-values of the multiple hypothesis tests are contained in 02_estim_CRT.log ("For OLS")
- Appendix figures and tables:
    - Fig. A2: histogramCRT.pdf (or .gph) in the Results folder
    - Fig. A3: Effect_sizes.xlsx in the Spreadsheets folder, worksheet "Figures", p=0.05
    - Tab. A3: 02_estim_CRT.log in the Results folder ("for college students")
    - Tab. A5, columns "Instrumental variables": iv.rtf in the Results folder; the p-values of the multiple hypothesis tests are contained in 02_estim_CRT.log (at the bottom)
    - Tab. A6: PSP-rep_CRT_outcomes.xlsx in the Spreadsheets folder, worksheet "Table"

Additional runs

To replicate Tables A4 and A5 (gender heterogeneity) in the appendix, follow these steps:

- To create Tab. A4: In 02_estim_CRT.do, activate “drop if fastCRT==1” for the first set of columns or “drop if unmotivatedCRT==1” for the second set of columns. For the last set of columns, instead add “timeCRT” to the “global controlvars”. Then re-run 00_master.do. The results will be found in mainResults.rtf in the Results folder; the p-values of the multiple hypothesis tests in 02_estim_CRT.log (“For OLS”).
- To create Tab. A5 (columns by gender): In 02_estim_CRT.do, activate “drop if female==1” for the analysis for men or “…==0” for the analysis for women. Then re-run 00_master.do. The results will be found in mainResults.rtf in the Results folder; the p-values of the multiple hypothesis tests in 02_estim_CRT.log (“For OLS”).

Tables and figures in the paper that are not mentioned above do not include additional analysis results.