

Replication Guide for Deb, Kitamura, Quah, and Stoye:

“Revealed Price Preference: Theory and Empirical Analysis”

Overview

The code in this replication package reproduces all tables in Deb, Kitamura, Quah, and Stoye (2022). For full replication, the replicator should expect running time of about a week. For the slowest-to-compute table, we provide a stripped-down replication that runs in a few hours. A replicator with minimal knowledge of MATLAB can also accelerate replication by changing the number of bootstrap replications. (Of course, this will minimally affect p-values.)

Instructions to Replicators

To replicate the Progresa analysis (Tables 1 and 2): Set `replicate_progresa` as working directory in MATLAB. Type `replicate_Progresa_tables`.

To replicate the FES analysis (Tables 3 and 4): Set `replicate_FES` as working directory in MATLAB. Type `write_FES_tables`.

To replicate the analysis of Canadian data (Tables 5 and 6): Set `replicate_Canada` as working directory in MATLAB. Type `write_Canada_tables_full` (careful: extended runtime) or `write_Canada_tables_fast` (will run in about 4 hours and replicate results for the first block of years for British Columbia, including Table 6).

In all cases, the final output will be tables as they appear in the paper. All tables are also stored as csv files with filename `Table1.csv` etc.

Data Availability and Provenance Statements

We are secondary data users throughout. The FES data are from Kitamura and Stoye (2018a, 2018b), who in turn rely on Blundell, Browning, and Crawford (2008a, 2008b). The Progresa data are from Attanasio and Pastorino (2020a, 2020b). The Canadian data are from Norris and Pendakur (2013, 2015a, 2015b) and were directly provided to us by the authors. All of these data are public use and are provided as part of this replication package. Finally, we use CPI deflators sourced from FRED and the Office for National Statistics, respectively. We certify that we have legitimate access to and permission to use all data used in this manuscript.

Details on each Data Source

In the FES data, the files `data75` through `data99` contain the household level FES data. These data are identical with replication files from Blundell, Browning, and Crawford (2008b). The data are self-documenting but we also refer to the extensive documentation in the original source. The `FRED-RPI` file contains annual deflators. Nominal prices are stored in `pal1`.

For the Canadian data, the original data are in `dataset_poverty`. The file used as input for our code is `dataset_poverty_matrix`. The conversion can be reproduced by running the STATA file `exporter.do` in the same directory. The state-level inflation data are stored in `inflation.csv`.

The Progres data are stored in `progres_data.csv`.

Computational Requirements

Software Requirements

The code runs in MATLAB and was verified on the 2021a release. The only additional software needed is a CVX installation. We provide this installation: It runs automatically if the FES analysis is replicated; alternatively, it can be accessed by making `replicate_FES` the MATLAB working directory and typing `DKQS_11_cvx`.

Controlled Randomness

The random number seed is set at line 159 of `DKQS_00_Main` and line 36 of `Canada_51_Statistics`.

Memory and Runtime Requirements

Code was verified on standard office equipment (e.g., Dell XPS 15-7590, Intel7-9750H CPU @2.6GHz, 32 GB RAM). Run time is about a week. This can be accelerated by using `write_Canada_tables_fast`, which will be a partial replication. The Progres analysis should replicate in a few minutes.

References

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