The Macroeconomic Consequences of Early Childhood Development Policies[1]

Diego Daruich, University of Southern California

Replication Instructions for Journal of Political Economy

1. OVERVIEW

This file contains the instructions to reproduce the results of the paper, using Matlab as the software of analysis. The replicator should expect the code to run for approximately a week, as detailed below.

Required programs

We use Matlab and latex. The user must have the following software/packages:

Matlab

Matlab R2022b
Compecon library

Latex

A standard latex installation

2. QUANTITATIVE RESULTS

We ran this sequence of codes using New York University's High Performance Computing, with each code requiring at most 40GB – each specific requirement is seen in the bash files. Running in parallel, these codes take approximately two weeks to run.

All the programs and results are in \\replication\ quantitative_results\. Each version of the the model has its own directory with the appropriate set of codes and the directory "Output" is where we save the output for the paper (tables and figures). Directory "run_generic" contains the general codes used by most versions of the model. Those with some differences have their own version of "run_generic" within their directories.

Below we describe what programs you have to run. Please follow this order as the programs are concatenated. Due to this concatenation and the fact that codes need to be run in parallel, there is no master file. However, the file RunScript_1.txt and the other five highlighted codes below may be interpreted as master files.

Required Programs: Matlab R2022b and compecon library (included in shared files)

[1] The collection of data used in this study was partly supported by the National Institutes of Health under grant number R01 HD069609 and R01 AG040213, and the National Science Foundation under award numbers SES 1157698 and 1623684. In addition, this work was supported in part through the NYU IT High Performance Computing resources, services, and staff expertise.

Steps:

1. Copy folders to your own HPC and go to that folder (hereafter, we refer to this as the "Main Folder")

2. Run the set of lines specified in **RunScript.txt** to start computing the required results. This takes about two weeks to finish.

3. (Once step 2 finishes) Go to the "Main Folder" and run the following set of lines:

   cd Analysis
   sbatch ***run_Summarize_SS_HPC_all.bash***
   sbatch ***run_Summarize_transition_HPC_all.bash***
   sbatch ***run_CHSParameterSensitivitySS_HPC_Read.bash***
   sbatch ***run_ParameterSensitivitySS_HPC_Read.bash***

   This analyses all the results, which takes about one day to finish.

4. (Once step 3 finishes) Go to the "Main Folder" and run the following set of lines:

   cd Analysis
   sbatch ***run_Calculations.bash***

   This creates all the figures and tables used in the paper – in folder /Output.