The replication package includes the following files

|  |  |  |
| --- | --- | --- |
| File name | Sub-directory | Type |
| **Data files** | | |
| cpi\_detailed.dta |  | STATA data file |
| init\_cond.dta |  | STATA data file |
| min\_wage.dta |  | STATA data file |
| poverty\_line2.dta |  | STATA data file |
| price\_indices.dta |  | STATA data file |
| psid\_states.dta |  | STATA data file |
| table\_2\_3\_5\_annual.csv |  | CSV file |
| data4estimation.dta | output | STATA data file |
| psid\_cons.dta | output | STATA data file |
|  |  |  |
|  |  |  |
| **STATA programs (by order of appearance in the code)** | | |
| shell.do |  | STATA do file |
| psid\_interview.do |  | STATA do file |
| psid\_individual.do |  | STATA do file |
| psid\_consumption.do |  | STATA do file |
| psid\_sample.do |  | STATA do file |
| prepare\_bootstrap.do |  | STATA do file |
| residual\_measures.do |  | STATA do file |
| advanced\_information\_test.do |  | STATA do file |
| bootstrap.do |  | STATA do file |
| variance\_estimation.do |  | STATA do file |
| tax\_rate\_estimation\_snap.do |  | STATA do file |
| pi\_s\_estimation.do |  | STATA do file |
| frisch\_estimation.do |  | STATA do file |
| aggregate\_consumption.do |  | STATA do file |
| descriptive\_stats.do |  | STATA do file |
| tables\_7\_8\_9.do |  | STATA do file |
| pi\_s\_by\_age\_figure.do |  | STATA do file |
| calculate\_AT\_elasticities.do |  | STATA do file |
| marshallian\_figure.do |  | STATA do file |
| moment\_fit\_table.do |  | STATA do file |
| external\_fit.do |  | STATA do file |
| identification\_figures.do |  | STATA do file |
| identification\_figures\_sub.do |  | STATA do file |
| insurance\_extensive\_margin.do |  | STATA do file |
| T4C1.do, T4C11.do, T4C2.do, T4C3.do, T4C4.do, T4C41.do, T4C5.do, T6C2.do, T6C3.do, T6C4.do, T6C5.do, T6C6.do | paramfiles | STATA do file |
| gmm\_age\_fv4\_pi5\_ns\_nltax\_add | gmm\_ado | STATA ado file |
| gmm\_age\_fv4\_pi5\_ns\_nltax\_b0 | gmm\_ado | STATA ado file |
| gmm\_age\_fv4\_pi5\_sep\_nltax\_b0 | gmm\_ado | STATA ado file |
|  |  |  |
| **Matlab Program** | | |
| Hessian |  | MATLAB code |

* The file shell.do can be used to replicate the entire paper. It both defines the path to the program files and data, and calls the rest of the files in the correct order. It is extensively commented explaining what the other files are doing.
* Files psid\_interview.do and psid\_individual.do are used to read the PSID interview and individual data and construct the panel. psid\_consumption.do prepares household consumption and asset measures. psid\_sample.do and prepare\_bootstrap.do prepare the sample and variables for estimation. The final data set is called data4estimation.dta, and it is provided as part of the replication package. For most results there is no need to run these 5 do files again, because data4estimation.dta contains the data requires for estimation.

**Note 1:** The PSID files are not provided. Researchers interested in constructing the data from scratch can download the PSID files (at no cost) from the PSID website and run the do files from the point above on the PSID annual files.

**Note 2**: Some of the results are generated using extended samples that are not included in data4estimation.dta. These results include Columns 3-6 of Table 1 (descriptive statistics), Table 2 (Comparison of PSID data with NIPA) and Column 2 of Table 8. Researchers interested in replicating these results will use the data set psid\_cons.dta provided in the output subdirectory. They will need to run on this data set the psid\_sample.do followed by the prepare\_bootstrap.do files, which will generate the required intermediate data set.

* residual\_measures.do generates the residual measures for the estimation.
* advanced\_information\_test.do conducts the advanced information test.
* bootstrap.do is the file used to conduct the structural estimation. This file will call variance\_estimation.do (estimates variances), tax\_rate\_estimation\_snap.do (estimates the tax function), pi\_s\_estimation.do (projects and s), and frisch\_estimation.do (estimates the Frisch elasticities). Note that frisch\_estimation.do will call the correct ado file from the gmm\_ado directory. Running the configuration T4C11 will also generate Figure 1 in the paper.

**Note 3**: To replicate the entire paper the bootstrap.do file should be ran 12 times for 12 different specifications (covering all the specifications in Tables 4 and 6, plus two runs for Table 3). This is explained in detail in the comments at the header of bootstrap.do.

* aggregate\_consumption.do and descriptive\_stats.do generate Table 2 and Table 1 respectively. Note that both of these files require data not in data4estimation.dta (follow instructions in Note 2 to run these files).
* tables\_7\_8\_9.do generates Table 7, 8 and 9 from the paper. Column 1 of Table 8 requires data not in data4estimation.dta (follow instructions in Note 2 to run these files).
* pi\_s\_by\_age\_figure.do, marshallian\_figure.do, and identification\_figures.do generate Figures 3-7 in the paper, as well as the Figure in the Appendix. marshallian\_figure.do also provides the required numbers for the calculation of insurance decomposition for the sample of food stamps recipients.
* calculate\_AT\_elasticities.do calculates the after-tax Marshallian elasticities reported in Table 5.
* moment\_fit\_table.do and external\_fit.do generate the two fit figures (8 and 9) and the appendix fit table.
* insurance\_extensive\_margin.do reports the numbers required for the insurance accounting on the extensive margin.
* Hessian calculates the Hessian reports the Hessian and eigenvalues reported in Appendix 5.

**Note 4**: Other than Hessian (only used in Appendix 5), researchers only need STATA to replicate the paper. Note however that the particular options used in the GMM estimation are only available for STATA 13 or higher.

**Note 5**: The replication package does not include a code for generating Figure 2. This is because this figure is an illustration drawing not based on data.

All the program files contain enough explanatory notes so that replication should be easy, although replicating all bootstrap specifications in Tables 4 and 6 might take a few days (depends on computing power).

The files have been checked for bugs, but of course it is possible that we may have missed some (hopefully not!). Please contact us at r.blundell@ucl.ac.uk, pista@stanford.edu or itaysap@post.tau.ac.il if you have any questions or comments.