

Certification script

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1. Preamble

At the risk of repeating the obvious, to run the certification script, as it is very well known, the files from the folder `src` need to be placed into `C:\ado\plus\r`. Finally, executing `testall.do` will start the checks and simulations.

2. Folders and Files

- 📁 Bench
 - 📁 first
 - 📁 second
 - 📁 third
- `testall.do`

3. Folders' Description

3.1. 📁first

The file `test.ado` contains the certification script for the syntax of each of the options on the `randregret` command. It uses the data from folder `data`. It tests possible user-errors displaying the meaningful messages on the console. The test was already run, and the results stored into `first_test_log.smcl`.

📁 first

📁 data

- `first_test_log.smcl`
- `firsttest.do`
- `test.do`

3.2. 📁second

The file `test.do` contains simulations where the `randregret` command can recover the real parameters of the data generation process. The `pdf` archives contains plots with the resulting estimated parameters from the simulations. The log file with the console prints of the routine are stored into `second_test_log.smcl`.

📁 second

- `second_test_log.smcl`
- `secondtest.do`
- `test.do`
- `sim_classicRRM_graph.pdf`
- `sim_GRRM_graph.pdf`
- `sim_muRRM_graph.pdf`
- `sim_PRRM_graph.pdf`

3.3. 📁third

The file `test.do` contains simulations to check the robust and cluster corrections for the estimated variance-covariance matrices. The procedure was to simulate homoscedastic data and then apply the robust and cluster corrections showing that the resulting estimates are the same (tolerance $1e-4$) as the non-corrected estimation of the variance-covariance matrix when the data is large enough ($n = 2,250,000$). The console print of the simulations were stored into the file `third_test_log.smcl`. Finally, the `.txt` files have a compilation of the results from all the estimated models.

📁 third

- `third_test_log.smcl`
- `third.do`
- `test.do`
- `var_correction_classicRRM.txt`
- `var_correction_GRRM.txt`
- `var_correction_muRRM.txt`
- `var_correction_PRRM.txt`