

This is the description of the replication + supplementary material zip-file for the paper “**Linear Regression for Panel with Unknown Number of Factors as Interactive Fixed Effects**” by Hyungsik Roger Moon (USC) and Martin Weidner (UCL).

- The **Supplementary Appendix file** can be found in
 - “./Supplementary-Appendix/Moon_Weidner_Supplement.pdf”
- The **Matlab code to implement the LS-estimator** can be found in “./MC+APPLICATION/LS_factor.m” and “./MC+APPLICATION/LS_factor2.m”
 - for a description and documentation of the code see “LS_factor.m”
 - these matlab programs are used both for the Monte Carlo (MC) simulation and for the empirical application.
 - the second file “LS_factor2.m” is just a small extension of the first, which also allows for known factors and factor loadings to be accounted for in the estimation (which is used in the empirical application only)
- **Empirical Application:**
 - The data file from Kim and Oka (2014) is available in “/Empirical-Application/DivorceRate1956_1988.csv”, or from the website <http://qed.econ.queensu.ca/jae/2014-v29.2/kim-oka/>
 - To replicate **Table 1** and **Figure 1** in the main paper run “MC+APPLICATION/Empirical-Application/Estimate-R/Est_Factor_Number_lagged_Y.m” in matlab. A txt-file is created that contains the estimated number of factors in Table 1, and the figure appears separately.
 - To replicate **Table 2 and 3** in the main paper run “estimate_beta.m” and “estimate_beta_lagged_Y.m” in the directory “MC+APPLICATION/Empirical-Application/Estimate-Beta”. Those matlab programs produce csv-files with the results of the tables.
 - Some further comments are provided in the respective matlab files.
- **Matlab files for Monte Carlo simulation for the Static Model** are in “./MC+APPLICATION/MONTE-CARLO/MC-Static/mc_static.m”
“./MC+APPLICATION/MONTE-CARLO/MC-Static/create_statistics.m”
“./MC+APPLICATION/MONTE-CARLO/MC-Static/run_all.m”
 - to replicate **Table 4,5,6** in the main paper just run “run_all.m”, which creates csv-files that contain the MC statistics
 - further documentation is provided in the matlab files themselves
- **Matlab files for the Empirical Monte Carlo simulation** are in “./MC+APPLICATION/MONTE-CARLO/mc_empirical.m”
(a small required routine “trunc.m” is also in the same directory)
 - to replicate **Table 1 in the Supplementary Material** just run “mc_empirical.m”, which will create a csv file that contains the MC statistics
 - some further comments are provided in the matlab file.
- **Matlab files for Monte Carlo simulation for AR(1) model** can be found in “./MC+APPLICATION/MONTE-CARLO/MC-AR1/mc_ar1.m”
“./MC+APPLICATION/MONTE-CARLO/MC-AR1/create_statistics.m”
“./MC+APPLICATION/MONTE-CARLO/MC-AR1/run_all.m”
 - to replicate **Table 2,3,4 in the Supplementary Material** just run “run_all.m”, which creates csv-files that contain the MC statistics
 - further documentation is provided in the matlab files themselves