

Replication Package for Online Appendix: *Time-Varying Shock Transmission in Non-Gaussian Structural Vector Autoregressions*

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This replication package accompanies the Online Appendix of the article: Helmut Lütkepohl and Till Strohsal, *Time-Varying Shock Transmission in Non-Gaussian Structural Vector Autoregressions*. *The Econometrics Journal*.

Data Availability and Provenance Statements

Statement about Rights

The authors have full rights to use and distribute the simulation code and generated data.

Summary of Availability

This package does not rely on external data. All data are generated via simulation and fully reproducible using the provided code.

Description of Programs and Code

This package reproduces the simulation results reported in Tables S3–S6 of the Online Appendix. All programs are written in MATLAB and organized as separate scripts for each table.

- `MAIN_Simulations_Table_S3.m`: Size and power analysis for Wald tests, homoskedastic case, $K = 2$ variables.
- `MAIN_Simulations_Table_S4.m`: Size and power analysis for Wald tests, homoskedastic case, $K = 3$ variables.
- `MAIN_Simulations_Table_S5.m`: Size and power analysis for Wald tests, heteroskedastic case, $K = 2$ variables.

- `MAIN_Simulations_Table_S6.m`: Size and power analysis for Wald tests, heteroskedastic case, $K = 3$ variables.

Each script prints results (empirical rejection frequencies) directly to the MATLAB command window.

Computational Requirements

Software Requirements

- MATLAB: Code tested in MATLAB R2023b.
- Required MATLAB Toolboxes:
 - Statistics and Machine Learning Toolbox
 - Optimization Toolbox
- Operating System: Microsoft Windows 11 Enterprise LTSC, Version 24H2, Build 26100.6899

Memory and Runtime Requirements

- Machine: Intel Core i7 (12th Gen), 16 GB RAM, SSD
- Runtime: See below.

Instructions to Replicators

1. Open MATLAB (version R2023b).
2. Set the working directory to the folder containing this replication package.
3. Run one of the four driver scripts:
 - `MAIN_Simulations_Table_S3.m` (Runtime: Approx. 12 hours.)
 - `MAIN_Simulations_Table_S4.m` (Runtime: Approx. 56 hours.)
 - `MAIN_Simulations_Table_S5.m` (Runtime: Approx. 12 hours.)
 - `MAIN_Simulations_Table_S6.m` (Runtime: Approx. 56 hours.)
4. After each code block, the empirical rejection rates for 10%, 5%, and 1% levels will be printed in the command window.
5. Note that the exact numerical results in Tables S3–S6 may differ slightly across computing environments. Numerical optimization algorithms can converge to different local maxima of the likelihood function, which may result in the selection of different B -matrices of structural impact coefficients. These differences can translate into small discrepancies of the empirical rejection rates.