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VAR in R and MATLAB

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R package vars

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Author: Bernhard Pfaff

Version: 1.4-9

Date: 2011-11-27

Depends: R ($\geq 2.0.0$), MASS, strucchange, urca ($\geq 1.1-6$),
lmtest ($\geq 0.9-26$), sandwich ($\geq 2.2-4$)

Description: Estimation, lag selection, diagnostic testing, forecasting, causality analysis, forecast error variance decomposition and impulse response functions of VAR models and estimation of SVAR/SVEC models.

BVAR in R - MSBVAR package

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Models:

- Bayesian VAR (BVAR)
- Markov-Switching BVAR (MSBVAR)

Description: Estimation, forecasting, impulse responses and error decompositions for frequentist and Bayesian VAR and MSBVAR models.

Version: 0.6-0

Depends: R ($\geq 2.12.0$), KernSmooth, xtable, coda, bit, mvtnorm, lattice

Published: 2011-02-01

Author: Patrick T. Brandt

Paper: Brandt (2006) Advances in Bayesian time series modeling and the study of politics: theory testing, forecasting, and policy analysis.

BVAR in MATLAB

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Models: Bayesian Inference in

- VARs
- Time-varying parameter VARs (TVP-VARs)
- TVP factor augmented VARs (TVP-FAVARs)

MATLAB code:

http://personal.strath.ac.uk/gary.koop/bayes_matlab_code_by_koop_and_korobilis.html

Paper: Koop and Korobilis (2010) Bayesian multivariate time series methods for empirical macroeconomics.

Chris Sims' R code¹

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`rfvar3`

Estimates a reduced form VAR, allowing automatic implementation of "Minnesota prior" style dummy observations favoring persistence.

`matrixtint`

Scale factor for a matrix t distribution, like the posterior from a VAR.

`mgnldnsty`

Computes a VAR estimate and the integrated posterior, with a proper prior specified using dummy observations.

`impulsdtrf`

Impulse responses from a VAR, using the output of `rfvar3` or `mgnldnsty`.

`varprior`

Generates the dummy observations that implement the parts of the Minnesota prior not included in `rfvar3`.

`impulsd`

Impulse responses from a SVAR $A(L)$ operator. Generally using `impulsdtrf` with non-identity A_0 is more convenient.

¹<http://sims.princeton.edu/yftp/VARtools/>