Abstract

Automated Lag Order Selection and Forecasting in VAR modeling
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Estimation and forecasting of univariate time series by means of ARIMA models is a standard tool in nearly every statistical package. Similarly, automated model selection and forecasting for a great deal of time series within an ARIMA framework is straightforward implemented. Focussing on the modeling of multivariate time series, there are also a broad range of statistical software tools for estimating and forecasting multivariate vector autoregressive (VAR) processes (for a given set of underlying time series). Within this talk we present a bundle of R-functions which allow to automate the selection, estimation and forecasting process of VAR models for a large number of different sets of time series. The choice of the lag order can be based on information criteria (e.g. Akaike Criterion, Schwarz Criterion and Final Prediction Error) or on minimizing the forecast errors. Finally, we demonstrate our function by means of economic data.

Key Words: vector autoregressive models, lag order selection, automated lag order determination, automated forecasts.