

8. LATVIJAS MATEMĀTIKAS KONFERENCE

Valmiera, 9.–10. aprīlis, 2010

TĒZES

**8th LATVIAN MATHEMATICAL
CONFERENCE**

Valmiera, April 9–10, 2010

ABSTRACTS

**LATVIJAS MATEMĀTIKAS BIEDRĪBA
VIDZEMES AUGSTSKOLA
LATVIJAS UNIVERSITĀTE**

FORECASTS WITH SINGLE-EQUATION MARKOV-SWITCHING MODEL: AN APPLICATION TO THE GROSS DOMESTIC PRODUCT OF LATVIA

GINTERS BUŠS

Central Statistical Bureau of Latvia

Lāčplēša iela 1, Rīga LV-1301, Latvia

E-mail: ginters.buss@csb.gov.lv

The paper compares one-period ahead forecasting performance of linear vector autoregressive (VAR) models and single-equation Markov-switching (MS) models for two cases: when leading information is available and when it is not. The results show that single-equation MS models tend to perform slightly better than linear VAR models when no leading information is available. However, if reliable leading information is available, single-equation MS models tend to give somewhat less precise forecasts than linear VAR models.

REFERENCES

- [1] B. Bellone. Classical Estimation of Multivariate Markov-Switching Models using MSVARlib. *Econometrics* 0508017, EconWPA, 2005.
- [2] G. Buss. Comparing Forecasts of Latvia's GDP Using Simple Seasonal ARIMA Models and Direct Versus Indirect Approach. MPRA Paper 16832, University Library of Munich, Germany, 2009.
- [3] E. Dubois and E. Michaux. Grocer 1.41: an econometric toolbox for Scilab. Available at <http://dubois.ensae.net/grocer.html>, 2010.
- [4] J. D. Hamilton. A New Approach to the Economic Analysis of Nonstationary Time Series and the Business Cycle. *Econometrica*, **57**(2): 357-384, 1989.
- [5] J. D. Hamilton. *Time Series Analysis*. Princeton University Press, Ch. 22, 677-703, 1994.
- [6] H. M. Krolzig. Econometric Modelling of Markov-Switching Vector Autoregressions using MSVAR for Ox. Working paper, 1998.
- [7] H. M. Krolzig. Predicting Markov-Switching Vector Autoregressive Processes. Working paper, 2000.
- [8] H. M. Krolzig. Constructing Turning Point Chronologies with Markov-Switching Vector Autoregressive Models: the Euro-Zone Business Cycle. Working paper, 2003.