Matthieu Droumaguet

European University Institute — Department of Economics
Via della Piazzuola 43, Florence 50133, Italy
+49 179 1865078, matthieu.droumaguet@eui.eu

Born: July 8, 1977 — Lannion, France
Citizenship: French

Education

exp. 2012	Ph.D. candidate in Economics (Supervisors: Massimiliano Marcellino and Helmut Lütkepohl), European University Institute — Florence, Italy
2008	M.A. in Economics, European University Institute — Florence, Italy
2007	M.Sc. in Economics and Management Science, Humboldt-Universität zu Berlin — Berlin, Germany
2001	M.Eng. in Computer Sciences, Université de Technologie de Compiègne — Compiègne, France
1998	B.Eng. in Applied Physics, Institut Universitaire de Technologie de Lannion — Lannion, France

Research Interests

Non-linear econometrics, multivariate time series analysis, Bayesian inference and testing, forecasting, empirical finance

Teaching Interests

Econometrics, time series analysis

Research Papers

Job market paper: Bayesian testing of Granger causality in Markov-switching VARs (joint work with Tomasz Woźniak)
Characterization of estimates of Markov-switching vector autoregressive models through Monte Carlo simulations
Structural changes in oil markets: A Markov-switching vector autoregressive approach

Ongoing Research

Bayesian inference on structural vector autoregressions with Markov-switches and mixture distributions (joint work with Tomasz Woźniak)
Density forecasts in Markov Switching models for business cycle analysis (joint work with Karol Ciszek and Tomasz Woźniak)

Work Experience

2006–2007 Student assistant. Institute of Economic Policy I (chair of Harald Uhlig), Humboldt-Universität zu Berlin — Berlin, Germany
2002–2005 Application Engineer. PAREXEL International — Berlin, Germany
2001–2002 Consultant. Altran-Edifis — Paris, France

Grants & Awards

2010–2011 Doctoral studies fellowship — Ministère de l'Enseignement supérieur et de la Recherche, France
2007–2009 Lavoisier fellowship — Ministère des Affaires Étrangères, France
2001 Conseil Général de l'Oise fellowship — France
2000 Leonardo Da Vinci fellowship — European Commission

Skills

Languages: French (native), English (fluent), German (fluent), Italian (intermediate), Japanese (beginner)

Computer Skills: Statistics and Econometrics (R, Gauss , STATA), mathematical packages (Matlab, Mathematica), economic databases (DataStream, EcoWin), programming (C, C++, Java, LISP, PROLOG), databases (Oracle, My SQL), web (HTML, Javascript, JSP, ASP/.NET Platforms)

References

Professor Massimiliano Marcellino (Supervisor). European University Institute, Department of Economics, +39 055 4685956, massimiliano.marcellino@eui.eu

Professor Helmut Lütkepohl (2^{nd} Advisor). European University Institute, Department of Economics, +39 055 4685971, helmut.luetkepohl@eui.eu

Job market paper abstract

Bayesian testing of Granger causality in Markov-switching VARs (joint work with Tomasz Woźniak)

Recent economic developments have shown the importance of spillover and contagion effects in financial markets as well as in macroeconomic reality. Such effects are not limited to relations between the levels of variables but also impact on the volatility and the distributions. We propose a method of testing restrictions for Granger noncausality on all these properties. The conditions for Markov-switching Vector Autoregressive models were derived by Warne (2000).[1] Due to nonlinearity of the restrictions classical tests have limited use. We therefore, choose Bayesian approach to testing. The inference consists of a novel Gibbs sampling algorithm for estimation of the restricted models, and of standard methods of computing the Posterior Odds Ratio. The analysis may be applied to financial and macroeconomic time series with complicated properties such as changes of parameter values with time and heteroskedasticity.

Last updated: October 28, 2011

[1] Warne, A. (2000). Causality and Regime Inference in a Markov Switching VAR.