Topics in estimation of DSGE models

Professor Fabio Canova (Pierre Werner Chair in Monetary Union at the European University Institute, Italy)

University of Glasgow

6-8 April, 2016

We are pleased to announce a PhD training course on **"Topics in estimation of DSGE models",** by Professor Fabio Canova (Pierre Werner Chair in Monetary Union at the European University Institute, Italy) at the **University of Glasgow, on 6-8 April, 2016**.

The course will take place at the **Adam Smith Business School, University of Glasgow in Lecture Theatre room 206, Level 2, Main Building.**

The course presents a discussion of topics in the estimation of Dynamic Stochastic General Equilibrium models (DSGE) models, which have become regular tools for policy analysis in central banks and other policy institutions. The course would also provide tools on how to interpret business-cycle fluctuations and to make and evaluate forecasts.

As also demonstrated by his eclectic portfolio of publications, Prof. Canova is an internationally renowned expert in Macroeconometrics and its applications to a variety of fields (including Finance and Development). Please find attached a short CV and an outline for the course.

The course is open to PhD students and academic staff from Scottish universities.

If you would like to register for this free workshop or require further details then please email Christine Haley at: **business-school-research@gla.ac.uk** by **21st March**. Please note that places are limited.

There are limited travel grants for PhD students on the basis of first booked first offered. If you wish to be considered for funding, then please indicate this when registering. SIRE funding is only available to Economics PhD students affiliated to a SIRE university.

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Topics in estimation of DSGE models
University of Glasgow, April 2016

Fabio Canova
BI Norwegian Business School and CEPR

Outline

The course presents a discussions of topics in the estimation modern general equilibrium macroeconometric models.

The lectures of the course are based on my book: Methods for Applied Macroeconomic Research, Princeton University, Press, 2007 and on articles which are described in the following bibliography.

Program

Day 1. Maximum likelihood estimation of DSGE models and numerical issues (3 hours).
Day 2. Bayesian estimation of DSGE models. Identification issues. (3 hours)
Day 3: DSGE-VARs; Data Rich DSGEs and eliciting priors; Choosing the variables to estimate DSGE models. Dealing with trends; Evaluation and forecasting with DSGE models. Time varying DSGE models: solutions and estimation issues. Solving and estimating DSGE models with structural breaks or occasionally binding constraints (4 hours)

Reading list

Adolfson, M, Laseen, S., Linde, J. and Villani, M., 2008. Evaluating an Estimated new Keynesian small open economy model, Journal of Economic Dynamics and Control, 32, 2690-2721.

Adolfson, M, Linde, J., 2008. Parameter Identification in an Estimated New Keynesian Open Economy Model, Federal Reserve Board, manuscript.

Canova, F. and Sala, L., 2009. Back to square one: Identification issues in DSGE models, Journal of Monetary Economics, 56(4), 431-449.

Del Negro, M, Schorfheide, F., Smets, F. and Wouters, R., 2006. On the fit of New-keynesian models, Journal of Business and Economic Statistics, 25, 143-162.

Iskrev, N., 2010. Local identification in DSGE models, Journal of Monetary Economics, 57, 189-202.

Canova, F. and Paustian, M., 2011. Business cycle measurement with some theory, Journal of Monetary Economics, 48, 365-381.

Chari, V., Kehoe, P. and McGratten, E., 2009. New Keynesian models: not yet useful for policy analysis, American Economic Journal: Macroeconomics, 1, 242-266.

Chari, V., Kehoe, P. and McGratten, E., 2007. Business Cycle Accounting, Econometrica, 75, 781-836.

Canova, F., 2014. Bridging DSGE models and the data, Journal of Monetary Economics, 67,1-14.

Canova, F., and Ferroni, F., 2011. Multiple filtering devices for the estimation of DSGE models, Quantitative Economics, 2, 73-98.

Canova, F., Ferroni, F., and C. Matthes 2014. Choosing the variables to estimate singular DSGE models, Journal of Applied Econometrics, 29, 1099-1117.

Canova, F., Ferroni, F., and C. Matthes, 2015, Approximating time varying structures with time invariant models, manuscript.

Komunjer, I. and Ng, S., 2011. Dynamic Identification of DSGE models, Econometrica, 79, 1995-2032.

Koop, G. , H. Pesaran, R. Smith ,2013. On the Bayesian identification of DSGE Models. Journal of Business and Economic Statistics, 31, 300-314.

Mueller, U., 2012. Measuring Prior sensitivity and prior informativeness in large Bayesian models, Journal of Monetary Economics, 56,581-597.

Qu, Z. and Tkachenko, D., 2012. Identification and frequency domain maximum likelihood estimation of linearized dynamics stochastic general equilibrium models, Quantitative Economics, 3, 95-112.

Del Negro M. and Schorfheide, F., 2008. Forming priors for DSGE models (and how it affects the assessment of nominal rigidities), Journal of Monetary Economics, 55, 1191-1208.

Boivin, J. and Giannoni, M., 2006. DSGE estimation in data rich environments, University of Montreal working paper.

Del Negro, M. and F. Schorfheide, 2004. " Priors from General Equilibrium Models for VARs", International Economic Review, 45, 643-673.

Guerrieri, L. and Iacoviello, M. 2015. Occbin a toolkit for solving dynamic models with occasional binding constraints easily. Journal of Monetary Economics, 70, 22-38

Kulish, M. and Pagan, A. 2014. Estimation and solution of models with structural breaks, manuscript.

Lombardi, M. and Nicoletti, G. 2011. Bayesian prior elicitation in DSGE models: micro vs macro priors, ECB working paper 1289.

Galvao, A., Giraitis, L., Kapetanios, G. and Petrova, K.: 2015, Local Bayesian estimation and forecasting with a TVP model, manuscript.

Maliar, L. Maliar, S. 2014, Numerical Methods for Large Scale Dynamic Economic Models in: Schmedders, K. and K. Judd (Eds.), Handbook of Computational Economics, Volume 3, Chapter 7, 325-477, Amsterdam: Elsevier Science.