Statistics and Econometrics, Block III
Winter 2013
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Outline

The course provides an integrated approach to solve, calibrate and estimate dynamic stochastic general equilibrium models and to compare them with vector autoregressions.

The course is self-contained but requires some knowledge of basic macroeconomic models, of time series methods, and programming skills. Two two-hour refresher classes on the latter two topics will be given by the TA prior to the start of the course. To be able to do well it is necessary that the students: 1) to acquire programming skills (with Matlab and Dynare), 2) invest time and effort, 3) read the complementary material assigned in class.

Grade will be based on 3 homeworks (40 percent) plus an in-class final exam. Homework are supposed to be done in groups of max 3 people.

The main reference for the course is: Canova, Fabio (2007), Methods for Applied Macroeconomic Research, Princeton University Press (C-2007). Further material can be found in Hamilton, James (1994) Time Series Analysis, Princeton University Press (H-1994). An additional textbook which can help is: De Jong, D. and Dave, C. (2011) Structural Macroeconometrics, Princeton University Press, second edition.

Notes and sample programs will be posted at my homepage www.eui.eu/personal/Canova.

Program

Introductory classes (held by the TA)
1. Review of time series methods: Hamilton (1994), chapters 2 and 3.
2. Review of Matlab programming language: Canova, F. and P. Winistorfer (2008), Introduction to Matlab programming.

Classes 1-2: Structural VARs (C-2007, ch.4, H-1994, ch 10-11).
Classes 3-4: Formulating and solving dynamics stochastic general equilibrium models. (C-2007, ch.2)
Classes 5-6: Calibrating and evaluating DSGE models. (C-2007, ch. 7)
Classes 7-8 Filtering and detrending. (C-2007, ch.3)
Classes 9-10: Estimating dynamic equations: Generalized Method of Moments and simulation estimators.(C-2007, ch. 5)

Complementary References

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