Dynamic Stochastic General Equlibibrium Models
Overview

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Topics of the course

1. **Introduction**
   1. New Keynesian Theory and its main counterparts
   2. Dynamic Programming

2. **Main theoretical features of the Smets-Wouters model**
   1. Households, Firms, Central Bank, Government
   2. Log-Linearization
   3. Structural and reduced-form

3. **The Econometrics of DSGE models**
   1. General model representation(s)
   2. Solution methods: linear vs. nonlinear approximation
   3. Identification of DSGE Models
   4. Calibration and Impulse-responses
   5. Classical estimation methods: GMM and Maximum Likelihood
   6. Bayesian estimation methods and model evaluation

4. **Further topics (if we have time):**
   1. Nonlinear estimation methods: Extended/Quadratic Kalman Filter, Particle Filter
   2. Regime switching models

About the Course

- Timetable:
    - Begin of the course: 07.04.2014
    - Mondays 16.00-18:00, CAWM 3
    - Fridays 10.00-12.00, CAWM 3
- Note: There is no distinct separation between lectures and classes
- Parts 1 and 2 will be taught by Andrea Beccarini
- Parts 3 and 4 will be taught by Willi Mutschler, please bring your own laptop, since we will heavily use Matlab and Dynare (www.dynare.org)
- Students who wish to get credit for the course are asked to write a thesis (15-20 pages) covering both a summary as well as an extension or application of one of the topics covered in the course.

Bibliography

Recommended Readings

- An and Schorfheide (2007). "Bayesian Analysis of DSGE Models".
- Canova (2007). Methods for Applied Macroeconomic Research.
- DeJong and Dave (2011). Structural Macroeconometrics.
- Smets and Wouters (2002, 2004). "An Estimated Stochastic Dynamic General Equilibrium Model of the Euro Area"

Further references will be given during the course.