Dynamic Stochastic General Equilibrium 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.
Recommended Readings

- An and Schorfheide (2007). "Bayesian Analysis of DSGE Models".

Further references will be given during the course.