Syllabus for FDPE Macroeconomic Theory: Part II, spring 2010

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Overview

The second part of the FDPE macroeconomic theory course is divided into *two sections*: The first section introduces real business cycle models (RBC). The second section builds on the real business cycle models and introduces nominal side – money – to those models.

The first section introduces students to business cycle facts and real business cycle theory. It also illustrates the main theoretical concepts and methods for solving and calibrating dynamic general equilibrium models. Further topics include the analysis of financial frictions, asset pricing, and open economy considerations. The main text book used in this section is George McCandless (2008): "The ABCs of RBCs. An Introduction to Dynamic Macroeconomic Models." Harvard University Press.

The second section follows the chapters 1–5, 7 of Jordi Galí's excellent book ``Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework"[1]. It shows why the monetary policy is neutral in classical, RBC-type macro models and explains a special case where it is not. The classical model is augmented with imperfect competition and price rigidities leading to the canonical new Keynesian model. Next, various monetary policy rules are studied in this framework. Discretion and commitment in monetary policy making is introduced. We also give a glance at open economy dimension of monetary policy.

Outline

(This is subject to revision!)

Section 1 (Haavio)

Business cycle fluctuations: some empirical regularities

Peter Birch Sörensen and Hans-Jörgen Whitta-Jacobsen (2005): *Introducing Advanced Macroeconomics: Growth and Business Cycles. Chapter 14: The economy in the short run: some facts about business cycles.* McGraw-Hill

King, R. and S. Rebelo (1999), "Resuscitating Real Business Cycles." In J. Taylor and M. Woodford (eds.), *Handbook of Macroeconomics*, Chapter 14, Volume 1B. Amsterdam; New York and Oxford: Elsevier Science, North-Holland, 927-1007.

[1] Book details: http://press.princeton.edu/titles/8654.html

Basic steps to analyse dynamic stochastic general equilibrium macro-models. Application of these techniques to simple real business cycle models

McCandless, Chapters 1, 3-7 (main emphasis on Chapters 5 and 6)

Harald Uhlig's "A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily": Available at http://www2.wiwi.hu-berlin.de/institute/wpol/html/toolkit.htm

Hansen, G. D. (1985), "Indivisible Labor and the Business Cycle." *Journal of Monetary Economics* Vol. 16, 309-327.

Extensions to the basic real business cycle model: investment adjustment costs, variable capacity utilisation, habit persistence in consumption. Asset pricing and the equity premium puzzle.

King, R. and S. Rebelo (1999), "Resuscitating Real Business Cycles." In J. Taylor and M. Woodford (eds.), *Handbook of Macroeconomics*, Chapter 14, Volume 1B. Amsterdam; New York and Oxford: Elsevier Science, North-Holland, 927-1007.

Constantinides, G. M. (1990), "Habit Formation: A Resolution of the Equity Premium Puzzle." *Journal of Political Economy* 98, 519-543.
Jermann, U. (1998), "Asset pricing in production economies." *Journal of Monetary Economics* Vol 41, 257-275.

Financial frictions

Bernanke , B. and Gertler (1989), "Agency costs, net worth and business fluctuations". *American Economic Review* Vol 79, 14-31.

Carlstrom, C. and Fuerst, T. (1997), "Agency costs, net worth and business fluctuations: A computable general equilibrium analysis." *American Economic Review* Vol 87, 893-910.

Open economy models

McCandless, Chapter 13 (excluding section 13.4)

Schmitt-Grohe, Stephanie and Martín Uribe (2003), "Closing Small Open Economy Models." *Journal of International Economics* (61), 163-185.

Section 2 (Ripatti)

Introduction: RBC revolution, empirical regularities, Galí ch. 1

Classical model: Introducing money into simplified RBC model, optimal monetary policy

Galí ch. 2;
ch 2 in Walsh (2003) Monetary Theory and Policy, 2nd Edition

The basic new Keynesian model: Imperfect competition, price rigidities

Galí ch. 3,

Richard Clarida & Jordi Gali & Mark Gertler, 1999. "The Science of Monetary Policy: A New Keynesian Perspective," American Economic Association, vol. 37(4), pages 1661-1707,

Monetary policy rules in the new Keynesian model
Monetary policy rules, characterising optimal rule, Galí ch. 4

Monetary policy trade-offs: discretion vs. commitment: Trade-off between stabilisation (of real economy) and inflation, discretion vs. commitment
Galí ch. 5,
Kydland, Finn and Edward Prescott (1977) "Rules Rather than Discretion: The Inconsistency of Optimal Plans", Journal of Political Economy, vol. 85, no. 3, pp. 473–91,
Walsh book (see above) ch. 8.

Monetary policy in an open-economy setting: Role of exchange rates
Galí ch. 7
Jordi Galí & Tommaso Monacelli, 2005. "Monetary Policy and Exchange Rate Volatility in a Small Open Economy," Review of Economic Studies, Blackwell Publishing, vol. 72(3), pages 707-734, 07.

Computations and exercises

Modern quantitative macroeconomics relies on computation since analytical solutions may be provided rarely. The assignments contain both analytical and computational exercises. We recommend using Dynare that is a Matlab library to solve standard dynamic models using perturbation methods. Octave is an opensource Matlab 'clone' and provides useful alternative if you do not have Matlab. Follow the Dynare (`http://www.dynare.org`) instructions (`http://www.dynare.org/DynareWiki/DynareOctave`) to install Dynare with Octave. We have tested both Windows and Ubuntu versions of Octave/Dynare and both of them do the job; those using Ubuntu may enjoy better user interface. Familiarise either of the programs and the very basics of Dynare well in advance (by, eg., running and studying example codes).