MGT-632

Recursive Methods in Macroeconomics

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Cursus	Sem.	Type
Management of technology		Opt.

Language of teaching	English
Credits	4
Session	
Exam	Multiple
Workload	120h
Hours	**42**
Lecture	28
Exercises	14
Number of positions	

Frequency

Every 2 years

Summary

This is a PhD course on recursive methods used in modern macroeconomics. Recursive representations of macroeconomic models are useful because they are parsimonious and allow the computer to be used to solve for the equilibrium and the dynamics of the model.

Content

The
course will focus on six model economies and you will learn how to write these models in recursive form, characterize the equilibrium and compute it. The course is structured in six lectures (morning), each followed by an exercise sessions (afternoon) where you will learn numerical methods to solve for the equilibrium of the model presented in the lecture. We will use Matlab as our main programming language.
The course has no prerequisites and most concepts will be introduced during the course. Nevertheless, prior knowledge of economics will be useful.

Learning Prerequisites

Important concepts to start the course

Lectures will take place on Wednesday, 9:15 to 12:00 in ODY -10019.1; exercises will take place after lectures, 13:15 to 16:00 in the same room. Lunch will be provided between lecture and exercise session. Students will have to bring their own laptop (with a recent version of Matlab including the symbolic toolbox) to exercise sessions. Exercise time will focus on working on the problem sets, doing exercises and going over some class material. Teaching assistants will not solve problem sets for students but help them.
This is a 4-credit course over 6 weeks, which is equivalent to 9.5 hours of work per week (including class and exercise time). You should not expect to complete your assignment during exercise time.

Assessment methods

Problem sets 100%
Problem sets will be given out after the lecture on Wednesday and need to be returned to the instructors at the beginning of class the following Wednesday. The solution to the problem set will be posted on the class web page after class. Late problem sets are not accepted. Students are expected to work independently on their problem sets, unless otherwise stated. Copied problem sets will receive a score of zero. Every student should turn in her/his problem set.

Resources

Bibliography

The course will rely on journal articles and lectures notes. You can find a list of relevant reading material below. Lectures, problem sets, solutions to problem sets and additional material will all be posted on the course web page.

Heathcote, Jonathan and Fabrizio Perri, "Financial Autarky and International Business Cycles", Journal of Monetary Economics, 2002. Heathcote, Jonathan and Fabrizio Perri, "Assessing International Efficiency", Handbook of International Economics, 2013.
Stockman, Alan C. and Linda L. Tesar, “Tastes and Technology in a Two-Country Model of the Business Cycle: Explaining International Co-Movements”, American Economic Review, 1995.
Mark Gertler and Nobuhiro Kiyotaki, “Financial intermediation and credit policy in business cycle analysis”, Handbook of Monetary Economics, 2010.
Galo Nuño and Carlos Thomas, “Bank leverage cycles”, American Economic Journal: Macroeconomics, 9(2):32–72, 2017.
Tobias Adrian and Hyun Shin, “Procyclical leverage and value-at-risk”, Review of Financial Studies, 27(2):373–403, 2014.
Ignazio Angeloni and Ester Faia. “Capital regulation and monetary policy with fragile banks”, Journal of Monetary Economics, 60(3):311–324, 2013.
Gali, Jordi, “Monetary Policy, Inflation and the Business Cycle: An Introduction to the New Keynesian Framework”, 2nd ed, Princeton University Press (2015)
Erceg, Christopher J., Dale W. Henderson, and Andrew T. Levin, “Optimal Monetary Policy with Staggered Wage and Price Contracts”, Journal of Monetary Economics, 2000.
House, Christopher L., Christian Proebsting, and Linda L. Tesar, “Austerity in the Aftermath of the Great Recession”, NBER Working Paper, 2017.
Gali, Jordi, “Monetary Policy, Inflation and the Business Cycle: An Introduction to the New Keynesian Framework”, 2nd ed, Princeton University Press (2015)
Barsky, Robert, Christofer House, and Miles Kimball, “Sticky-Price Models and Durable Goods," American Economic Review, 2007, 97 (3), 984-98.
Erceg, Christopher and Andrew Levin, “Optimal Monetary Policy with Durable Consumption Goods," Journal of Monetary Economics, 2006, 53 (7), 1341-59.
Monacelli, Tommaso, “New Keynesian Models, Durable Goods, and Collateral Constraints," Journal of Monetary Economics, 2009, 56 (2), 242-54.
Iacoviello, Matteo and Stefano Neri, “Housing Market Spillovers: Evidence from an Estimated DSGE Model," American Economic Journal: Macroeconomics, 2010, 2 (2), 125-64.
Forlati, Chiara and Luisa Lambertini, “Risky Mortgages in a DSGE Model,” International Journal of Central Banking, Vol. 7, No. 1, March 2011, 285-335
Guerrieri, L. and M. Iacoviello, 2015, “Occbin: A Toolkit for Solving Dynamic Models with Occasionally Binding Constraints Easily”, Journal of Monetary Economics 70, 22-38.
Holden, Tom D., 2016, Computation of solutions to Dynamic Models with Occasionally Binding Constraints, available at http://www.tholden.org/papers/

Ressources en bibliothèque

- Barsky / Sticky-Price Models and Durable Goods
- Monacelli / New Keynesian Models, Durable Goods, and Collateral Constraint
- Tobias / Procyclical Leverage and Value-at-Risk
- Gali / Monetary Policy, Inflation, and the Business Cycle
- Heathcote / Assessing International Efficiency
- Nuño / Bank Leverage Systems
- Erceg / Optimla Monetary Policy With Durable Consumption Goods
- Angeloni / Capital regulation and monetary policy with fragile banks
- Forlati / Risky Mortgages in a DSGE Model
- Guerrieri / Occbin: A Toolkit for Solving Dynamic Models with Occasionally Binding Constraints Easily
- Iacoviello / Housing Market Spillovers: Evidence from an Estimated DSGE Model
- Holden / Computation of solutions to Dynamic Models with Occasionally Binding Constraints
- Heathcote / Financial Autarky and International Business Cycles
- Stockman / Tastes and Technology in a Two-Country Model of the Business Cycle
- Gertle / Financial Intermediation and Credit PolicyinBusiness Cycle Analysis