Macroeconomic III
Syllabus 1st part
Hernán D. Seoane
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Logistics

Theory classes: Monday and Wednesday 4pm to 5.30. Data, methods and models

Office hours: Wednesday before or after class (flexible but by appointment). 15.1.19

Practice classes: Thursday. Computational stuff, implementation and some exercises

Grade Hernan: Problem sets (10%), midterm (40%)
Grade Felix: Presentations (10%), final (40%)
Final Grade: sum of both

Evaluation (my part)

2 (maybe 3) homework: solve models by hand and in the computer

Midterm is a take home midterm to do during the week of October 21st to 30th (most likely you will get it earlier and you will be able to submit a bit later, if needed)

We will use Matlab and Julia

What we do here

contact: hseoane@eco.uc3m.es

I teach the first half (7 weeks), Felix Wellschmied will teach the second half

Real Business Cycle

➢ base model
➢ extensions: asset pricing
➢ extensions: news shocks, maybe something else

Monetary models without price frictions

➢ base model
➢ fiscal/monetary interaction
➢ SL ch 24 and 25
➢ SW unpleasant
➢ Leeper 1991

New-Keynesian

➢ base model: monetary models without money and price frictions
➢ extensions: zlb, unconventional monetary policy, fiscal/monetary interaction
➢ helicopter money, policy switching

In the middle we will focus on

➢ Empirics and stylized facts
➢ Methods: local solution methods, linear and non-linear
➢ some econometric stuff (VARs, identification, etc.)

Our key methodological focus will be on Perturbation methods: local solution methods, lineal and non-lineal

Big advantage of these methods: fast and accurate around an approximation point. Allows for full and partial information estimation methods

Macroeconomics III Second Part

Professors: Felix Wellschmied

UC3M

Objective. The objective of the course is to introduce the modeling and computation of heterogeneous agents economies. The focus is on economies with incomplete asset markets where workers face idiosyncratic risk.

Part I. Macroeconomic heterogeneity in the data.

1. Income and consumption inequality: (Heathcote, Perri, and Violante 2010), (Binelli and Attanasio 2010).

2. Estimating earnings risk: (MaCurdy 1982), (Duffie and Singleton 1993), (Horowitz 2003).

3. Wealth inequality: (Rios-Rull 2016).

Part II. Theoretical framework.

1. The heterogeneous agents model in steady state: (Huggett 1993), (Aiyagari 1994).

2. Entrepreneurship and wealth: (Cagetti and De Nardi 2006).

3. Social insurance and poverty: (Hubbard, Skinner, and Zeldes 1995).

Part III. Numerical methods applied to heterogeneous agents economies.

1. Differentiation, integration and function approximation.

2. Finding the root of a function: (Heer and Maussner 2009) Chapter 8.

3. Golden section search: (Heer and Maussner 2009) Chapter 8.

4. Least square minimization: (Heer and Maussner 2009) Chapter 8.

5. Value function iteration, Multigrid, Projections: (Tsao and Tsitsiklis 1991), (Judd 2001).

6. Endogenous grid points: (Carroll 2006), (Barillas and Fernandez-Villaverde 2007).

Part IV. Search frictions as source of labor market risk.

1. Heterogeneous jobs as source of risk: (Postel-Vinay and Robin 2002), (Hornstein, Krusell, and Violante 2012).

2. Job and productivity heterogeneity: (Low, Meghir, and Pistaferri 2010), (Tjaden and Wellschmied 2014).

Part V. From income to consumption inequality.

1. Consumption insurance in the data: (Blundell, Pistaferri, and Preston 2008).

2. Consumption insurance from self-insurance: (Kaplan and Violante 2010).

3. Consumption insurance from private-insurance: (Krueger and Perri 2006).

Part VI. Income insurance from the government.

1. Social security: (Krueger and Kubler 2006).

2. Capital taxation: (Conesa, Kitao, and Krueger 2009).

3. Progressive income taxation: (Heathcote, Storesletten, and Violante 2016).

Part VII. Idiosyncratic risk and aggregate fluctuations.

1. Unemployment risk: (Shimer 2005), (Hagedorn and Manovskii 2008).

2. Neoclassical growth model with idiosyncratic risk: (Krusell and Smith 1998).

3. Neoclassical growth model with lumpy investment: (Khan and Thomas 2003).

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