Syllabus

Econ 741B

Topics in Macroeconomics and Monetary Economics

Fall 2011

1 Overview

This is the second half of a second-year Ph.D. class in macroeconomics. The first half of the class is taught by Alisdair McKay. The course requires knowledge of macroeconomics, microeconomics and econometrics as taught in the first year Ph.D. classes.

This class studies the implications of firm heterogeneity for macroeconomics. Traditionally, macroeconomic models treated all firms as identical. Over the past 20 years, microeconomic data has revealed a large amount of volatility and turnover, or "churning", at the firm level. How are aggregate outcomes, such as the level and volatility of GDP, employment, productivity, and asset prices affected by this heterogeneity? As we will see, the heterogeneity is critical to understanding the effect of financial frictions.

More specifically, the class focuses on models of firm and establishment entry and exit, dynamics, on models of adjustment costs and irreversibility, and various forms of financial frictions, with various applications.

The class will be a mix of formal lectures - I will present some models and summarize some papers – and student presentations. Each student must present a paper for this class (either in Alisdair McKay's part, or in my part). You need to read papers critically, thinking about the virtues and limitations of a paper - this leads to research ideas. Presenting is also an important skill that you need to practice. The papers to be presented are listed at the end of this syllabus. You should send me an email before November 9, letting me know which paper you want to present (or that you are presenting in Alisdair McKay's part).

It is **very important** that you read the papers marked as "required" in the syllabus. (I have reduced the number of required papers, but these few papers must be read.) I encourage you to talk during the class, asking questions or making comments. I will distribute some lecture notes, but they are likely to be very rough.

I will give you 2 or 3 problem sets to do, which will involve quantitative or empirical work. I recommend that you do these problems using Matlab. You can get a student version of Matlab (from

mathworks.com or from BU) at a low price, or you can use the computer lab. You can find plenty of Matlab tutorials online (google: matlab primer).

There is no final exam. Instead, you are asked to write a research proposal. The proposal (3-5 pages) must state a research question, discuss the existing literature, and explain how you plan to carry out the research. (Obviously, you do not have to carry it out in the end, though it could be a start for your second year paper.) The proposals will be rated on relevance and importance of the research question, creativity, feasibility and detail of the proposal (i.e. you must be as precise as possible on what you want to do).

Conference

BU Economics and the Federal Reserve Bank of Boston are co-organizing a conference on "linkages between macroeconomics and finance" on Oct 28-29. You are highly encouraged to attend and get a taste of recent research in macroeconomics. See http://www.bostonfed.org/macrofinance2011/

2 Logistics

Time

This class is held Wed 5:30-8:30 in CAS 204b

First class: Wednesday, October 12th; Last class: Wednesday, December 7th. Alisdair McKay will teach on Wednesday, October 19th.

On November 30th, I will be traveling for a seminar presentation, as a result the class is cancelled. We will discuss a convenient time for a make-up class.

No class on November 23rd (Thanksgiving)

Contact Info and Office Hours

François Gourio, office 400, 270 Bay State Road, Email: <fgourio@bu.edu>. Email is the best way to reach me.

Office hours are open-door - you can drop by, and if I am in, I will usually be able to talk. (My regular hours are roughly 10:30am-7pm). If you want to talk for a long time, you may want to send me an email to make an appointment.

Official office hours: Tu 2:30-3:30, Wed 2-3, Fri 10-11.

Academic conduct statement

Do not cheat. If you are not sure about the definition of cheating, ask me!

Textbooks

The following textbook is a very useful reference in macroeconomics: "Recursive Macroeconomic Theory", Ljungqvist and Thomas Sargent (MIT Press).

Some books which are generally useful:

"Recursive Methods for Economic Dynamics", Stokey with Lucas and Prescott (Harvard UP).

"Dynamic Economics", Adda and Cooper (MIT Press).

"Numerical Methods in Economics", Judd (MIT Press).

"Applied Computational Economics and Finance", Miranda and Fackler (MIT Press).

3 Coursework and grading

This section refers to the total course including the part taught by Alisdair McKay.

Students will present one paper in class (either in the part taught by Alisdair, or in the part taught by Francois). The presentation should take about 30 minutes and should summarize the question that the paper addresses, its methods and its conclusion. Students should point out the strengths and weaknesses of the paper. Presentations are scheduled throughout the semester, see the outline below. We will have one presentation per week and students signing up first will have first choice. In addition, we will have a class session devoted to presentations on December 7.

Students will submit one research proposal that suggests a question, discusses the literature on the topic and outlines methods that could be used to answer the question. The proposal should be between 3 and 5 pages long. It is due on January 10, 2012.

Some problem sets will be assigned throughout the semester.

The final course grade will be determined according to the following weights: presentation (35%), proposal (45%), problem sets (20%).

Presentations

The list of papers to present is at the end of this syllabus. Examples from last year (for a different class) are posted on: http://people.bu.edu/fgourio/class745b.htm

You can use either powerpoint or beamer (with Latex/Scientific word), or even some other software if you prefer.

4 Requirements: Summary

- Read the required papers.
- Attend classes and participate.
- Read and study the lecture notes (when available)
- Turn in the problem sets on time.
- Before Nov. 9th, sign up for a presentation.
- Do the presentation in class.
- Turn in by January 10 a research proposal.
- NOTE: this class is co-taught with prof. McKay. You have to do one presentation, and write one research proposal for the class – you can decide to do it either with prof. McKay, or with me.

5 Outline

- Lecture 1 (Oct 12): Some facts on firms dynamics. Models of firms dynamics with entry and exit. Reallocation and TFP.

Required reading: Hopenhayn and Rogerson (1993 JPE)

Nonrequired reading: Klenow and Hsieh (2009 QJE), Restuccia and Rogerson (2008 RED), Midrigan and Xu (2010 Mimeo).

- Lecture 2 (Oct 26): Adjustment costs and Irreversibility.

Required readings: Cooper and Haltiwanger, (2006 REStud).

Nonrequired reading: Gilchrist and Himmelberg (JME 1995), Campbell and Fisher (2001 AER), Dixit (1989 JPE)

- Lecture 3 (Nov 2): Firm dynamics with financing constraints. No default.

Required Readings: Gomes (AER 2001), Angeletos (2007 RED)

Student presentation #1: Hansen and Prescott (2005 RED)

- Lecture 4 (Nov 9): Financial constraints: models with default

  Required readings: Cooley and Quadrini (AER 2001)

Student presentation #2: Hennessy and Whited (JF 2005)

- Lecture 5 (Nov 16): Business cycles with firm heterogeneity

  Required reading: Bloom (2009, Econometrica)

  Nonrequired reading: Veracierto (AER 2002), Thomas (JPE 2002),

  Student presentation #3: Bachmann, Caballero and Engel (2010)

- Lecture 6 (Nov 30 – to be rescheduled) Applications: Credit Crunch, Global Imbalances, Idiosyncratic/Industry shocks

  Nonrequired reading: Khan and Thomas (2010)

  Student presentation #4 Gabaix (2010) or Carvalho (2010)

  Student presentation #5 Caballero, Farhi and Gourinchas (2008) or Mendoza, Quadrini and Rios-Rull (2009)

- Lecture 7 (Dec 7): Student presentations (joint with Alisdair McKay)

6 References

The following papers are **required** reading

Angeletos, 2007. "Uninsured Idiosyncratic Investment Risk and Aggregate Saving", Review of Economic Dynamics 10:1.

Bloom, 2009. "The Impact of Uncertainty Shocks" Econometrica

Cooley and Quadrini, 2001. "Financial Markets and Firm Dynamics" American Economic Review, 91(5):1286-1310.

Cooper and Haltiwanger, 2006. "On the Nature of Capital Adjustment Costs" Review of Economic Studies 73 (3), 611–633

Hennessy and Toni Whited, 2005. "Debt Dynamics" Journal of Finance 60:1129-1165

Hopenhayn and Rogerson, 1993. "Job Turnover and Policy Evaluation: A General Equilibrium Analysis", Journal of Political Economy, 101(5): 915-38.

The following papers are non-required reading

Bartelsman and Doms, 2000, "Understanding Productivity: Lessons from Longitudinal Microdata," Journal of Economic Literature, 38:3, 569-594

Caballero, Farhi, and Gourinchas, 2008. "An Equilibrium Model of "Global Imbalances" and Low Interest Rates", AER.

Caballero, Farhi and Hammour, 2006. "Speculative Growth: Hints from the US economy", AER.

Campbell, 1998. "Entry, Exit, Embodied Technology and Business Cycles", Review of Economic Dynamics, 1, 371-408.

Campbell and Fisher, 2000. "Aggregate Employment Fluctuations with Microeconomic Asymmetries", American Economic Review 90(5): 1323-1345.

Chari and Hopenhayn, 1991. "Vintage Human Capital, Growth, and the Diffusion of New Technology," Journal of Political Economy, 99:1142-1165.

Clementi and Palazzo, 2010. "Entry, Exit, Firm Dynamics and Aggregate Fluctuations", mimeo BU SMG, 2010

Cooley, Hansen and Prescott, 1995. "Equilibrium Business Cycles with Idle Resources and Variable Capacity Utilization," Economic Theory, 6, 35–49.

Covas and Den Haan, 2008. "Cyclical Behavior of Debt and Equity Finance", AER.

Dixit, 1989. "Entry and Exit Decisions under Uncertainty" Journal of Political Economy, 97(3):620-638.

Gabaix, 2010, "The Granular Origins of Aggregate Fluctuations" forthcoming in Econometrica.

Gilchrist and Williams, 2000. "Putty-Clay and Investment: A Business Cycle Analysis," JPE 2000.

Gilchrist, Simon, Jae Sim and Egon Zakrajsek, 2011. "Uncertainty, Financial Frictions, and Investment Dynamics", Mimeo.

Hopenhayn and Vereshchagina, 2009. "Risk Taking by Entrepreneurs," American Economic Review, 88(5):1808-183.

Khan and Thomas, 2010. "Credit Shocks and Aggregate Fluctuations in an Economy with Production Heterogeneity", Mimeo OSU.

Klenow and Hsieh, 2009, "Misallocation and Manufacturing TFP in China and India," Quarterly Journal of Economics.

Klette and Kortum, 2004, Innovating Firms and Aggregate Innovation, Journal of Political Economy, 112(5).

Lee and Mukoyama (2008) "Entry, Exit and Plant-level Dynamics over the Business Cycle," mimeo

Midrigan and Xu, 2009, "Finance and Misallocation: Evidence from Plant-Level Data," mimeo.

Quadrini, Mendoza and Rios-Rull. Financial Integration, Financial Development and Global Imbalances, JPE 2009.

Restuccia and Rogerson, 2008, "Policy Distortions and Aggregate Productivity with Heterogeneous Plants," Review of Economic Dynamics, 11(4): 707-20.

Riddick and Whited. "The Corporate Propensity to Save" Journal of Finance 64 (2009): 1729-1766

Rossi-Hansberg and Wright, 2004. "Firm Size Dynamics in the Aggregate Economy", AER.

Samaniego, 2009. "Entry, Exit and Business Cycles in General Equilibrium Model", Review of Economic Dynamics.

Thomas, 2002. "Is Lumpy Investment Relevant for the Business Cycle?" Journal of Political Economy, 110(3):508534.

Veracierto, 2002. "Plant-Level Irreversible Investment and Equilibrium Business Cycles, American Economic Review, 92(1): 181-197.

Veracierto, 2008. "Firing Costs and Business Cycles Fluctuations," International Economic Review.

Papers for presentation

(1) Carvalho, 2010. "Aggregate Fluctuations and the Network Structure of Intersectoral Trade", Mimeo CREI.

(2) Jovanovic and MacDonald, 1994, "The Life Cycle of a Competitive Industry", Journal of Political Economy, 102(2):322-347.

(3) Gabaix, 2010. "The Granular Origins of Aggregate Fluctuations" forthcoming in Econometrica.

(4) Luttmer, 2007. "Selection, Growth, and the Size Distribution of Firms," Quarterly Journal of Economics, 122(3): 1103-1144.

(5) Eisfeldt and Rampini, 2005. "Capital Reallocation and Liquidity", Journal of Monetary Economics.

(6) Bachmann, Caballero and Engel, 2010. "Aggregate Implications of Lumpy Investment: New Evidence and a DSGE Model," Mimeo.

(7) Bakke and Whited, 2010. "Threshold Events and Identification: A Study of Cash Shortfalls", forthcoming, Journal of Finance.

(8) Caballero and Hammour, 1994. "The Cleansing Effect of Recessions, American Economic Review. 84(5): 1350-1368.

(9) Jermann and Quadrini, 2007. "Stock market boom and the productivity gains of the 1990s", Journal of Monetary Economics, 54(2):413-432.

(10) Quadrini, Mendoza and Rios-Rull, 2009. "Financial Integration, Financial Development and Global Imbalances", JPE.

(11) Caballero, Farhi and Gourinchas, 2008. "An Equilibrium Model of "Global Imbalances" and Low Interest Rates", AER.