An Introduction to Macroeconomics with Household Heterogeneity: Syllabus

Dirk Krueger

Fall Semester 2022 - First Half

1 Organization

1.1 Organizational Details

- **Class Title:** An Introduction to Macroeconomics with Household Heterogeneity

- **Times and Locations:** Mondays and Wednesdays 12:00-1:30pm in TBD. First class is August 31, 2022 and last class is October 19, 2022. Additional classes will be scheduled in agreement with students.

- **Canvas Course Web Page:** https://canvas.upenn.edu

- **Readings:** I will mainly rely on my lecture notes and original articles. Please refer to the table of contents for the articles we plan to cover in detail, and to the bibliography of the lecture notes for further references. I will post these papers on Canvas.

1.2 Suggested Background Readings

1. Angus Deaton "Understanding Consumption" Oxford University Press, 1992

2. Orazio Attanasio "Consumption, " in Handbook of Macroeconomics, Vol. 3B, Elsevier, 1999.

3. J. Heathcote, K. Storesletten and G. Violante (2009), "Quantitative Macroeconomics with Heterogeneous Households," *Annual Review of Economics*, 1, 319-354.

4. F. Guvenen (2012), "Macroeconomics with Heterogeneity: A Practical Guide," *Federal Reserve Bank of Richmond Economic Quarterly.*

5. D. Krueger, K. Mitman and F. Perri (2016) "Macroeconomics and Household Heterogeneity, " in Handbook of Macroeconomics, Vol. 2A, North Holland, 2016.

6. T. Jappelli and L. Pistaferri "The Economics of Consumption: Theory and Evidence" Oxford University Press, 2017

7. D. Krueger (2022), "An Introduction to Macroeconomics with Household Heterogeneity," *Manuscript*

1.3 Instructor

- **Name:** Dirk Krueger

- **Email:** dkrueger@econ.upenn.edu

- **Office:** 520 PCPE

- **Office Hours**: Monday, 3:30-4:30 and Tues. 10:45-11:45 and by appointment

1.4 Course Outline and Overview

This is a course in quantitative macroeconomics with heterogeneous households. It first covers basic models of a single household's intertemporal consumption (and labor supply) allocation decision under various assumptions about the life horizon and labor income process of the household as well as the capital market structure. This year I will mainly focus on general equilibrium versions of these models as well as their applications to health economics, public finance and household finance. I also want to talk about models with risk sharing and limited commitment a bit more than in past years. For details see the table of contents for the course at the end of this syllabus.

1.5 Goal of the Course

I want to prepare you to write your first research paper and, eventually, a dissertation in this area, which is overlaps the fields of macroeconomics, health economics, labor economics and applied microeconomics. After having taken this course you will know how to write down dynamic consumption models, solve them (numerically, if required) in general equilibrium, map these models to the data and use them for applied policy question. I also hope expose you to open research questions in this area so that you, if you wish, can apply the techniques acquired and the substance studied in this course to start your own research agenda. **Most importantly, we want to have fun with this course!!!**

1.6 Course Requirements

There are two course requirements. First, you will have to complete one fairly involved research project. This project will entail the estimation of (parts of) theoretical models using cross-section micro data and/or the numerical computation and simulation of a sequence of models (or variants thereof) described in class. I will guide you through this project with reasonably precise instructions of what to do for most of the project. At the end of the project I will ask more open ended questions that might hopefully lead to the start of a 3rd year paper. You will work on this project during the course; a written summary of the results from the project is due on TBD in my mailbox (physical or electronic). The project will account for 1/2 of the grade for the course.

The remaining 1/3 of the grade will be determined by a 20min presentation of a paper in conjunction with a 2 page referee report of the presented paper. The selected paper has to satisfy two criteria: a) it has to fit the general theme of the course, and b) it either was published in the last 5 years or is still a working paper. The report is due at the time of the presentation of the paper.

At the end of this course I want you to be at the research frontier, which means that you can do research yourself and critique the work of others in this area.

2 Tentative Outline of the Course

Date	Topic	Notes
8/31, 9/7	Introduction, Complete Markets (SCM) Background Literature above	1-4
9/12, 14	Standard Incomplete Markets Model (SIM) in Partial Equilibrium Hall (1978), Kimball (1990), Deaton (1991), Carroll (1992), Blundell et al. (2007)	5
9/19, 21	SIM in GE with No Aggregate Risk: Steady States, Transitions Aiyagari ('94), Huggett ('93), Conesa & Krueger ('06), Kindermann & Krueger ('21)	7.1, 7.3
9/26, 28	Applications of SIM to Personal Bankruptcy/Foreclosure Chatterjee et al. (2007), Jeske et al. ('13), Mitman ('14), Corbae and Quintin ('15)	7.2
10/3, 5	GE with Aggregate Risk: Theory and Computation Krusell and Smith (1998), Reiter (2009), Levintal (2018), Winberry (2018)	7.4
10/10, 12	GE with Aggregate Risk: Crises Applications Glover et al. ('20, 21), Krueger, Mitman & Perri ('16, '17)	N/A
10/17, 19	Endogenous Incomplete Markets Models Kocherlakota (1996), Alvarez & Jermann (2000), Krueger & Perri (2006) Krueger & Uhlig (2006,2022), Cole, Krueger, Mailath & Park (2022)	8
TBD	Presentations You choose (within reason)	N/A