

ECON 6412: Advanced Macroeconomic Theory

Spring 2024
(Tentative)

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Course description

This is a macroeconomics topics course for advanced PhD students. Its goal is to introduce quantitative macro models with heterogeneous agents, and bring students to the frontier of research in this field.

We will begin with a warm-up for heterogeneous-agent macro models, with special attention to their computation. We will then turn to recent research that applies the heterogeneous-agent macro approach to study various topics related to inequality, which can be broadly categorized into (1) the economics of *the super-rich*: e.g., entrepreneurship, intergenerational links, and top wealth shares, and (2) the economics of *the extremely poor*: e.g., unemployment, disability, homelessness, and social insurance.

Grading and requirements

- (i) Assignments (numerical): 30%
- (ii) Presentations: 30%
- (iii) Term paper/project: 40%

Outline (Tentative):

1. Heterogeneous Agents Models with Idiosyncratic Risks and Incomplete Market
2. Introducing the Life-cycle
3. Heterogeneous Agents Macro Research on Various Topics:
 - a. Economics of the super-rich: saving, entrepreneurship, intergenerational links, causes and dynamics of the top wealth shares.
 - b. Economics of the extremely poor: employment and health risks, disability, homelessness, social insurance.

Research Papers:

Methodology: the Heterogenous Agents Macro Models

1. R. Aiyagari. "Uninsured Idiosyncratic Risk and Aggregate Saving." *The Quarterly Journal of Economics*, 109(3), 1994.
2. M. Huggett, "The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies", *Journal of Economic Dynamics and Control* 17, 1993.
3. A. Auerbach and L. Kotlikoff, "Dynamic Fiscal Policy", Cambridge University Press, 1987.
4. A. Imrohoroglu, S. Imrohoroglu, and D.H. Joines, "A Life Cycle Analysis of Social Security," *Economic Theory*, 6 (1995), 83-114.

The economics of the super-rich

5. De Nardi, Mariacristina (2004), 'Wealth inequality and intergenerational links', *Review of Economic Studies* 71(3), 743–768.
6. Quadrini, Vincenzo (2000), 'Entrepreneurship, saving and social mobility', *Review of Economic Dynamics* 3(1), 1–40.
7. Cagetti, Marco and De Nardi, Mariacristina (2006), 'Entrepreneurship, frictions and wealth', *Journal of Political Economy* 114(5), 835–870.
8. Castaneda, Ana, Diaz-Gimenez, Javier and Rios-Rull, Jose-Victor (2003), 'Accounting for u.s. earnings and wealth inequality', *Journal of Political Economy* 111(4), 818–857.
9. Benhabib, J., Bisin, A., and M. Luo. 2019. Wealth Distribution and Social Mobility in the US: A Quantitative Approach. *American Economic Review*, 109(5), pages 1623-47.
10. Kaymak, B., Markus Poschke, 2016. "The evolution of wealth inequality over half a century: The role of taxes, transfers and technology," *Journal of Monetary Economics*, Volume 77, Pages 1-25,
11. Hubmer, J., P. Krusell, and A. A. Smith, 2020. Sources of U.S. Wealth Inequality: Past, Present, and Future, *NBER Macroeconomics Annual 2020*, Volume 35.
12. İmrohorođlu, Ayse and Kai Zhao, 2021." Rising Wealth Inequality: Intergenerational Links, Entrepreneurship, and the Decline in Interest Rate", working paper.
13. Dynan, Karen E., Skinner, Jonathan and Zeldes, Stephen P. (2004), 'Do the rich save more?', *Journal of Political Economy* 112(2), 397–444.

The economics of the extremely poor

14. İmrohorođlu, Ayse and Kai Zhao, 2021." Homelessness", working paper.
15. Roozbeh Hosseini & Karen A. Kopecky & Kai Zhao, 2021. "How Important Is Health Inequality for Lifetime Earnings Inequality?" *FRB Atlanta Working Paper 2021-1*, Federal Reserve Bank of Atlanta.

16. Roozbeh Hosseini & Karen A. Kopeccky & Kai Zhao, 2021. " The evolution of health over the life cycle," *Review of Economic Dynamics*.
17. R.G. Hubbard, J. Skinner, S.P. Zeldes, 1995. "Precautionary saving and social insurance," *Journal of Political Economics*, 103 (2), pp. 360-399.
18. Braun, R.A., Karen Kopeccky, and Tatyana Koreshkova, 2017. "Old, Sick, Alone and Poor: A Welfare Analysis of Old-Age Social Insurance Programs," *Review of Economic Studies* 84, pp. 580-612.
19. Zhao, K., 2017. "Social Insurance, Private Health Insurance and Individual Welfare", *Journal of Economic Dynamics and Control*, Volume 78.