

# RoME: Macroeconomics I (2)

## Module IV — School Year 2020 - 2021

### Instructor Information

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Office Hours: HOURS

### Class Information

Dates: April 12, 2021 – May 21, 2021  
Time: TIME START – TIME END

### Course Description

This course aims to discuss topics related to the three factors of standard macroeconomic models: 1). Productivity, 2) Capital, and 3) Labor. More specifically, we will discuss the dynamic inefficiency in capital accumulations in market economies; the source of productivity growth through human capital accumulation and innovations; the search and matching frictions in the labor market and its implications on wage inequality and unemployment. We will discuss these topics using some standard macroeconomics toolkits: overlapping generation models, endogenous growth models, and search models.

### Recommended Textbooks (Course Materials in Slides)

Introduction to Modern Economic Growth, by Daron Acemoglu.

Wage Dispersion: Why Are Similar Workers Paid Differently?, by Dale T. Mortensen

Equilibrium Unemployment Theory, Christopher A. Pissarides

### Agenda and Readings

Topic I (2 lectures) overlapping generation and rational bubbles  
lecture 1: OLG in endowment economy and rational bubble

- Samuelson, Paul A. "An exact consumption-loan model of interest with or without the social contrivance of money." *Journal of political economy* 66, no. 6 (1958): 467-482.
- Kiyotaki, Nobuhiro, and Randall Wright. "On money as a medium of exchange." *Journal of political Economy* 97, no. 4 (1989): 927-954.
- Weil, Philippe. "Overlapping generations: the first jubilee." *Journal of Economic Perspectives* 22, no. 4 (2008): 115-34.

## lecture 2: OLG in production economy and social security

- Tirole, Jean. "Asset bubbles and overlapping generations." *Econometrica* (1985): 1499-1528.
- Blanchard, Olivier J. "Debt, deficits, and finite horizons." *Journal of political economy* 93, no. 2 (1985): 223-247.

## HW 1: perpetual youth model

### Topic II (5 lectures) endogenous growth models

#### lecture 1: growth facts and neoclassical growth: a recap

- △ Kaldor, Nicholas. "Capital accumulation and economic growth." In *The Theory of Capital*, pp. 177-222. Palgrave Macmillan, London, 1961.
- △ Lucas Jr, Robert E. "On the mechanics of economic development." *Journal of Monetary Economics* 22, no. 1 (1988): 3-42.
- Mankiw, N. Gregory, David Romer, and David N. Weil. "A contribution to the empirics of economic growth." *Quarterly Journal of Economics* 107, no. 2 (1992): 407-437.
- △ Hall, Robert E., and Charles I. Jones. "Why do some countries produce so much more output per worker than others?." *Quarterly Journal of Economics* 114, no. 1 (1999): 83-116.
- △ Jones, Charles I. "The facts of economic growth." In *Handbook of Macroeconomics*, vol. 2, pp. 3-69. Elsevier, 2016.

#### lecture 2: the role of human capital in growth

- Arrow, Kenneth J. "The Economic Implications of Learning by Doing." *The Review of Economic Studies* 29, no. 3 (1962): 155-173.
- Jones, Larry E., and Rodolfo Manuelli. "A convex model of equilibrium growth: Theory and policy implications." *Journal of Political Economy* 98, no. 5, Part 1 (1990): 1008-1038.
- Romer, Paul M. "Increasing returns and long-run growth." *Journal of Political Economy* 94, no. 5 (1986): 1002-1037.
- Uzawa, Hirofumi. "Optimum technical change in an aggregative model of economic growth." *International Economic Review* 6, no. 1 (1965): 18-31.

#### lecture 3: creative destruction and innovation dynamics

- △ Aghion, P., and P. Howitt. "A Model of Growth through Creative Destruction." *Econometrica* 60, no. 2 (1992).
- Bloom, Nicholas, Mark Schankerman, and John Van Reenen. "Identifying technology spillovers and product market rivalry." *Econometrica* 81, no. 4 (2013): 1347-1393.

- △ Acemoglu, D. (2009) Introduction to Modern Economic Growth, Princeton, New Jersey: Princeton University Press, chapter 14
- Grossman, Gene M., and Elhanan Helpman. "Quality ladders in the theory of growth." *Review of Economic Studies* 58, no. 1 (1991): 43-61.
- Segerstrom, Paul S., Thirumalai CA Anant, and Elias Dinopoulos. "A Schumpeterian model of the product life cycle." *American Economic Review* (1990): 1077-1091.
- △ Klette, Tor Jakob, and Samuel Kortum. "Innovating firms and aggregate innovation." *Journal of political economy* 112, no. 5 (2004): 986-1018.

#### lecture 4: micro data for macro growth

- Aghion, Philippe, Nick Bloom, Richard Blundell, Rachel Griffith, and Peter Howitt. "Competition and innovation: An inverted-U relationship." *The quarterly journal of economics* 120, no. 2 (2005): 701-728.
- △ Akcigit, Ufuk, Murat Alp Celik, and Jeremy Greenwood. "Buy, keep, or sell: Economic growth and the market for ideas." *Econometrica* 84, no. 3 (2016): 943-984.
- △ Akcigit, Ufuk, and William R. Kerr. "Growth through heterogeneous innovations." *Journal of Political Economy* 126, no. 4 (2018): 1374-1443.
- Acemoglu, Daron, Ufuk Akcigit, Harun Alp, Nicholas Bloom, and William Kerr. "Innovation, reallocation, and growth." *American Economic Review* 108, no. 11 (2018): 3450-91.
- △ Bloom, Nicholas, Charles I. Jones, John Van Reenen, and Michael Webb. "Are ideas getting harder to find?." *American Economic Review* 110, no. 4 (2020): 1104-44.

#### Topic III (5 lectures) wage dispersion and unemployment

##### lecture 1-2: search and wage (price) dispersion

- Stigler, George J. "The economics of information." *Journal of political economy* 69, no. 3 (1961): 213-225.
- △ McCall, J. J. "Economics of Information and Job Search." *The Quarterly Journal of Economics* 84, no. 1 (1970): 113-26. Accessed August 10, 2020. [www.jstor.org/stable/1879403](http://www.jstor.org/stable/1879403).
- Diamond, P. A. "A Model of Price Adjustment," *Journal of Economic Theory* (1971), pp. 158-68.
- Burdett, K. and Judd, K.L., Equilibrium price dispersion. *Econometrica* (1983), pp.955-969.
- △ Burdett, Kenneth, and Dale T. Mortensen. "Wage differentials, employer size, and unemployment." *International Economic Review* (1998): 257-273.
- Christensen, Bent Jesper, Rasmus Lentz, Dale T. Mortensen, George R. Neumann, and Axel Werwatz. "On-the-job search and the wage distribution." *Journal of Labor Economics* 23, no. 1 (2005): 31-58.

- Postel-Vinay, Fabien, and Jean-Marc Robin. "Equilibrium Wage Dispersion with Worker and Employer Heterogeneity." *Econometrica* 70, no. 6 (2002): 2295-350.
- Hornstein, Andreas, Per Krusell, and Giovanni L. Violante. "Frictional wage dispersion in search models: A quantitative assessment." *American Economic Review* 101, no. 7 (2011): 2873-98.

#### HW 4: sufficient statistics of wage dispersion

#### lecture 3: labor market fluctuations: an accounting problem

- Davies, S. and J. Haltiwanger, Gross Job Creation, Gross Job Destruction and Employment Reallocation, *Quarterly Journal of Economics* (1992), 107, pp. 819-63.
- Lucas Jr, Robert E. "Macroeconomic priorities." *American Economic Review* 93, no. 1 (2003): 1-14.
- △ Shimer, Robert. "The cyclicalities of hires, separations, and job-to-job transitions." *Review-Federal Reserve Bank OF Saint Louis* 87, no. 4 (2005): 493.
- △ Chari, Varadarajan V., Patrick J. Kehoe, and Ellen R. McGrattan. "Business cycle accounting." *Econometrica* 75, no. 3 (2007): 781-836.
- Shimer, Robert. "Mismatch." *The American Economic Review* 97, no. 4 (2007): 1074-101.
- △ Shimer, Robert. "Reassessing the ins and outs of unemployment." *Review of Economic Dynamics* 15, no. 2 (2012): 127-148.
- △ Karabarbounis, Loukas. "The labor wedge: MRS vs. MPN." *Review of Economic Dynamics* 17, no. 2 (2014): 206-223.

#### lecture 4-5: DMP paradigm and labor market fluctuations

- Lucas Jr, Robert, and Edward C. Prescott. "Equilibrium search and unemployment." *Journal of Economic Theory* 7, no. 2 (1974): 188-209.
- △ Mortensen, D.T. and C. Pissarides, , Job Creation and Job Destruction in the Theory of Unemployment, *Review of Economic Studies* (1994), 61, July, 397- 415.
- Diamond, Peter A. "Aggregate demand management in search equilibrium." *Journal of political Economy* 90, no. 5 (1982): 881-894.
- Hosios, Arthur J. "On the efficiency of matching and related models of search and unemployment." *The Review of Economic Studies* 57, no. 2 (1990): 279-298.
- Rogerson, Richard, Robert Shimer, and Randall Wright. "Search-theoretic models of the labor market: A survey." *Journal of Economic Literature* 43, no. 4 (2005): 959-988.
- △ Shimer, Robert. "The cyclical behavior of equilibrium unemployment and vacancies." *American Economic Review* 95, no. 1 (2005): 25-49.

△ Hall, Robert E. "Employment fluctuations with equilibrium wage stickiness." *American Economic Review* 95, no. 1 (2005): 50-65.

- Moen, Espen R. "Competitive Search Equilibrium." *Journal of Political Economy* 105, no. 2 (1997): 385-411.

**HW 5:** efficiency of frictional economy and competitive search