Syllabus EC741 Topics in Macroeconomics

Logistics:

MonWed 8:30-9:45am at SSW 315

Instructor:

Masao Fukui

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   270 Bay State Road, Room 400
   Office hours: MonTue 4:15-5:45

Overview:

This is the second half of the second-year Ph.D. course in macroeconomics. The theme of the course is to unpack the aggregate labor demand. What is the distribution of workers across firms? Why do a handful of firms hire a large share of workers? Why do wages differ across firms for similar workers? What determines the reallocation of workers across firms? How have these patterns changed over time and why?

The course emphasizes two methodological tools: (i) continuous time techniques and (ii) numerical computation of heterogeneous agent macroeconomic models.

Julia codes used in the class are available here:

https://github.com/masaofukui/741_Julia

Requirements:

Grading will be based on problem sets (80%) and a research proposal or a final project (20%).

Topic 1: Firm Size Distribution

◆ Gabaix, X. (2009). Power Laws in Economics and Finance. *Annual Review of Economics*, *1*(1), 255-294.
◆ Luttmer, E. G. (2007). Selection, growth, and the size distribution of firms. *The Quarterly Journal of Economics*, *122*(3), 1103-1144.

- Achdou, Y., Han, J., Lasry, J. M., Lions, P. L., & Moll, B. "Online Appendix: Numerical Methods for Income and Wealth Distribution in Macroeconomics: A Continuous-Time Approach." (2014). https://benjaminmoll.com/wp-content/uploads/2020/02/HACT_Numerical_Appendix.pdf
- Moll, B. (2018) Lectures 5 and 6 Theories of Top Inequality Distributional Dynamics and Differential Operators. https://benjaminmoll.com/wp-content/uploads/2019/07/Lectures5_6_2149.pdf

Topic 2: Canonical Model of Firm Dynamics

- Hopenhayn, H., & Rogerson, R. (1993). Job turnover and policy evaluation: A general equilibrium analysis. *Journal of Political Economy*, *101*(5), 915-938.
- Moll, B. (2020) Hopenhayn Model in Continuous Time. https://benjaminmoll.com/wp-content/uploads/2020/06/hopenhayn.pdf
- Bokanowski, O., Maroso, S., & Zidani, H. (2009). Some convergence results for Howard's algorithm. *SIAM Journal on Numerical Analysis*, *47*(4), 3001-3026.

Topic 3: Declining Business Dynamism

- Karahan, F., Pugsley, B., & Şahin, A. (2024). Demographic Origins of the Start-up Deficit. *American Economic Review*, *114*(7), 1986-2023.
- Kaas, L. (2023). Block-recursive equilibria in heterogeneous-agent models. *Journal of Economic Theory*, *212*, 105689.

Topic 4: Firm Dynamics without Free Entry

- Gutiérrez, G., & Philippon, T. (2019). The failure of free entry (No. w26001). National Bureau of Economic Research.
- Auclert, A., Bardóczy, B., Rognlie, M., & Straub, L. (2021). Using the sequence-space Jacobian to solve and estimate heterogeneous-agent models. *Econometrica*, *89*(5), 2375-2408.

Topic 5: The Nature of Labor Reallocation

- Ilut, C., Kehrig, M., & Schneider, M. (2018). Slow to hire, quick to fire: Employment dynamics with asymmetric responses to news. *Journal of Political Economy*, *126*(5), 2011-2071.
- Hopenhayn, H., & Rogerson, R. (1993). Job turnover and policy evaluation: A general equilibrium analysis. *Journal of Political Economy*, *101*(5), 915-938.

- Carrillo, P., Donaldson, D., Pomeranz, D., & Singhal, M. (2023). Misallocation in Firm Production: A Nonparametric Analysis Using Procurement Lotteries (No. w31311). National Bureau of Economic Research.
- Restuccia, D., & Rogerson, R. (2008). Policy distortions and aggregate productivity with heterogeneous establishments. *Review of Economic Dynamics*, *11*(4), 707-720.
- Øksendal, B., & Sulem, A. (2019). Stochastic Control of jump diffusions. In *Applied Stochastic Control of Jump Diffusions* (pp. 93-155). Cham: Springer International Publishing. Chapters 8 & 9.

Topic 6: Firm Wage

- Kline, P. (2024). Firm wage effects. *Handbook of Labor Economics*, *5*, 115-181.
- Bloom, N., Guvenen, F., Smith, B. S., Song, J., & von Wachter, T. (2018, May). The disappearing large-firm wage premium. In *AEA Papers and Proceedings* (Vol. 108, pp. 317-322). 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association.
- Bonhomme, S., Lamadon, T., & Manresa, E. (2019). A distributional framework for matched employer employee data. *Econometrica*, *87*(3), 699-739.
- Borovicková, K., Richmond, F. R. B., & Shimer, R. (2024). Assortative Matching and Wages: The Role of Selection.
- Elsby, M. W., & Gottfries, A. (2022). Firm dynamics, on-the-job search, and labor market fluctuations. *The Review of Economic Studies*, *89*(3), 1370-1419.
- McCrary, S. (2022). A Job Ladder Model of Firm, Worker, and Earnings Dynamics. *Worker, and Earnings Dynamics (November 4, 2022)*.
- Bilal, A., Engbom, N., Mongey, S., & Violante, G. L. (2022). Firm and worker dynamics in a frictional labor market. *Econometrica*, *90*(4), 1425-1462.
- Elsby, M., Gottfries, A., Michaels, R., & Ratner, D. (2022). Vacancy chains.

Topic 7: Large Firms and Monopsony in the Labor Market

- Berger, D., Herkenhoff, K., & Mongey, S. (2022). Labor market power. *American Economic Review*, *112*(4), 1147-1193.
- Rossi-Hansberg, E., Sarte, P. D., & Trachter, N. (2021). Diverging trends in national and local concentration. *NBER Macroeconomics Annual*, *35*(1), 115-150.
- Hsieh, C. T., & Rossi-Hansberg, E. (2023). The industrial revolution in services. *Journal of Political Economy Macroeconomics*, *1*(1), 3-42.

◆ Cao, D., Hyatt, H. R., Mukoyama, T., & Sager, E. (2020). Firm growth through new establishments. *Available at SSRN 3361451*.

◆ Chen, Z. (2023). Economic growth and the rise of large firms.