

Search Theory

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Course objective

This half course of the core provides an introduction to Search theory and some of its applications to labor markets, monetary transactions, and asset markets. Students will learn how to characterise the behaviour of individual agents (e.g., job seekers) in a market with search frictions, and how these choices aggregate to determine (potentially inefficient) macroeconomic outcomes. Alternative price and wage setting mechanisms (i.e., posting versus bargaining) will be considered.

Requirements

Grading will be based on a written final exam (90%) and on problem sets (10%).

Practicalities

The TA for this course is **Lukas Nord** (lukas.nord@eui.eu). There will be four review sessions, for three problem sets (posted on Brightspace and to be handed in shortly before the corresponding sessions):

- PS1: Posted on April 7, to be handed in on April 14 (12am), with review session on April 16;
- PS2: Posted on April 14, to be handed in on April 21 (12am), with review session on April 23;
- PS3: Posted on April 21, to be handed in on April 28 (12am), with review session on April 30;
- Revision session mid May.

You may (and are encouraged to) work in groups, but you must hand in the assignments individually. I will hold office hours every Tuesday afternoon, and Lukas every Monday (exact time tbd). Please send an email to either of us if those times do not work and you would like to make an appointment.

Readings

The references corresponding to each topic are indicated in the topics list below. There is no textbook for this course, though the following books have a partial overlap with what we will cover in class:

- Pierre Cahuc, Stéphane Carcillo, and André Zylberberg. *Labor Economics*. MIT press, 2014
- Dale Mortensen. *Wage Dispersion: Why Are Similar Workers Paid Differently?* MIT press, 2003
- Ed Nosal and Guillaume Rocheteau. *Money, Payments, and Liquidity*. MIT press, 2011
- Nicolas Petrosky-Nadeau and Etienne Wasmer. *Labor, Credit, and Goods Markets: The Macroeconomics of Search and Unemployment*. MIT Press, 2017
- Christopher A Pissarides. *Equilibrium Unemployment Theory*. MIT press, 2000

Outline

Lecture 1 (April 6, 11am): Basic job search

- Cahuc et al. (2014, Chap. 5.2)
- Peter Diamond. Unemployment, vacancies, wages. *The American Economic Review*, 101(4):1045–1072, 2011
- Dale T Mortensen. Job search and labor market analysis. *Handbook of Labor Economics*, 2:849–919, 1986
- Richard Rogerson, Robert Shimer, and Randall Wright. Search-theoretic models of the labor market: A survey. *Journal of Economic Literature*, 43(4):959–988, 2005

Lecture 2 (April 7, 11am): Equilibrium search and wage dispersion

- Cahuc et al. (2014, Chap. 5.4), Mortensen (2003, Chap. 1 and 2)
- Kenneth Burdett and Dale T Mortensen. Wage differentials, employer size, and unemployment. *International Economic Review*, pages 257–273, 1998
- Andreas Hornstein, Per Krusell, and Giovanni L Violante. Frictional wage dispersion in search models: A quantitative assessment. *American Economic Review*, 101(7):2873–98, 2011

Lecture 3 (April 8, 11am): Search and matching

- Cahuc et al. (2014, Chap. 9.3), Pissarides (2000, Chap. 1), Petroski-Nadeau Wasmer (2017, Chap. 1)
- Andreas Hornstein, Per Krusell, and Giovanni L Violante. Unemployment and vacancy fluctuations in the matching model: Inspecting the mechanism. *FRB Richmond Economic Quarterly*, 91(3):19–51, 2005

- Dale T Mortensen and Christopher A Pissarides. Job reallocation, employment fluctuations and unemployment. *Handbook of Macroeconomics*, 1:1171–1228, 1999
- Christopher A Pissarides. Equilibrium in the labor market with search frictions. *American Economic Review*, 101(4):1092–1105, 2011

Lecture 4 (April 12, 11.30am): Competitive search

- Cahuc et al. (2014, Chap. 9.4), Pissarides (2000, Chap. 8), Petroski-Nadeau Wasmer (2017, Chap. 8)
- Arthur J Hosios. On the efficiency of matching and related models of search and unemployment. *The Review of Economic Studies*, 57(2):279–298, 1990
- Espen R Moen. Competitive search equilibrium. *Journal of Political Economy*, 105(2):385–411, 1997
- Randall Wright, Philipp Kircher, Benoît Julien, and Veronica Guerrieri. Directed search and competitive search equilibrium: A guided tour. *Journal of Economic Literature*, 59(1):90–148, March 2021

Lectures 5 and 6 (April 13, 11am & April 15, 9am): Money in search equilibrium

- Nosal and Rocheteau (2017, Chap. 1 to 5)
- Nobuhiro Kiyotaki and Randall Wright. A search-theoretic approach to monetary economics. *The American Economic Review*, pages 63–77, 1993
- Ricardo Lagos, Guillaume Rocheteau, and Randall Wright. Liquidity: A new monetarist perspective. *Journal of Economic Literature*, 55(2):371–440, 2017
- Peter Rupert, Martin Schindler, Andrei Shevchenko, Randall Wright, et al. The search-theoretic approach to monetary economics: a primer. *Economic Review-Federal Reserve Bank of Cleveland*, 36(4):10–28, 2000
- Alberto Trejos and Randall Wright. Search, bargaining, money, and prices. *Journal of political Economy*, 103(1):118–141, 1995

Lecture 7 (April 20, 11am): OTC markets

- Nosal and Rocheteau (2017, Chap. 15)
- Pierre-Olivier Weill. The search theory of over-the-counter markets. *Annual Review of Economics*, 12:747–773, 2020