

Syllabus: EUI topic course on “Competitive Search and Labour Sorting”, 2018-2019

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Overview: The course intends to extend students knowledge of search theory for labor/marriage markets from random search to directed/competitive search. It then briefly introduces concepts from sorting under two-sided heterogeneity, in particular which workers work for which firms and how this affects the wage inequality among workers. Finally, we combine both to study questions of sorting in search markets. The following elaborates on the three parts in more details:

(1) This course first introduces new concepts in labor search, in particular the concept of competitive search in which firms post wages strategically to attract workers. The commonalities and differences to random search models will be discussed – basic knowledge of random search as introduced in Macro III is a prerequisite. For a homogeneous-worker directed search framework we will study the basic setup and its micro-foundations, as well as more advanced topics such as optimal unemployment insurance and firm dynamics. If time permits we might get into recursive properties for business cycles.

(2) A particularly interesting topic is the study of two-sided heterogeneity where both firms (or jobs) and workers differ in skills and production non-trivially depends on who is working where. To lead over to this, the course briefly introduces key notions of matching theory in competitive equilibrium, both with small (one worker) and large (many worker) firms. Key insights on wage dispersion between agents are discussed, and possibly implications for structural change.

(3) Finally, questions of sorting will be embedded into a frictional markets setup where workers have to search for jobs. Similarities to models of marriage markets will be discussed. Key themes here are skill mismatch because workers it takes workers to long to find the right trading partners, identification (how can we actually figure these out from data), changes in the sorting patterns due to search frictions, and wage and employment implications.

The course will be given in 10 two-hour lectures. It will be assessed based on referee reports on one of the papers discussed in class, and on the following assignment: write an extension of the work they have seen. Ideally this comprises of a new or extended model, based on those they have seen in class. Less recommended but also permissible is a sketch of a new application of the models presented. The key is to lay out why this is interesting. It is also important to state clearly what insights the individual is aiming for, and why he/she thinks that those are likely to be true.

Reading List (the list contains more than we will cover, but we may also add additional literature during the course):

Part 1:

Much of the material is summarized in the following survey: Wright, Randall, Philipp Kircher, Benoit Julien and Veronica Guerrieri: "Directed Search – A Guided Tour", NBER Working Paper No. 23884 (<http://www.nber.org/papers/w23884>)

See also

Daron Acemoglu and Robert Shimer (1999) "Efficient Unemployment Insurance," JPE 107, 893-928.

Michele Belot, Philipp Kircher and Paul Muller (2016) "How Wage Announcements Affect Job Search Behavior — A Field Experiment," mimeo.

Kenneth Burdett, Shouyong Shi and Randall Wright (2001) "Pricing and Matching with Frictions," JPE 109, 1060-1085.

Manolis Galenianos, Philipp Kircher and Gabor Virag (2011) "Market Power and Efficiency in a Search Model," IER 52, 85-104.

Kevin Laang, Michael Manove and William T. Dickens (2005) "Racial Discrimination in Labor Markets with Posted Wage Offers", AER 95(4), 1327-1340.

Leo Kaas and Philipp Kircher (2015) "Efficient Firm Dynamics in a Frictional Labor Market," AER 105, 3030-3060.

Part 2:

Eeckhout, Jan and Philipp Kircher, "Identifying Sorting – In Theory" Review of Economic Studies, 2011, Vol. 78 (3), 872-906.

Jan Eeckhout and Philipp Kircher (2018) "Assortative Matching with Large Firms" Econometrica, 2018 86(1): 85-132..

Gabaix X, Landier A. Why Has CEO Pay Increased So Much?. Quarterly Journal of Economics. 2008;123 (1) :49-100.

Tervio, Marko, 2008, "The Difference that CEOs Make: An Assignment Model Approach", American Economic Review, 98(3), p. 642-668.

Part 3:

H. Chade, J. Eeckhout, L. Smith, "Sorting Through Search and Matching Models in Economics" forthcoming, *Journal of Economic Literature*.

Eeckhout, Jan and Philipp Kircher "Sorting and Decentralized Price Competition" *Econometrica*, 2010, Vol. 78(2), 539-574.

Shi, Shouyong, 2001, "Frictional Assignment 1, Efficiency", *Journal of Economic Theory*, 98, 232 - 260.

Shimer, Robert, and Lones Smith, 2000, "Assortative Matching and Search", *Econometrica*, 68(2), 343-369.

Eeckhout, Jan and Philipp Kircher, "Identifying Sorting - In Theory" *Review of Economic Studies*, 2011, Vol. 78 (3), 872-906.

Hagedorn, Marcus, Tzuo Law and Iourii Manovskii, "Identifying Equilibrium Models of Labor Market Sorting", 2017, *Econometrica*. 85(1), pp. 29-65

Jeremy Lise and Fabian Postel-Vinay, 2016, "Multidimensional Skills, Sorting, and Human Capital Accumulation", mimeo.