

## Search and Information on the Internet

### Course Overview

This section will review research on how consumers find information on the internet. We will begin with price comparison search and price dispersion. A second topic examines the role of intermediaries in affecting user behavior and user consumption of information, including search engines and search advertising, the role of search and congestion in marketplaces, the impact of the internet on the news media, and the role of news aggregators and social media on news consumption and political information.

### Readings

#### ***Suggested:***

- Athey, Susan and Glenn Ellison. "Position Auctions with Consumer Search," *Quarterly Journal of Economics*, 2011, Vol. 126, Issue 3, Pages 1213-1270. <http://economics.mit.edu/files/7560>
- Dinerstein, Michael, et al. *Consumer price search and platform design in internet commerce*. No. w20415. National Bureau of Economic Research, 2014. <http://web.stanford.edu/~leinav/Search.pdf>
- Fradkin, Andrey. Search frictions and the design of online marketplaces. Working paper, Stanford University, 2013. [http://andreyfradkin.com/assets/Fradkin\\_JMP\\_Sep2014.pdf](http://andreyfradkin.com/assets/Fradkin_JMP_Sep2014.pdf)
- Gentzkow, Matthew and Shapiro, Jesse, "Ideological Segregation Online and Offline," *Quarterly Journal of Economics*. 126 (4). November 2011.

#### **For More Background:**

#### ***Price Comparison and Price Search***

- Baye, M., and J. Morgan. "[Information Gatekeepers on the Internet and the Competitiveness of Homogeneous Product Markets](#)." *American Economic Review* 91, no. 3 (June 2001): 454-474.
- Baye, Michael, John Morgan, and Patrick Scholten, "[Price Dispersion in the Small and in the Large: Evidence from an Internet Price Comparison Site](#)," *Journal of Industrial Economics*, Vol. 52, No. 4, December 2004, pp. 463-96.
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- Ellison, Glenn and Ellison, Sara, 2009, "[Search, Obfuscation, and Price Elasticities on the Internet](#)," *Econometrica*
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- Ghose, Anindya and Yuliang Yao, "[Using Transaction Prices to Re-Examine Price Dispersion in Electronic Markets](#)," *Information Systems Research*, forthcoming.
- Hortacsu, Ali, Babur de los Santos and Matthijs Wildenbeest, "Search with Learning", working paper ([.pdf](#))
- Hortacsu, Ali, Babur De los Santos and Matthijs Wildenbeest, Testing models of consumer search using data on web browsing and purchasing behavior ([.pdf](#)), forthcoming, *American Economic Review*
- Kumar, Anuj, Michael Smith, Rahul Telang, [Information Discovery and the Long Tail of Motion Picture Content](#)
- Scott Morton, Fiona and Jorge Silva-Risso, [Zettelmeyer, Florian](#) 2003. [Consumer Information and Discrimination: Does the Internet Affect the Pricing of New Cars to Women and Minorities?](#). *Quantitative Marketing and Economics*. 1(1): 65-92.
- Scott Morton, Fiona and Jorge Silva-Risso, [Florian Zettelmeyer](#) 2006. [How the Internet Lowers Prices: Evidence from Matched Survey and Auto Transaction Data](#). *Journal of Marketing Research*. 43(2): 168-181.
- Stahl, Dale. "[Oligopolistic pricing with heterogeneous consumer search](#)," *International Journal of Industrial Organization*, 14 (2), 1996, 243-268.

### **Search Engines and Search Platforms**

- Athey, Susan, "Information, Privacy, and the Internet," Central Planning Bureau Lecture, CPB Netherlands Bureau for Economic Policy Analysis, June, 2014. <http://www.cpb.nl/sites/default/files/CPB-Lecture-2014-Information-Privacy-and-the-Internet-an-economic-perspective.pdf>
- Hagiu, Andrei and Bruno Julien, "Why Do Intermediaries Divert Search?" *Rand Journal of Economics*, 2012.
- Halaburda, Hanna and Mikolaj Jan Piskorski, "Competing by Restricting Choice: The Case of Search Platforms," Harvard Business School Working Paper, 2013.
- Ron Kohavi, Thomas Crook, Roger Longbotham, Brian Frasca, Randy Henne, Juan Lavista Ferres, Tamir Melamed, [Online Experimentation at Microsoft](#)

### **Search Advertising**

- Athey, Susan and Glenn Ellison. "Position Auctions with Consumer Search," *Quarterly Journal of Economics*, 2011, Vol. 126, Issue 3, Pages 1213-1270. <http://economics.mit.edu/files/7560>
- Athey, Susan and Denis Nekipelov, 2012, "An Empirical Model of Sponsored Search Advertising." [http://faculty-gsb.stanford.edu/athey/documents/Structural\\_Sponsored\\_Search.pdf](http://faculty-gsb.stanford.edu/athey/documents/Structural_Sponsored_Search.pdf)
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- Varian, Hal R. 2006. "[Position Auctions.](#)"
- Varian, Hal R. 2009. "[Online Ad Auctions](#) ", AER Papers and Proceedings, May 2009

### **Marketplaces, Matching and Efficiency**

- Abraham, Ittai, Susan Athey, Moshe Babaioff, and Michael Grubb, "Peaches, Lemons, and Cookies: Designing Auction Markets with Dispersed Information," working paper, 2016, <https://people.stanford.edu/athey/sites/default/files/peaches-lemons-cookies.pdf>
- Blake, Tom, Chris Nosko, and Steve Tadelis, Returns to Consumer Search: Evidence from eBay. 17th ACM Conference on Electronic Commerce, (EC 2016), June 2016, pp. 531-545. [http://faculty.haas.berkeley.edu/stadelis/BNT\\_search.pdf](http://faculty.haas.berkeley.edu/stadelis/BNT_search.pdf)
- Cullen, Zoë, and Chiara Farronato, [Outsourcing Tasks Online: Matching Supply and Demand on Peer-to-Peer Internet Platforms](#), Revise and Resubmit, Management Science.
- Farronato, Chiara, and Andrey Fradkin, "Market Structure with the Entry of Peer-to-Peer Platforms: The Case of Hotels and Airbnb," working paper.
- Einav, Liran, Chiara Farronato, and Jonathan Levin, "Peer-to-Peer Markets," *Annual Review of Economics*, 8, September 2016, 615-6. <http://www.stanford.edu/~leinav/pubs/AR2016.pdf>
- Fradkin, Andrey. Search frictions and the design of online marketplaces. Working paper, Stanford University, 2013. [http://andreyfradkin.com/assets/Fradkin\\_JMP\\_Sep2014.pdf](http://andreyfradkin.com/assets/Fradkin_JMP_Sep2014.pdf)
- Levin, Jon and Milgrom, Paul, 2010. Online Advertising: Heterogeneity and Conflation in Market Design, *American Economic Review*, 100, 603–607.
- Lewis, G. (2011) Asymmetric Information, Adverse Selection and Online Disclosure: The Case of eBay Motors, *American Economic Review*, 101, 1535–1546.
- Romanyuk G. [Ignorance is Strength: Improving the Performance of Matching Markets by Limiting Information](#), 2016, working paper.

- Tadelis, B. S. and Zettelmeyer, F. (2015) Information Disclosure as a Matching Mechanism: Theory and Evidence from a Field Experiment, *American Economic Review*, 105, 886– 905.

### **News Media**

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- Athey, Susan and Markus Mobius, "[The Impact of News Aggregators on Internet News Consumption: The Case of Localization](#)," working paper.
- Chiou, Leslie and Catherine Tucker, "[Copyright, Digitization, and Aggregation](#)," Working Paper.
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<http://faculty.chicagobooth.edu/matthew.gentzkow/research/DollarsForDollars.pdf>
- Gentzkow, Matthew and Shapiro, Jesse, "Ideological Segregation Online and Offline," *Quarterly Journal of Economics*. 126 (4). November 2011.