

## Reading list for [Summer 2022 NBER Innovation Research Boot Camp](#)

Organizers: [Kevin Bryan](#) (Toronto Rotman), [Ben Jones](#) (Northwestern Kellogg), [Heidi Williams](#) (Stanford)  
July 15-21 at the Royal Sonesta Hotel in Cambridge MA

### Friday 7/15 Session 1: Introduction, [Ben Jones](#) and [Heidi Williams](#)

- Arrow, Kenneth. 1962. "Economic Welfare and the Allocation of Resources for Invention." In *The Rate and Direction of Inventive Activity: Economic and Social Factors*, pp. 609-625. Princeton, NJ: Princeton University Press. **READ pp. 609-618 ONLY.**
- Bloom, Nicholas, John Van Reenen, and Heidi L. Williams. 2019. "A Toolkit of Policies to Promote Innovation." *Journal of Economic Perspectives* 33 (3): 163–184.
- Griliches, Zvi. 1990. "Patent Statistics as Economic Indicators: A Survey." *Journal of Economic Literature* 28(4): 1661-1707.
- Jaffe, Adam B., Manuel Trajtenberg, and Rebecca Henderson. "Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations." *The Quarterly Journal of Economics* 108, no. 3 (1993): 577–98.
- Jones, Benjamin F. and Lawrence H. Summers. 2021. "A Calculation of the Social Returns to Innovation." In *Innovation and Public Policy*, University of Chicago Press.

### Friday 7/15 Session 2: Innovation in a historical perspective, [Naomi Lamoreaux](#)

- Khan, B. Zorina. 2015. "Inventing Prizes: A Historical Perspective on Innovation Awards and Technology Policy." *Business History Review* 89 (4): 631–660.
- Lamoreaux, Naomi R., Kenneth L. Sokoloff, and Dhanoos Sutthiphisal. 2013. "Patent Alchemy: The Market for Technology in US History." *Business History Review* 87 (1): 3–38.
- Beauchamp, Christopher. 2016. "The First Patent Litigation Explosion." *Yale Law Journal* 125: 848–944.
- Usselman, Steven W. 1991. "Patents Purloined: Railroads, Inventors, and the Diffusion of Innovation in 19th-Century America." *Technology and Culture* 32 (4): 1047–1075.
- Barnett, Jonathan M. 2021. *Innovators, Firms, and Markets: The Organizational Logic of Intellectual Property*. Oxford University Press.
- Haber, Stephen H. and Naomi R. Lamoreaux, eds. 2021. *The Battle over Patents: History and Politics of Innovation*. New York: Oxford University Press.

### Saturday 7/16 Session 1: Economics of science and science funding, [Pierre Azoulay](#)

- Aghion, Philippe, Mathias Dewatripont, and Jeremy C. Stein. 2008. "Academic Freedom, Private-Sector Focus, and the Process of Innovation." *RAND Journal of Economics* 39 (3): 617–635.
- Stern, Scott. 2004. "Do Scientists Pay to Be Scientists?" *Management Science* 50 (6): 835–853.
- Azoulay, Pierre, Christian Fons-Rosen, and Joshua S. Graff Zivin. 2019. "Does Science Advance One Funeral at a Time?" *American Economic Review* 109 (8): 2889–2920.
- Furman, Jeffrey L. and Scott Stern. 2011. "Climbing atop the Shoulders of Giants: The Impact of Institutions on Cumulative Research." *American Economic Review* 101 (5): 1933–1963.
- Azoulay, Pierre, Joshua S Graff Zivin, Danielle Li, and Bhaven N Sampat. 2019. "Public R&D Investments and Private-sector Patenting: Evidence from NIH Funding Rules." *Review of Economic Studies* 86 (1): 117–152.
- Azoulay, Pierre, Joshua S. Graff Zivin, and Gustavo Manso. 2011. "Incentives and Creativity: Evidence from the Academic Life Sciences." *RAND Journal of Economics* 42 (3): 527–554.

Saturday 7/16 Session 2: Innovation policies I, [Heidi Williams](#)

- Budish, Eric, Benjamin N. Roin, and Heidi L. Williams. 2015. "Do Firms Underinvest in Long-Term Research? Evidence from Cancer Clinical Trials." *American Economic Review* 105 (7): 2044–2085.
- Galasso, Alberto and Mark Schankerman. 2015. "Patents and Cumulative Innovation: Causal Evidence from the Courts." *Quarterly Journal of Economics* 130: 317–369.
- Gallini, Nancy and Suzanne Scotchmer. 2002. "Intellectual Property: When Is It the Best Incentive System?" In: *Innovation Policy and the Economy*. Ed. by Adam B. Jaffe, Josh Lerner, and Scott Stern. Vol. 2. Cambridge: MIT Press: 51–78.
- Ouellette, Lisa Larrimore. 2012. "Do Patents Disclose Useful Information?" *Harvard Journal of Law & Technology* 25 (2): 531–593.
- Walsh, John P., Charlene Cho, and Wesley M. Cohen. 2005. "View from the Bench: Patents and Material Transfers." *Science* 309 (5743): 2002–2003.

Monday 7/18 Session 1: Idea-based models of economic growth, [Chad Jones](#)

- Romer, Paul M. 1990. "Endogenous Technological Change." *Journal of Political Economy* 98 (5): S71–S102.
- Jones, Charles I. 2005. "Growth and Ideas." In: *Handbook of Economic Growth*. Elsevier: 1063–1111.
- Jones, Charles I. 2022. "The Past and Future of Economic Growth: A Semi-Endogenous Perspective." *Annual Review of Economics*
- Bloom, Nicholas, Charles Jones, John Van Reenen, and Michael Webb. 2020. "Are Ideas Getting Harder to Find?" *American Economic Review* 110 (4): 1104–1144.
- Jones, Charles I. 2021. "Recipes and Economic Growth: A Combinatorial March Down an Exponential Tail." NBER Working Paper 28340. National Bureau of Economic Research

Monday 7/18 Session 2: Human capital and innovation, [Ben Jones](#)

- Jones, Benjamin. 2009. "The Burden of Knowledge and the 'Death of the Renaissance Man': Is Innovation Getting Harder?" *Review of Economic Studies* 76 (1): 283–317.
- Wuchty, Stefan, Benjamin Jones, and Brian Uzzi. 2007. "The Increasing Dominance of Teams in Production of Knowledge." *Science* 316 (5827): 1036–1039.
- Bell, Alex, Raj Chetty, Xavier Jaravel, Neviana Petkova, and John Van Reenen. Forthcoming. "Who Becomes an Inventor in America? The Importance of Exposure to Innovation." *Quarterly Journal of Economics*.

Monday 7/18 Keynote, [Scott Stern](#)

- Delgado, Mercedes, Michael E. Porter, and Scott Stern. 2014. "Clusters, Convergence, and Economic Performance." *Research Policy* 43 (10): 1785–1799.
- Myers, Kyle and Lauren Lanahan. Forthcoming. "Estimating Spillovers from Publicly Funded R&D: Evidence from the US Department of Energy." *American Economic Review*.

Thursday 7/21 Session 1: Innovation policies II, [John Van Reenen](#)

- Akcigit, Ufuk, Stefanie Stantcheva, Austan Goolsbee, and Benjamin Jones. 2022. "Taxation and Innovation: What Do We Know?" In: *Innovation and Public Policy*. Chicago: University of Chicago Press.
- Bloom, Nicholas, Mark Schankerman, and John Van Reenen. 2013. "Identifying Technology Spillovers and Product Market Rivalry." *Econometrica* 81 (4): 1347–1393.

- Bloom, Nicholas, John Van Reenen, and Heidi L. Williams. 2019. "A Toolkit of Policies to Promote Innovation." *Journal of Economic Perspectives* 33 (3): 163–184.
- Dechezleprêtre, Antoine, Elias Einiö, Ralf Martin, Kieu-Trang Nguyen, and John Van Reenen. 2016. "Do Tax Incentives for Research Increase Firm Innovation? An RD Design for R&D." NBER Working Paper 22405. National Bureau of Economic Research.
- Kerr, Sari Pekkala and William R. Kerr. 2022. "Immigration Policy Levers for US Innovation and Startups." In: *Innovation and Public Policy*. Ed. by Austan Goolsbee and Benjamin Jones. Chicago: University of Chicago Press.
- Goolsbee, Austan and Benjamin Jones, eds. 2022. *Innovation and Public Policy*. Chicago: University of Chicago Press.

Thursday 7/21 Session 2: Diffusion, [Kevin Bryan](#); + wrap-up from [Ben Jones](#) and [Heidi Williams](#)

- Griliches, Zvi. 1957. "Hybrid Corn: An Exploration in the Economics of Technological Change." *Econometrica* 25 (4): 501–522.
- David, Paul A. 1990. "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox." *American Economic Review* 80 (2): 355–361.
- Moscona, Jacob and Karthik Sastry. 2022. "Inappropriate Technology: Evidence from Global Agriculture." Working Paper.
- Comin, Diego and Bart Hobijn. 2010. "An Exploration of Technology Diffusion." *American Economic Review* 100 (5): 2031–2059.

Thursday 7/21 Keynote, [Rebecca Henderson](#)

- Gibbons, Robert and Rebecca Henderson. 2013. "What Do Managers Do? Exploring Persistent Performance Differences among Seemingly Similar Enterprises." In: *The Handbook of Organizational Economics*. Ed. by Robert Gibbons and John Roberts. Princeton: Princeton University Press: 680–731.
- Helper, Susan and Rebecca Henderson. 2014. "Management Practices, Relational Contracts, and the Decline of General Motors." *Journal of Economic Perspectives* 28 (1): 49–72.
- Henderson, Rebecca. 2021. "Innovation in the 21st Century: Architectural Change, Purpose, and the Challenges of Our Time." *Management Science* 67 (9): 5479–5488.