NBER Innovation Research Bootcamp Application

Dafna Bearson
Strategy Unit, Harvard Business School
February 5, 2025

Dear NBER Innovation Research Bootcamp Selection Committee,

Please find my application for the 2024 NBER Innovation Research Bootcamp attached. I have included a one-page essay describing my current and future research and reasons for wanting to attend the bootcamp. Additionally, you will find my curriculum vitae with a list of all current and completed PhD courses. I will gladly provide supporting materials upon request.

Professor Shane Greenstein has submitted my letter of recommendation to Mr. Brett Maranjian.

My complete contact information is as follows:

Dafna Bearson
HBS Mail Center
700 Soldiers Field Road
Boston, MA 02163

dbearson@hbs.edu

(510) 502-1473

I look forward to hearing from you. Thank you very much for your consideration!

Sincerely,

Dafna Bearson

DAFNA F. BEARSON
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EDUCATION

Ph.D. Harvard Business School — August 2021-
Strategy Unit, advised by Professors Juan Alcácer, Shane Greenstein, and Maria Roche

B.A. Economics, University of California, Berkeley — May 2018
Distinction in General Scholarship
Honors in Economics
Economics Honors Thesis, advised by Professor Laura D'Andrea Tyson

RESEARCH INTERESTS

- Intellectual property commercialization strategies.
- Markets for technology (MFT), including the diffusion and deployment of new technologies.
- Strategy and economics of innovation.

RESEARCH IN PROGRESS

Bearson, D. "Keep, License, or Sell? Examining the Antecedents of Strategic Intellectual Property Transfer."

Bearson, D. & Roche, M. "Transferability MATTRs: Towards Understanding Antecedents of Strategic Licensing."

Bearson, D. & Wright, N. "Strategic Targeting and Unequal Global Adoption of Artificial Intelligence."

RESEARCH PUBLICATIONS

Bearson, D., Kenney, M., & Zysman, J. (2021). "Measuring the Impacts of Labor in the Platform Economy: New Work Created, Old Work Reorganized, and Value Creation Reconfigured." *Industrial and Corporate Change, 30*(3), 536-563.

Bearson, D. & Sunstein, C. (2023). "Take-up." *Behavioral Public Policy,* 1-16.

Kenney, M., **Bearson, D.,** & Zysman, J. (2021). "The Platform Economy Matures: Exploring and Measuring Pervasiveness and Power." *Socio-Economic Review*, *19*(4), 1451-1483.

Kenney, M., Zysman, J., **Bearson, D.,** & Eldred, C. (2020). "Work in an Era of Intelligent Tools and Systems: Finding the Path to an Equitable Economy." In *Our Social Europe – Strong Together, Global Supply Chains – Global Responsibility, New Work – Human-centric Work*, edited by A. M. Deutsch, A. Görne-Zagel, F. Kopowski, P. Ständer, and M. Thies. Berlin, Germany: Federal Ministry of Labour and Social Affairs Directorate-General European and International Employment and Social Policy, ESF.

PHD COURSEWORK

Economics: Microeconomic Theory I (Arda Gitmez) and Microeconomic Theory II (Giuseppe Lopomo); Empirical Studies of Innovation and Digitization (Shane Greenstein); Economics of International Business (Laura Alfaro); Labor Market Analysis (Lawrence Katz); Behavioral Economics, Law and Public Policy (Cass Sunstein)

Methods: Econometrics I (Gregory Bruich) and Econometrics II (Timothy Layton); Analytical Methods for Strategy Research (Eric Van den Steen); Advanced Data Science (Pavlos Protopapas); Field Experiments (Michael Luca).

Strategy: Foundations of Strategy (Dennis Yao); Advanced Topics in Strategy Research (Juan Alcácer); Research Development Course in Strategy (Hong Luo, Tiona Zuzul, Andy Wu, 5 semesters completed to-date); Managing Service Operations (Ryan Buell)

CONFERENCES & SEMINARS (*INVITED)

Presenter*, "Strategic Targeting and Unequal Global Adoption of Artificial Intelligence," AI in Management, March 2025.

Presenter, "When to Lend Inventions? Strategic Licensing of Intellectual Property," Strategic Management Society, October 2024
Presenter, "Commercializing Deep Technology: Managing The Road from The Lab to The Market," Academy of Management, Summer 2024
Presenter, "When to Lend Intellectual Property," HBS Internal Strategy Unit Seminar, Fall 2023.

PROFESSIONAL EXPERIENCE

PRIMO Tutor, Harvard Business School, Harvard University, Boston, Massachusetts
June-August 2024

Teaching Fellow for MBA Strategy, Harvard Business School, Harvard University, Boston, Massachusetts
January 2024-present

Research Analyst, Professor Laura D'Andrea Tyson, University of California, Berkeley, Haas School of Business, Berkeley, California
September 2017-June 2021

Research Analyst, Professors Martin Kenney and John Zysman, Berkeley Roundtable on the International Economy (BRIE) and Center for Information Technology Research in the Interest of Society (CITRIS), Berkeley, California
May 2018-June 2021

Research Fellow, German Federal Ministry of Labour and Social Affairs (BMAS), Berlin, Germany
August 2019-January 2020

Visiting Scholar, Alexander von Humboldt Institute for Internet and Society (HIIG), Berlin, Germany
August 2019-January 2020

Researcher and Writer, Dr. Olli Rehn, Governor of the Central Bank of Finland, Virtual
August 2018-December 2018

AWARDS

PhD Research Scholarship, Harvard Business School	2021-present
Conference Scholarship, Strategic Management Society	2024
Research Scholarship, German Federal Ministry of Labour and Social Affairs	2019-2020
Regents' and Chancellor's Scholarship, University of California, Berkeley	2013-2018
Stamps Leadership Scholarship, Stamps Family Charitable Foundation	2013-2018
Gail Karp Orgell Scholarship, Jewish Community Federation, San Francisco	2013-2018
Arts and Social Change Prize, Big Ideas Competition	2017
Critical Language Scholarship in Mandarin Chinese, US Department of State	2016

OTHER

Ad hoc reviewer: Strategy Science, Socio-Economic Review, Industrial and Corporate Change, Strategic Management Society Conference.
Stata, Python, LaTex, MS Office.
English (native), Mandarin Chinese (advanced), Hebrew and Arabic (basic).

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February 5, 2025

My research explores the supply-side of markets for technology (MFT). My first paper examines innovative companies' decision to keep, sell, or license their intellectual property (IP). I hypothesize that the decision about how to commercialize IP is a strategic one, which is informed by the expected value of the IP and its relatedness to the firms' core technology position, which affects the ability to accurately predict the future value of IP. To date, I have built a novel database of over 2 million patents that are kept, sold, or licensed, combined with several established databases on patent- and firm-level characteristics. Preliminary results show that companies are more likely to license their inventions with high scientific value. Additionally, firms are more likely to license their "somewhat" economically valuable inventions, but less likely to license their least or most economically valuable inventions. The analysis is in progress for patent sales.

My second paper (with Maria Roche) examines the antecedents of firms' decisions to license IP. We propose a conceptual framework emphasizing two critical factors: (1) transferability, defined as the ease of transferring knowledge embodied in inventions across firm boundaries, and (2) relevance, representing the invention's importance to a firm's value creation and capture processes. Leveraging a novel proxy for transferability—the moving average type-token ratio (MATTR), which measures the lexical diversity of patent descriptions—we analyze licensing agreements for U.S. patents. The results reveal that higher MATTR is associated with a greater likelihood of licensing, suggesting that firms strategically enhance transferability for potential licensees. My first and second papers contribute to the literature on innovation strategy and technology markets, highlighting the strategic selection of IP into MFT and the dynamic interplay of invention characteristics, firm strategy, and industry context in shaping commercialization decisions.

My third paper (with Nataliya Wright) shifts focus to how strategic choices of technology producers may drive the unequal diffusion of frontier technologies—specifically focusing on AI. While prior work attributes uneven adoption patterns to physical transaction costs and complementary assets, we theorize that AI producers' strategic choice to target specific markets creates search and fit frictions for others. We test this theory using unique data tracking the adoption of AI and other web technologies—which requires little in the way of physical costs and complementary assets—across approximately 89,000 firms globally. We find staggered adoption of AI primarily led by large, established firms in markets that are targeted by AI producers, suggesting that others face higher search frictions. Consistent with the idea that AI producers' targeting also makes the tools less fit for others, companies that cater to different markets than the AI producers are less likely to adopt the technology, despite seeing similar performance gains.

In the future, I intend to continue to research topics related to the economics of innovation and firm strategy, specifically IP and technology commercialization strategy. This research topic is important for firms whose strategies rely on developing technology that is valuable to other companies and to firms whose strategies depend on access to technology that is developed outside of their boundaries.

I am motivated to attend the Innovation Research Bootcamp for several reasons. First, the intensive workshop will expose me to frontier literature and methods in innovation research. The opportunity to directly engage in discourse on this topic with preeminent scholars and peers will provide insight beyond what is possible from reading papers on my own. Second, the bootcamp will open the door to a community of scholars and peers with shared interests. I hope to remain connected, provide and receive feedback, share resources, collaborate, and build from each other's work. Third, this is a critical time for feedback on my projects. The ideas, methods, and discussions in the bootcamp will go directly into shaping and improving my dissertation. Because I have two and a half years of the program remaining, and my projects are still maturing, I have sufficient time to integrate learnings from the bootcamp and make substantial progress on my work. Thank you very much for your consideration.

Harvard Business School

Shane M. Greenstein
he/him/his
Martin Marshall Professor of Business Administration, Technology and Operations Management

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Dafna Bearson

February 4, 2025

I highly recommend Dafna Bearson for the 2025 NBER innovation boot camp. I know Dafna from a Ph.D.-level economics course, her qualifying exam in technology strategy, and as an advisor to her thesis. I am well-positioned to attest to Dafna's research skills, qualifications, and interests. There are several reasons that I am confident Dafna would greatly benefit from and contribute to the entrepreneurship boot camp this summer.

Dafna was a top-performing student in my doctoral course, "Empirical Studies of Innovation and Digitization." She excelled in the course, which involves rigorous quantitative analysis of empirical papers to understand the economics and strategic issues central to studying firm conduct in innovation-intensive industries. Dafna was always prepared for class and eager to contribute to the discussion. She raised interesting and important questions about the papers, demonstrating a deep understanding of the range of discussion topics, methodologically and substantively.

Since successfully passing her qualifying exams, I have advised Dafna as she has gone from having ideas to developing theory, acquiring data, performing empirical analyses, and writing two papers that are now nearly ready for submission. The focus of her research is technology commercialization. She demonstrates that while her research agenda is ambitious, she efficiently and effectively operationalizes it—and generates interest and excitement by combining foundational theory with novel ways of developing and testing it using new data and cutting-edge methods.

I recommend Dafna for the NBER innovation boot camp this summer. She is in her fourth year and would greatly benefit from the boot camp by joining a larger cohort of rising scholars in the field and because of greater exposure to leading scholars and research at the intersection of innovation and economics, which is where her interests lie.

Please do not hesitate to contact me should you have any follow-up questions.

Sincerely,

