Application for NBER Innovation Research Boot Camp 2024

Applicant info:

Jacob Greenspon
DPhil Economics student, University of Oxford
jacob.greenspon@economics.ox.ac.uk

Recommendation letter writer:

Nathaniel Lane
Associate Professor of Economics, University of Oxford
nathaniel.lane@economics.ox.ac.uk

Jacob N. Greenspon

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EDUCATION

University of Oxford — Oxford, UK
Doctor of Philosophy, Economics, *Distinction on Probationer Research Student Exams* — 2022 – Present

Harvard University, John F. Kennedy School of Government — Cambridge, MA
Master in Public Policy, International and Global Affairs (on leave 2020-21) — 2019 – 2022

Queen's University — Kingston, ON (remote)
Master of Arts, Economics (Enhanced Coursework (Doctoral) stream) — 2020 – 2021

McGill University — Montreal, QC
Bachelor of Arts, Economics and Political Science, *Distinction and First Class Honours* — 2012 – 2016

ACADEMIC PUBLICATIONS

- "Matching Geographies and Job Skills in the Energy Transition" *The Extractive Industries and Society*, forthcoming (revised version of MPP thesis) (with Daniel Raimi) (previously: Resources for the Future WP 22-25)
- "Productivity and Pay in the US and Canada" *International Productivity Monitor*, Number 41, Fall 2021 (with Lawrence Summers and Anna Stansbury) (previously: NBER WP 29548; Coverage: VoxEU, PIIE, AEIdeas,)

WORKING PAPERS

- "Did the 2022 global energy crisis accelerate the diffusion of low-carbon technologies?" (with Paulo Bastos, Katherine Stapleton, and Daria Taglioni) (draft available upon request)
- "A Note on Global Distribution of Authorship in Economics Journals" NBER Working Paper 29435 (with Dani Rodrik)

WORKS IN PROGRESS

- "Local energy access and industry location: evidence from World War II 'emergency pipelines'" (with Gordon Hanson)
- "Labour Strikes and Innovation in the Second Industrial Revolution" (draft available upon request)
- 'Out of the box' thinking? Negotiating the adoption of labor-saving shipping containerization
- The history and geography of the energy-industrialization relationship in the United States (with Gordon Hanson)
- "Social Media and Protest Diffusion: Facebook and the 2020 India Farmers Protests" (draft available upon request)

RELEVANT POSITIONS

- Research Coordinator, Harvard Kennedy School of Government, Aug. 2023 – Present (Part-time)
- Consultant, World Bank Development Research Group Trade & Intl. Integration, July 2022 – Aug. 2023 (Part-time)
- Research Assistant, Gordon Hanson, Harvard Kennedy School of Government, May 2022 – Aug. 2023 (Part-time)
- Research Assistant, Dani Rodrik, Harvard Kennedy School of Government, July 2021 – Aug. 2023 (Part-time)
- Economist, Innovation, Science and Economic Development Canada, Summer 2021
- Parliamentary Affairs Advisor, Senate of Canada, Office of Senator Peter Harder, Jan. – June 2021 (Part-time)
- Research Associate, University of Toronto Schwartz Reisman Institute for Technology, Sept. 2020 – June 2021 (Part-time)
- Analyst Intern, Colorado Governor's Office for State Planning and Budget (Harvard Dukakis Fellowship), Summer 2020
- Research Assistant, Harvard Kennedy School Wiener Center for Social Policy, Nov. 2019 – April 2020 (Part-time)
- Policy Analyst/Research Associate, Institute for Competitiveness & Prosperity/Martin Prosperity Institute, 2017 – 2019
- Economist, Centre for the Study of Living Standards, 2016 – 2017
- Trainee, Trade and Economics Section, Delegation of the European Union to Canada, Summer 2015
- Research Intern, Richard Schultz, McGill University Department of Political Science, Summer 2014

TEACHING EXPERIENCE

- Introductory Macroeconomics, University of Oxford Keble College, 2024
- American Economic Policy, Harvard University, TA for Lawrence Summers and Jeffrey Liebman, 2023
- Political Economy of Globalization, Harvard University, TF for Lawrence Summers and Robert Lawrence, 2020 and 2021
- Economic Development, Queen's University, TA for Huw Lloyd-Ellis, 2021

FUNDING AND AWARDS

- Oxford Centre for Research on Structural Transformation and Growth (CROSTAG) research grant, 2024
- Social Sciences and Humanities Research Council of Canada Doctoral Fellowship, 2023-2027
- Harvard Environmental Economics Program Mossavar-Rahmani Center Master's Student Paper Prize, 2022

FUNDING AND AWARDS (CONTD)

- Harvard Kennedy School Taubman Center Urban Prize for best paper on domestic urban issues in the US, 2022
- Harvard Kennedy School IGA Award for Best Integration of Disparate Quantitative Data in a MPP thesis (PAE), 2022
- Canadian Network for Economic History Frank D. Lewis Memorial Prize in Economic History, 2022
- Certificate of Distinction in Teaching, Harvard University Office of Undergraduate Education, 2020
- Student Fellowship, McGill University Research Group on Constitutional Studies, 2015-2016
- McGill University Charles and Betty Maldoff Family Arts Research Internship Award, 2014

PRESENTATIONS

- Sciences Po - Paris School of Economics - Harvard Kennedy School Inequality and the Environment Symposium for Early-Career Researchers, 2024, Paris, France
- US Department of Energy National Renewable Energy Laboratory - Joint Institute for Strategic Energy Analysis Energy Workforce Needs Assessment Workshop, 2023, (remote)
- Canadian Resource and Environmental Economics Association Annual Conference 2023, Ottawa, Canada
- Canadian Economics Association Annual Meeting 2023, Winnipeg, Canada (remote)
- Canadian Economics Association Annual Meeting 2022, Ottawa, Canada
- Canadian Network for Economic History Conference 2022, Fredericton, Canada (remote)
- Queen's Sociology Graduate Student Association Conference, 2021, Kingston, Canada (remote)
- Canadian Economics Association Annual Meeting 2017, Montreal, Canada

POLICY RESEARCH

- "Ontario Needs a Broader and Coordinated Approach to Innovation Policy." *Ontario 360 Transition Briefings*, 2022
- "Recent trends and long-term challenges in Ontario's labour market." *Ontario 360 Transition Briefings*, 2022
- "Productivity and Pay in the US and Canada" *International Productivity Monitor*, Number 41, Fall 2021 (with Lawrence Summers and Anna Stansbury) (previously: NBER WP 29548; Coverage: VoxEU, PIIE, AEIdeas,)
- "The Search for Stability: A Review of Worker Transitions." American Enterprise Institute, 2021 (with David Deming, Rachel Lipson, Jerren Chang, Stephanie Nussbaum, and Mariano Parro)
- "Learning from the Past for Designing the Future of AI Global Governance." Schwartz Reisman Institute, 2020.
- "Canada should tread carefully on 'common ownership' concerns" CD Howe Institute, 2019 (with Grant Bishop)
- "A Threat to Competition That's Easy to Criticize but Tough to Regulate." *Barron's Magazine*, 2019
- "Success Breeds Inequality." *Harvard Business Review*, 2019 (with Darren Karn).
- "How Big a Problem Is It That a Few Shareholders Own Stock in So Many Competing Companies?" *Harvard Business Review*, 2019
- "Unfinished Business: Ontario since the Great Recession" Inst. for Competitiveness & Prosperity Annual Report 17, 2018 (with Weseem Ahmed, Margaret Campbell, and Christopher Mack).
- "Teaching for Tomorrow: Building the Necessary Skills Today." Inst. for Competitiveness & Prosperity WP 33, 2018 (with Margaret Campbell).
- "Focus on commercialization to boost innovation in Ontario." *Ontario 360 Briefings*, 2018 (with Jamison Steeve).
- "The Final Leg: How Ontario Can Win the Innovation Race." Inst. for Competitiveness & Prosperity WP 31, 2018
- "Strength in Numbers: Targeting Labour Force Participation to Improve Prosperity in Ontario." Inst. for Competitiveness & Prosperity Annual Report 16, 2017 (with Julia Hawthornthwaite, and Saad Usmani).
- "The Gap Year: An Overview of the Issues." Centre for the Study of Living Standards Research Report, 2017
- "Are Trends in Patenting Reflective of Innovative Activity in Canada?" CSLS Report, 2017 (with Erika Rodrigues).

SERVICE

- Mentor, Graduate Applications International Network (GAIN), 2023
- DPhil Student Representative, University of Oxford Department of Economics, 2022-2023
- Mentor, Economics Applicant Mentoring Program (joint with Oxford, LSE, Cambridge, UCL, and Warwick), 2022-2023
- Undergraduate Student Representative, McGill University Senate and Faculty of Arts Curriculum Committee, 2013-2016

SKILLS: Proficient in R, Stata, LaTeX, and Microsoft Office Suite; Intermediate French

MEMBERSHIPS: Canadian Economics Association; Economic History Society

CITIZENSHIP: Canada.

List of Current/Completed PhD Courses

NB: Much of my PhD coursework was completed during my masters studies at Queen's University and the Harvard Kennedy School, with additional field courses completed during my doctoral studies at Oxford University as a 'Probationer Research Student'.

- Microeconomic Theory I, Harvard Kennedy School, Fall 2019
- Advanced Microeconomic Theory, Queen's University, Fall 2020-Spring 2021
- Industrial Organization Theory, Queen's University, Fall 2020
- Econometrics, Queen's University, Fall 2020
- Applied Econometrics, Queen's University, Spring 2021
- Macroeconomic Theory, Queen's University, Spring 2021
- Development Economics, Queen's University, Spring 2021
- Labor Market Analysis, Harvard University, Fall 2021
- Advanced Empirical Research Methods, Oxford University, Fall 2022-Spring 2023
- Economic History I, Oxford University, Fall 2022
- Labour Economics, Oxford University, Spring 2023
- Urban and Spatial Economics, Oxford University, Spring 2024 (in progress)

To the Application Review Panel:

The NBER Innovation Research Boot Camp is the ideal opportunity to learn more about the fundamentals of innovation economics while engaging with those at its frontier. My doctoral research focuses on innovations related to automation and the energy transition, typically with a policy-relevant historical lens. At the Boot Camp I hope to deepen my understanding of the drivers and impacts of innovation, build connections with experts and other young scholars with shared interests, and learn how I can contribute to advancing the research frontier. I plan to leverage this experience as I continue my doctoral research as well as my innovation policy work.

My research studies the degree to which labor and energy market developments influence both invention and diffusion, and how this interacts with the impacts innovation may have on the agents in these markets. In one project with World Bank economists, I study whether the 2022 energy price shock increased adoption of low-carbon technologies in firms, industries, and subnational regions with greater ex-ante exposure to the shock due to their energy intensity and reliance on imported fossil fuels. In future work, I hope to explore whether some of the observed increases in low-carbon technology adoption can be attributed to industrial policies or carbon pricing schemes. Another project on energy innovation, co-authored with Gordon Hanson and accepted for an April NBER special conference on The Economic Impacts of World War II, studies how the historical diffusion of natural gas led to regional economic development in energy-intensive industries. This is a part of a wider project on what lessons for the current energy transition can be drawn from the historical invention and diffusion of energy innovations.

Another area of my research studies automation and labor markets. In one paper, I find that higher labor costs due to worker strikes in American cities during the 1880s led to an increase in labor-saving patents in related industries. A final project, just begun, studies how the 1960s diffusion of shipping containerization (an important automation technology) across ports depended on firms successfully bargaining with unions to support displaced dockworkers, and how their job transitions were affected by these different compensation and retraining schemes.

My research interests developed from my work on innovation policy for the government of Canada and several think tanks. My first job after college involved documenting patenting trends across the G7, and in my next job I was invited to brief the government of Ontario on my research on university technology transfer offices and regional innovation centers. More recently, I worked on innovation strategy in Canada's Ministry of Industry. My policy work motivates my academic research and I hope to continue this involvement throughout my academic career.

The specialized education in innovation economics offered by the Boot Camp will be crucial as I progress in my PhD. Courses in labor, IO, spatial economics, and economic history have provided me with a solid foundation but left me yearning for a deeper understanding of the drivers, dynamics, and impacts of innovation. I will finally note that if selected for the Camp I will not require transportation or accommodations as I will already be located in Cambridge, MA.

Thank you in advance for considering my application to the Boot Camp.

Jacob Greenspon

DR. NATHANIEL LANE / ASSOCIATE PROFESSOR
DEPARTMENT OF ECONOMICS

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Nathaniel Lane
Associate Professor
Department of Economics
University of Oxford

15 Jan. 2023

Dear Committee Members,

Subject:

Letter of support for Jacob Greenspon for Summer Institute Innovation Policy Bootcamp

I am writing a letter in support of Jacob Greenspon, my D.Phil. student. **I fully support him attending and being considered for the NBER Innovation Bootcamp**. As an advanced doctoral student working in this area, it will be a beneficial experience.

Jacob Greenspon, a dedicated doctoral candidate, views the Innovation Research Boot Camp as a valuable opportunity to enhance his research endeavors. Through engaging with leading experts and fellow scholars, he aims to deepen his understanding of the drivers of invention. Jacob's research focuses on the intricate relationship between labor and energy markets and their reciprocal influence on innovation. His work delves into directed technological change, exploring how labor-saving inventions emerge in response to worker strikes, and examining the impact of energy prices on incentivizing low-carbon technology adoption.

Notably, Jacob investigates the effects of shipping container adoption on dockworkers and how local energy access contributes to persistent energy-intensive job growth and regional economic development. His academic pursuits align seamlessly with his prior contributions, including published work on productivity-pay linkages and involvement in innovation policy initiatives for the government of Canada and various think tanks. Jacob's comprehensive coursework in labor, urban/spatial studies, economic history, and development has aptly prepared him for the immersive experience offered by the Boot Camp.

Eager to broaden his knowledge of innovation economics, Jacob is enthusiastic about gaining exposure to cutting-edge research at the NBER Summer Institute Innovation Policy meeting. His

commitment to advancing scholarship in this field is evident, and I am confident that he will make the most of this enriching opportunity to further his academic and professional development.

Do not hesitate email me with any questions about this student. I endorse their consideration and am more than happy to provide details.

Sincerely,

Nathaniel Lane

