Jason Hall
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1925 Fourth Street South
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Dear Professors Bryan, Ganguli, and Myers,

I am writing to express my interest in the NBER Innovation Boot Camp. I am a PhD Candidate in Economics at the University of Minnesota - Twin Cities, and a Research Analyst at the Federal Reserve Bank of Minneapolis. My advisor is Professor Kjetil Storesletten (kstoresl@umn.edu), who is also my reference.

My research studies important questions in the topic of innovation policy design and innovation more broadly, including: what drives the adoption of GMO crops across countries? How does strategic behavior in labor markets by firms affect the optimal design of R&D subsidies? I approach these questions by merging economic theory with detailed primary source research, and combining restricted-access micro-data on firm R&D expenditures and R&D worker characteristics from the United States Census Bureau with purpose-built datasets. For example, in one of my projects, my coauthors and I construct a novel dataset linking transgenic crops with the genes inserted into them, and then identifying, via an extensive search of the entomology literature, the set of agricultural pests that are affected by the proteins encoded by those genes. This enables us to directly measure technological appropriateness on a country by country basis at the variety level. In contrast with prior literature, our preliminary results indicate that appropriateness does not systematically vary with development, at least in our admittedly narrow setting.

In addition to my academic work, I also have experience working in the federal government as a Pathways Intern at the National Institutes of Health, National Institute of Allergy and Infectious Disease, Technology Transfer and Intellectual Property Office, which provided me with direct exposure to some of the individuals who were charged with implementing one of the core portions of innovation policy in the United States: the transfer of public sector insights to the private sector for commercialization. This experience provided me with a desire to study both the process of innovation and innovation policy, and I think a somewhat unique perspective on both. I believe that this perspective would be valuable to the boot camp, and that the boot camp, in turn, would provide me with an opportunity to meet leaders in this field, as well as a subset of researchers who by construction are interested in the same research topics as me.

In conclusion, I believe that I would benefit greatly from participation in the Innovation Boot Camp and hope that you will select me. Thank you for your consideration.

Sincerely,
Jason Hall

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Education

PhD in Economics, University of Minnesota, In Progress (Anticipated Completion, 06/2027)

BA in Economics and Mathematics, University of Richmond, 2019 (Summa Cum Laude and Phi Beta Kappa)

Professional Experience

Federal Reserve Bank of Minneapolis, Research Analyst, 2023-Present

NERA Economic Consulting, Analyst (Antitrust and Competition Policy), 2019-2021

National Institutes of Health, National Institute of Allergy and Infectious Diseases, Technology Transfer and Intellectual Property Office, Pathways Intern, Summer 2016 & 2017

Teaching Experience

University of Minnesota, Teaching Assistant, Graduate Econometrics Sequence, Fall 2022 and Spring 2023.

Research

Publications in Academic Journals

"Discussion of 'Fiscal Federalism and monetary unions' by Berriel, Gonzalez-Aguado, Kehoe, and Pastorino," with Marco Bassetto, *Journal of Monetary Economics, 2024*.

Other Publications

"On the Mechanics of Fiscal Inflations," with Marco Bassetto and Luca Benzoni, *Quarterly Review, 2024*.

Work In Progress

"Griliches Goes Global," with Honey Batra and Scott Sommers

"Inventors are Rival, Inventions are Not"

Honors and Awards

First Place, University of Minnesota Third-Year Paper Competition, 2024

Special Sworn Status, U.S. Census Bureau, 2024-Present

First Place, University of Minnesota Sandor Poster Competition, 2024

David Lilly Family Fellowship, University of Minnesota, Fall 2022-Spring 2023

College of Liberal Arts Graduate Fellowship, University of Minnesota, Fall 2021-Spring 2022

National Merit Scholar, 2015-2019

James D. Crump Prize in Mathematics, University of Richmond, 2019

Robert L. Taylor Award for Excellence in Economics, University of Richmond, 2019

Robert E. Loving Book Award, University of Richmond, 2017

Referee Activities

Review of Economic Dynamics

Programming

R (fluent)

Julia (fluent)

SQL (proficient)

Stata (proficient)

Mathematica (proficient)

Personal

Citizenship: United States

Course Work

Please note that courses are offered in quarters at the University of Minnesota, and that I have completed all classes. I include the name of the course professor in parentheses after the course number.

Microeconomic Theory (First Year Core)

1. ECON8101 (Werner)
2. ECON8102 (Phelan)
3. ECON8103 (Rustichini)
4. ECON8104 (Rahman)

Macroeconomic Theory (First Year Core)

1. ECON8105 (Kehoe)
2. ECON8106 (Jones)
3. ECON8107 (Chari)
4. ECON8108 (Amador)

Econometrics (First Year)

1. ECON8205 (Petrin)
2. ECON8206 (Petrin)
3. ECON8207 (Mullins)

Economic Growth and Development (Field)

1. ECON8311 (Storesletten)
2. ECON8312 (Malmberg)
3. ECON8313 (Luttmer)

Public Economics (Field)

1. ECON8801 (Jones)
2. ECON8803 (Chari)

Game Theory

1. ECON8117 (Rahman)
2. ECON8118 (Rustichini)

Monetary Economics

1. ECON8701 (Arellano)
2. ECON8702 (Bianchi)

Advanced Microeconomics

1. ECON8181 (DeNardi)
2. ECON8182 (Guvenen)

Financial Economics

1. ECON8705 (Werner)

Advanced Macroeconomics

1. ECON8185 (Guvenen)

Last updated: February 5, 2025

My research agenda can be divided into two separate branches. The first of the two seeks to understand what drives the adoption of technologies across different countries, and the implications of this for cross-country inequality. The specific setting I study with coauthors is that of GMO crops, principally corn. We are motivated by a simple scientific fact - the original Yieldgard corn introduced in the United States in 1996 exhibits significant toxic activity against many of the most prominent pests of corn in Sub-Saharan Africa. Despite this, there is little adoption of either the original Yieldgard corn or any of the litany of follow-on products. The broad goal of this project is to understand why this is. One popular answer is that technology originated in developed countries is "inappropriate" for less developed countries (as in e.g. Moscona and Sastry, 2022). Our setting is particularly suited to examining this hypothesis. That is because these crops typically include genes that regulate the production of δ-endotoxins ("Cry proteins"). Each of the proteins will kill some subset of agricultural pests: we have manually reviewed hundreds of entomology articles to construct a dataset identifying which ones. To measure the importance of a pest to a given country, we measure the quantity of scientific research about the pest in that country. Appropriateness is then measured as the sum of affected pest-level importance, suitably normalized by country. We also engage in robustness exercises using pests that the entomology literature has identified as particularly important. Both proxies generate a surprising finding: there does not appear to be a systematic decline in appropriateness across the country income distribution, despite the fact that these products are overwhelmingly developed by four large Western multinationals. This suggests that inappropriateness is not the dominant concern, and to that end we are also examining a number of other hypotheses, including market-size effects, regulatory barriers, and consumer preferences in these countries.

The second branch of my research focuses on macroeconomic implications of frictions in markets for scientific researchers. The first paper in this series, which won the third year paper competition held at the University of Minnesota, develops a general equilibrium model of simultaneous dynamic competition in product markets and labor markets in which firms improve their productivity by hiring researchers in partially segmented labor markets. This segmentation generates strategic incentives to "hoard" researchers, whereby leading firms hire large amounts of researchers to raise rival's cost of innovation. In this vein, I am also working on a second project, which makes use of restricted-use Census data covering the universe of PhD recipients from the United States and the Longitudinal Employer-Household Dynamics data. This project focuses on understanding the degree of market segmentation in scientific labor markets by making use of worker mobility data and detailed characteristics about said workers, including their field of study (e.g. Computer Science). I plan to use the model to understand the implications of segmentation for government policy, including the design of R&D tax credits and basic science funding.

Attending the Innovation Boot Camp would be a boon to me for two reasons in particular. The first is that it would expose me to more traditional empirical work: my courses and research here at the University of Minnesota have had a more structural bent, and I think it would be valuable to learn more about how the innovation literature does reduced-form work from some of the best in the field. The second is that it would enable me to interact with a group of people who, by construction, have very similar research interests to me, which seems valuable both for finding coauthors and for being exposed to future leaders in the field. Being exposed to others interested in the same topics is also valuable because it gives one the opportunity to talk about research with (and get feedback from) interested parties, which is always useful (and fun!).

UNIVERSITY OF MINNESOTA

Twin Cities campus

Department of Economics
College of Liberal Arts

Kjetil Storesletten
Richard and Beverly Fink
Professor of Economics
4-141 Hanson Hall
1925 Fourth Street Southzp
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612-987-5810

February 1, 2025, Minneapolis

Dear Boot Camp Committee,

I am writing in support of my advisee, Jason Hall, who is applying for attending the NBER Innovation Research Boot Camp 2025. I am his main advisor.

Jason is the top student of his cohort of PhD students in economics at University of Minnesota. Last year he was selected as the First Place winner of the 2024 Third-Year Paper Competition for his paper "Inventors are Rival, Inventions are Not." This paper studies how market leaders use their (monopsony) market power in the labor market for researchers to bid up the wages for these researchers so as to increase the cost of innovation and R&D for competitors and potential market entrants. Jason is the most promising student we have had in our workshop. He is mature and make constructive comments in the workshop. He has a strong long-term potential as a researcher and I believe he will eventually be a top student from the University of Minnesota PhD program. In recent years we have placed students at top places such as Yale University and Brown University.

His current work studies one of the big questions in economic growth, namely what determines technology adoption and the direction of innovation. Jason aims at addressing this issue by studying a class of technologies where the appropriateness and the adoption can be measured directly, namely for GMO varieties of agricultural products.

Bottom line, the NBER Innovation Research Boot Camp 2025 would be of great benefit to Jason and I believe the boot camp would benefit from having him as a participant.

Sincerely,



Kjetil Storesletten