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January 27, 2023

NBER Innovation Research Bootcamp

Dear Professors Bryan, Ganguli, and Myers,

I am writing to apply for the Innovation Research Bootcamp. I am currently a second year PhD student in Economics at the University of Chicago. My research interests are primarily in development, economic geography, and the environment. I find the intersection of innovation, economic growth, and climate change to be a particularly exciting area. The innovation bootcamp is a great opportunity to learn more about various dimensions of innovation that can help further sharpen my research agenda on the importance of innovation in shaping the spatial distribution of economic activity, driving economic growth in developing countries, and mitigating climate change.

Prior to starting my PhD at the University of Chicago, working as a research assistant for Professors Sabrina Howell and Simone Lenzu at NYU Stern exposed me to research on innovation. In a co-authored working paper with Sabrina Howell, Jason Rathje (U.S. Air Force), and John Van Reenen (LSE), we use administrative U.S. Air Force data to assess the impact of recent reforms on innovation procurement. We find that competition openness is a key characteristic for successful innovation procurement. In this work, I developed measures of openness by applying natural language processing to application abstracts. **Sabrina Howell has graciously agreed to write a letter of recommendation.**

I also have experience researching frontier climate mitigation technologies in coauthored works with environmental scientists and foresters at UC Berkeley, with projects published in the *Proceedings of the National Academies of Sciences* and *Environmental Science and Technology*. In these projects, we use feasible technologies in a novel manner to generate climate benefits and push the market for carbon capture and innovative wood products forward in California.

Please find my CV, a list of coursework at the University of Chicago, and my research statement enclosed below. Thank you for your time and consideration. I am looking forward to hearing from you soon.

Yours Sincerely,

Jun Wong

Jun Wong

January 2023

junwong97 junwong@uchicago.edu (813)-992-2838 junwong97.github.io

EDUCATION

University of Chicago Aug. 2021 – Present
Ph.D. Economics

University of California, Berkeley Aug. 2015 – Dec. 2018
B.A. (Honors) Economics

WORKING PAPERS

Opening up military innovation: An evaluation of reforms to the U.S. Air Force SBIR program
With Sabrina Howell, Jason Rathje, and John Van Reenen.

PUBLICATIONS

Lender Automation and Racial Disparities in Credit Access
With Sabrina Howell, Theresa Kuchler, David Snitkof, and Johannes Stroebel.
Forthcoming at *The Journal of Finance*

Markets for carbon removal with renewable natural gas production with carbon capture and storage
With Daniel Sanchez, Jonathan Santoso, and Marjorie Went.
Environmental Science and Technology 56, no. 7, (2022)

Innovative wood use can enable carbon-beneficial forest management in California
With Bodie Cabiyo, Brandon Collins, Jeremy Fried, William Stewart, and Daniel Sanchez.
Proceedings of the National Academy of Sciences 118, no. 49 (2021)

SELECTED WORKS IN PROGRESS

Constrained Labor Supply Response to Weather Forecasts

Rubbish Economics: Examining Bengaluru's Municipal Waste Management
With Ashton Pallottini, Yixin Sun, and Emma Zhang

Social Connectedness and Knowledge Spillovers
With Isaac Norwich

TEACHING

Lecturer, Introduction to Microeconomics Jan. 2023 - Present
Northwestern Prison Education Program Chicago, IL

Lecturer, Seminar in Ecological Economics Aug. 2018 - Dec. 2018
UC Berkeley Economics Berkeley, CA

Head Student Instructor, Intermediate Microeconomics Jan. 2018 - May 2018
UC Berkeley Economics Berkeley, CA

RESEARCH ASSISTANCE

Research Assistant for Professor Michael Greenstone Sep. 2022 - Present
Energy Policy Institute at the University of Chicago Chicago, IL

Research Assistant for Professors Sabrina Howell and Simone Lenzu Jun. 2019 - Aug. 2021
NYU Stern New York, NY

Research Data Analyst for Professor Daniel Sanchez Jan. 2019 - Feb. 2020
UC Berkeley Environmental Science, Policy, and Management Berkeley, CA

Research Assistant for Professor Clair Brown Jan. 2018 - Aug. 2018
UC Berkeley Institute for Labor and Employment & CoolClimate Berkeley, CA

Research Assistant for Dr. Jalel Sager and Jonathan Lee Aug. 2017 - Dec. 2018
UC Berkeley CAL-RAE Berkeley, CA

PRESENTATIONS

2022 NBER Summer Institute Economics of National Security, European Finance Association Annual Meeting

Pre-2021 Low Emissions Solutions Conference, Fall AGU Meeting

OTHER INFORMATION

Honors: PREDOC Consortium Grant (2020); BITSS Catalyst Grant for Advancing Transparent, Reproducible, and Ethical Research (2020); Student Environmental Resource Center Fellowship (2018); Undergraduate Research Apprentice Summer Grant (2018); Cal Energy Corps (2018); Economics Departmental Grant (2018); Berkeley Undergraduate Scholarship (2015-2018).

Skills: R, Stata, Python, Julia, AMPL, GIS

Refereeing: *Economic Development Quarterly, Energies*

Citizenship: United States

Languages: English, Mandarin

First Year

Fall

- Empirical Analysis I (Azeem Shaikh)
- Theory of Income I (Nancy Stokey)
- Price Theory I (Kevin Murphy and Casey Mulligan)

Winter

- Empirical Analysis II (Lars Peter Hansen)
- Theory of Income II (Mikhail Golosov)
- Price Theory II (Philip Reny)

Spring

- Empirical Analysis III (Magne Mostad and James Heckman)
- Theory of Income III (Fernando Alvarez)
- Price Theory III (Lars Stole)

Second Year

Fall

- Environmental & Energy Economics I (Ryan Kellogg)
- International Macroeconomics and Trade (Jonathan Dingel and Rodrigo Adão)
- The Practicalities of Running Randomized Control Trials (Rachel Glennerster)

Winter

- Advanced Industrial Organization II (Ali Hortaçsu)
- Firm Dynamics and Economic Growth (Ufuk Akcigit)
- Spatial Economics (Esteban Rossi-Hansberg)

I am a second year PhD student at the University of Chicago with primary interests in development, economic geography, and the environment. My research relies on a variety of methods from large-scale field experiments to causally identify the effects of interventions to building quantitative spatial models to simulate counterfactuals across space.

Current and Future Research My current ongoing research has two overarching themes: the inequality in climate change adaptation and incorporating other notions of space into economic geography.

In an ongoing project, **"Constrained Labor Supply Response to Weather Forecasts"** focuses on how daily wage workers in India adapt to extreme heat days through their labor supply decisions. Often, workers in the low-wage informal sectors face tradeoffs between daily subsistence-level income and heat-related illnesses. Accurate weather forecasts can help workers adapt to extreme heat days through labor supply reallocation. This project is currently in the scoping stage and will be piloted within the next year.

In another ongoing project with coauthors Ashton Pallottini, Yixin Sun, and Emma Zhang, **"Rubbish Economics: Examining Bengaluru's Municipal Waste Management,"** attempts to find demand- and supply-side solutions for informal waste dumping in India. As Bengaluru (and much of India) has rapidly urbanized, informal dump sites have grown to be an environmental and health hazard. We are currently conducting initial descriptive surveys and this project will be piloted by the summer or fall of 2023.

Another vein of my research concerns how different notions of geography affect the spatial distribution of economic activity. In **"Social Connectedness and Knowledge Spillovers"** with Isaac Norwich, we try to understand how the differences in social networks across cities can affect the intensity of knowledge spillovers in a spatial knowledge economy. We find that the density of the social network in a particular city is positively associated with the magnitude of local knowledge spillovers.

In future work, I hope to merge the currently separate research themes into a cohesive research agenda around climate change adaptation and migration. Moreover, I would like to explore how innovation can be a central driving force in mitigating climate change and accelerating economic growth. I am particularly curious about pursuing research that would bring creative destruction models into a dynamic quantitative spatial model.

Motivation for Joining the Innovation Bootcamp I would like to attend the bootcamp for two reasons. First, I would like to learn more about the literature on directed innovation and how that can mitigate climate change. Second, I would also like to learn more about different facets of the innovation literature: the course on firm dynamics and economic growth at the University of Chicago focuses heavily on Schumpeterian models, but I would also like to be exposed to more empirical work in the innovation literature.