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February 6, 2025

Dear Professor Bryan, Professor Ganguli, and Professor Myers,

I am writing to express my strong interest in participating in the NBER Innovation Research Boot Camp 2025. As a researcher deeply engaged in understanding the intersections of trade, innovation, and labor markets, I am excited by the opportunity to contribute to and learn from this vibrant intellectual community.

My current research examines how protectionist trade policies impact firm-level innovation, in the context of China and the 2018-2019 U.S.-China trade war. This project aims to provide new empirical evidence on how trade shocks influence innovation incentives separately through the market size channel and the import competition channel, by constructing a novel measure of innovation activity based on firms' labor demand for Research & Development tasks and exploiting policy variation in both export tariffs and import tariffs to disentangle the two channels. Using theory summarized by Akcigit and Melitz (2022) to guide the empirical analysis, this study builds on foundational work by Bloom, Draca, and Van Reenen (2016) and hopes to extend their insights to the setting of a middle-income country and negative trade shocks. In another project, I explore how labor market regulations shape firms' technology adoption decisions and the implications for earnings dynamics. In the future, I aim to investigate how trade disruptions affect the adoption of capital-embedded technologies and the impact on firms' productivity.

In addition to my independent research, I have had the privilege of working as a research assistant for Professor Peter Schott, where I have gained invaluable experience working with firm level data in the U.S. to think about a firm's innovation behavior and outcome, and their relationship with the firm's manufacturing activities. Professor Schott has kindly agreed to provide a letter of recommendation on my behalf.

The NBER Innovation Research Boot Camp represents an unparalleled opportunity to refine my research agenda, engage with leading scholars, and deepen my methodological expertise. I am eager to contribute my perspectives on trade and innovation while gaining insights that will shape my future work. Thank you for considering my application. I look forward to the possibility of joining this esteemed program.

Sincerely,
Sabrina Peng

CHENCHEN (SABRINA) PENG

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Research Interests:

Trade, innovation and technology adoption, and related labor market effects

Fields of Concentration:

Primary: International Trade

Secondary: Economics of Innovation, Labor Economics

Comprehensive Examinations Completed:

2023 (Oral): International Trade (*with distinction*); Economic Development (*with distinction*)

Education:

Ph.D. Candidate in Economics, Yale University, 2024-

M.Phil. Economics, Yale University, 2024

M.A. Economics, Yale University, 2024

B.A. Mathematics and Economics (*highest distinction*), University of Virginia, 2020

Fellowships, Honors and Awards:

Ryoichi Sasakawa Young Leaders Fellowship Fund (SYLFF) fellowship, Yale University, 2023

Cowles Foundation & Doctoral Fellowship, Yale University, 2021-

Best Undergraduate Paper Award, International Atlantic Economic Society, 2020

Duncan Clark Hyde Academic Achievement Award, University of Virginia, 2020

Research and Work Experience:

Research Assistant to Prof. Peter Schott and Prof. Teresa Fort, Yale University, 2023-

Research Assistant to Prof. Paul Goldsmith-Pinkham, Yale University, 2022

Data Scientist, 2nd Order Solutions, 2020-2021

Pre-Doctoral Publication & Conference Presentation:

"Selective Entry in Highway Procurement Auctions", (2020), *Atlantic Economic Journal*, 48:519–533.

2020: International Atlantic Economic Society Virtual Conference

Languages: English (fluent), Mandarin (native)

PhD Courses

Completed:

- General Economic Theory: Microeconomics (year-long sequence)
- General Economic Theory: Macroeconomics (year-long sequence)
- Econometrics I & II
- General Economic History: Western Europe
- Topics in Empirical Economics and Public Policy
- Industrial Organization I & II
- International Trade I & II
- Economic Development I & II

Current:

- Empirical Trade and Development: A Practitioner's Guide

Research Statement

My research explores how trade and labor market policies affect innovation and technology adoption, and the implications for firms' productivity and workers. Two primary lines of inquiry drive my current work: understanding how protectionist policies impact innovation and examining how labor market regulations influence technology adoption and earning dynamics.

My first project (joint with Jianwei Ai and Tra Nguyen, both PhD students) investigates how protectionist trade policies impact firm-level innovation, in the context of China and the 2018-2019 U.S.-China trade war. While the recent trends towards protectionist policies raise important questions about the impact of such policies on innovation, most of the work on this topic has been done in the context of globalization, and the empirical evidence on the effect of import competition on innovation is mixed (Akcigit and Melitz 2022). By combining a novel measure of innovation activities based on firms' labor demand in Research and Development (R&D) related tasks and policy variation in both export tariffs and import tariffs, we aim to provide new empirical evidence on how trade shocks influence innovation incentives separately through the market size channel and the import competition channel. While rising export tariffs decrease firms' profits from selling a new product, rising import tariffs may create opportunities for firms to capture domestic market shares. Guided by these theoretical insights, we build on seminal work by Bloom, Draca, and Van Reenen (2016) and hope to extend their insights to the setting of a middle-income country and negative trade shocks.

My second project (joint with Tra Nguyen) examines how labor market regulations influence technology adoption and the resulting earning dynamics. In an environment where new technology vintages emerge and require new skills from the workers to complement, adopting the newest technologies can render the skills of older workers obsolete. Thus, with the higher labor adjustment costs imposed by more stringent labor market regulations, firms may be more reluctant to adopt new technologies, favoring the older workers at the cost of firms' productivity. This project seeks to understand the role of labor market regulations in shaping firms' decisions to adopt new technologies, the implications for efficiency, and the distributional consequences across workers of different age groups and occupational categories.

Looking forward, I am particularly interested in extending my research agenda to several areas. First, I aim to investigate how trade disruptions – due to natural disasters or geopolitical factors – affect the adoption of capital-embedded technologies and the heterogeneous impact on firms' productivity. Second, I seek to understand the relationship between buyer-supplier matches and innovation, particularly the role of long-term trade relationships in fostering innovation, and the potential disruptions in these trade relationships due to innovation and the subsequent product switches. Third, I am interested in studying the spatial dimensions of technology adoption, particularly the effects of automation technologies on inequality across geographic units.

The NBER Innovation Research Boot Camp represents an exceptional opportunity to deepen my understanding of innovation economics. The program's interdisciplinary approach and the chance to engage with leading scholars and participate in the NBER Summer Institute Innovation Policy meeting will be invaluable for me to refine my research agenda, gain theoretical insights, and deepen methodological expertise. I am especially eager to engage with empirical techniques that bridge micro-level firm behaviors with macroeconomic outcomes, equipping me to produce actionable insights for both academic and policy audiences. My work's focus on the intersection of trade, innovation, and labor markets positions me to contribute meaningfully to the boot camp's discourse, while benefiting from its rich intellectual environment.

Yale SCHOOL OF MANAGEMENT

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February 6, 2025

Dear Committee,

This letter is in support of Sabrina Peng's application to attend the 2025 NBER Innovation Research Boot Camp. Sabrina is currently 4-th year PhD student in the Yale Economics Department. I first met Sabrina during her first year in the program when she sought me out to discuss research topics. We've met regularly since then, and two years ago I asked her to be one of the two RAs I have working with US Census data. She is smart, hard-working, creative and ambitious. She is an excellent RA – quick to catch on and able to get things done with minimal supervision – and is developing a good idea for her dissertation.

I think Sabrina is an excellent candidate for this boot camp for two additional reasons. First, for her dissertation she plans to explore the role of changes in trade policy on firm innovation in China and perhaps the United States. Second, her RA work for me also focuses on innovation, in particular a paper I am working on now with co-authors that uses microdata to revisit the question about whether ideas are getting harder to find. Given these interests, I think she would benefit tremendously from the program you are planning. I also think she will add meaningfully to the discussions that take place during the program, both formal and informal.

If you would like any further information, please let me know.

Sincerely,



Peter K. Schott
Juan Trippe Professor of International Economics
Yale School of Management