Jiancong Liu
jiancong.liu@phd.unibocconi.it
https://sites.google.com/view/jiancong-liu/home

January 30, 2025

To NBER Innovation Research Boot Camp

Dear Selection Committee,

It is with great enthusiasm that I submit my application for the *NBER Innovation Research Boot Camp 2025*. As a Ph.D. candidate at Bocconi University, I specialize in international trade and development economics with a focus on firm dynamics. I believe this program offers an invaluable opportunity to deepen my understanding of innovation economics and its interactions with market structure and features of globalization.

While my current research is mainly about firms and productivity dynamics, I'm interested in learning more about innovation economics. I have one preliminary project that investigates the impact of ownership structure on firms' innovation directions, taking into consideration of both the knowledge spillover channel and the anti-competition channel. I'm keen in exploring more about firms' innovation strategy and the related strategic interactions, particularly under the context of globalization, import competition pressure, and north-south differences in IP protection.

Participating in the Innovation Research Boot Camp would allow me to expand my knowledge of core theories, methods, and frontier questions in the economics of innovation, an area highly complementary to my existing work. I am particularly excited about engaging with a community of leading scholars at the forefront of this critical field, including Professors Azoulay, Bryan, and Williams, and gaining insights that will significantly enhance my research and expertise. The opportunity to attend the NBER Summer Institute Innovation Policy meeting is also highly appealing, as it would provide exposure to cutting-edge research and valuable networking opportunities.

As someone passionate about producing policy-relevant research, I am also eager to understand broader institutional and economic factors that drive breakthrough innovation and facilitate technology diffusion to create a more resilient and inclusive global economy. I am confident that this boot camp will provide the foundational knowledge and connections to guide my next steps as a researcher.

My recommendation letter will be provided by my Ph.D. supervisor, **prof. Gianmarco Ottaviano** (email address: **gianmarco.ottaviano@unibocconi.it**). Thank you for considering my application, and I look forward to the opportunity to contribute to and learn from this exciting program.

Yours sincerely,

Jiancong Liu

Jiancong Liu

JIANCONG LIU

Ettore Bocconi Department of Economics, Bocconi University, Milan, Italy
(+39) 349-789-5471 | Personal Website | jiancong.liu@phd.unibocconi.it

EDUCATION

Ph.D. in Economics and Finance, Bocconi University, Milan, Italy *2025 (Expected)*
- DSE summer school, Massachusetts Institute of Technology *2022*
- Market Design, Revealed Preference Approach, Two-Sided Matching

M. A. in Economics, University of British Columbia, Vancouver, Canada, *2019*
B.B.A. in International Business, Zhongnan University of Economics and Law, Wuhan, China, *2018*

CONFERENCE AND SEMINAR PRESENTATION

First-Year Courses: Introduction to Mathematics; Introduction to Probability; Econometrics (1-3); Microeconomics (1-4); Macroeconomics (1-4)

Field Courses: Development Economics; Structural Econometrics; Topics in Applied Econometrics; Advanced Econometrics; Advanced Macroeconomics; International Trade; Corporate Finance; Advanced Topics in Asset Pricing

RESEARCH INTERESTS

International Trade, Finance and Development, Public Economics, Innovation Economics

WORKING PAPERS

Pro-Competitive Gains of Trade Facilitation: Evidence from China (with *Y. Ao*)
- Focus on national *Single Window* program, rationalize inconsistency between micro and macro evidence
- Imputed per-shipment fixed cost, Staggered DID for identification, policy-equivalent (tariff) comparison
- General equilibrium quantification and decomposition of welfare consequences

Biased Tax Enforcement as A Trade Barrier: The Role of Mandated Transparency at Custom
- Estimate the impact of information based tax enforcement on firms' export performance via RDD
- Develop a novel modelling method to connect domestic and foreign market with linear marginal costs

Academic Retractions and Entrepreneurial Outcomes (with *Y. Ding, M. Matta, H. Xu*)
- Use semantic similarity to link startup firms and academic retractions, compile multi-dimension datasets
- Identify the causality with stacked DID, explore mechanism via heterogeneity and stock market reactions

Trade Finance and Exports: Firm-level Evidence from China (with *M. Auboin, B. Haile, Y. Wang*)
- Identify trade loans using the description of purpose, adjust by export-related notes receivables
- Media exposure: faculti.net; WTO Staff working paper: Research ERSD-2024-05

Specialization or Collaboration? Innovation under Common Ownership (with *Y. Ao, J. Shuai*)
- Study the response of innovation direction changes to common ownership status, with firm-pair data
- Index switch and financial institution merges for Stacked Diff-in-Diff and instrument variable

WORKING IN PROGRESS

- Non-Performing Loans and Structural Transformation (with *N. Limodio*)
- Weak Banks Make You Feel the Heat: How NPLs Delay the Green Transition (with *A. Raabe*)
- Digital Infrastructure and Port Efficiency (with *D. Xie*)

RESEARCH EXPERIENCE

Ph.D. Intern, ERDI, Asian Development Bank *September 2024 – November 2024*
- Conduct research on climate finance: data collection, identification strategy development and analysis
- Present final output and JMP on Bank-wide seminars; participate in regular department workshops

Ph.D. Intern, ERSD, World Trade Organization *October 2023 – March 2024*
- Contributed to drafting World Trade Report 2024, focusing on the roadmap for dom. policy and int. corp.
- Developed SQL skills independently to query the WTO tariff line database, supporting quantification
- Actively participated in brainstorming sessions, workshops (UNCTAD, ILO) and seminars (IHEID)
- Co-authored on trade finance (WTO staff working paper) and climate risk on supply chain (manuscript)

Research Assistant, Bocconi University, Prof. Gianmarco Ottaviano *November – December 2023*
- Empirically test the theoretical prediction using Chinese Customs data and firm-level census data

Research Assistant, Bocconi University, Prof. Francesco Decarolis *April – August 2021*
- Help with the replication package in Python for publication (K-Means Clustering); draft referee reports

TEACHING EXPERIENCE

Teaching Assistant, Bocconi University *2020 – 2023*
- Graduate level: Econometrics; International Trade and Globalization
- Undergraduate level: International Economics
- In-class teaching, software workshop, exam questions preparation, office hours, exams grading

Teaching Assistant, University of British Columbia *2019*
- Principal of Macroeconomics (Undergraduate)
- In-class teaching, grading exams, office hours

REFEREE SERVICE

World Trade Review; International Tax and Public Finance

CONFERENCE AND SEMINAR PRESENTATION

2025: AEA Annual Meeting

2024: Royal Economic Society; Comparative Analysis of Enterprise Data Conference; Academic Conference on Inclusive Trade Policy; PhD Workshop on Quantitative Finance and Financial Technology Workshop; UEA European Meeting; Asia-Pacific Trade Seminar; IIPF Annual Meeting; 6th World Bank/IFS/ODI Public Finance Conference; ADB/ERDI seminar; 9th Zurich Conference on Public Finance

2023: RIEF Doctoral Meeting; GEP CEPR Postgraduate Conference; Econometric Society Asian Meeting; EEA Meeting; Midwest International Trade and Theory Conference; Econometric Society European Winter Meeting; LEAP Milan; Trade Tea Milan

MISCELLANEOUS

Software: Stata, Python (Advanced), Matlab, Dynare (Proficient), R, SQL (Beginner), Latex
Technical: Web Scraping (Proficient); Machine Learning and Textual Analysis (Proficient)
Language: Chinese (Native); English (Professional); French (Beginner)

Current and Future Research and Motivation for Attending the Boot Camp

I identify myself as an applied economist. My research spans the intersections of international trade, industrial organization, and finance, with an emerging focus on the economics of innovation. My work integrates causal inference techniques and general equilibrium models to explore firm dynamics, market structures, and broader welfare implications. While my primary research agenda has been centered on globalization and trade, I have recently expanded my interests to the role of innovation in firms' responses to import competition and strengthening resilience to climate change, particularly in developing countries.

My job market paper investigates the pro-competitive effects of trade facilitation and finds that *National Single Window*, a typical trade facilitation measure, undermines the relative advantage of large firms and encourages market entry, thereby intensifying competition, enhancing allocation efficiency, and boosting aggregate productivity. Building on it, an extension project investigates how streamlined Customs processes impact port efficiency. Another strand of my research centers on corporate finance and climate banking. A preliminary project exams **how common ownership affects firms' innovation direction**, considering both knowledge spillover and anti-competition incentives. During my internship at Asian Development Bank, I coauthored a paper analyzing the role of non-performing loans in mobilizing private credit to finance green transition, one measure being green innovation. Through my research experience, I developed a robust set of empirical skills and gained extensive familiarity with firm-level datasets and patent data, providing a strong foundation for my future research in innovation.

Looking ahead, I aim to deepen my understanding of the interplay of forces that drives the **direction of firms' innovation**. I'm particularly interested in putting this research under the context of **globalization**, namely global value chain and import competition. This is an important topic because social planner, in general, may want to have a broader scope of innovation directions while it is likely that individual rational, due to say market power and/or outside opportunities, leads to concentration in some domains, creating potential welfare loss. I am also very interested in exploiting potential policy tools to correct this specific market failure.

The NBER Innovation Research Boot Camp represents an ideal platform to enhance my expertise in this domain. The opportunity to engage with leading researchers, learn about frontier methods, and discuss critical innovation policy issues aligns perfectly with my academic trajectory. Participation in this program will equip me with the theoretical and empirical tools needed to integrate innovation into my research agenda effectively. Moreover, attending the NBER Summer Institute sessions will provide invaluable exposure to cutting-edge debates and foster collaborations with peers and mentors in the field.

By attending the boot camp, I hope to contribute to the broader discourse on innovation economics and leverage these insights to inform both my research and policymaking endeavors. I am particularly eager to apply these learnings to address pressing challenges, especially in emerging economies, bridging the gap between academic research and impactful policy solutions.

Università Commerciale
Luigi Bocconi

Via Sarfatti 25
20136 Milano

Milan, February 3rd, 2025

TO THE NBER INNOVATION RESEARCH BOOT CAMP SELECTION COMMITTEE

It is my pleasure to strongly recommend Jiancong Liu, a Ph.D. candidate in Economics and Finance at Bocconi University, for the 2025 Innovation Research Boot Camp.

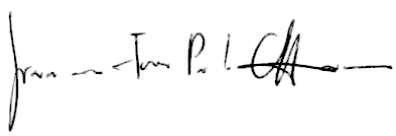
As his supervisor, I have closely followed his academic growth and am consistently impressed by his analytical rigor and creativity to answer pressing economic questions. Jiancong specializes in the study of international trade and development economics. His job market paper, Pro-Competitive Gains of Trade Facilitation: Evidence from China, employs cutting-edge methods to quantify how Custom reforms reshape market competition, making novel contribution to understanding institutional and technological drivers of efficiency. Equally compelling is his work on Specialization or Collaboration? Innovation Direction under Common Ownership. Although preliminary, it is an interesting project that aligns with the scope and focus of the bootcamp. I believe he will benefit a lot from attending this research event.

Beyond research, Jiancong has interned at the World Trade Organization and Asian Development Bank, where he contributed to high-impact projects on trade inclusiveness and green innovation. His presentations at leading conferences (UEA, RES) further demonstrate his capacity to engage critically with diverse scholarly audiences.

I would therefore strongly recommend Jiancong as a very valuable participant to the NBER Innovation Research Boot Camp 2025. As Jiancong Liu is a committed, sociable and interactive person, his presence would be an asset for other participants.

Do not hesitate to contact me for any further information.

Sincerely yours



Gianmarco I.P. Ottaviano
Professor of Economics
Achille and Giulia Boroli Chair in European Studies
Department of Economics