Ruyue Li

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February 12, 2026

NBER Innovation Research Boot Camp
Selection Committee

Dear Members of the Selection Committee,

I am a third-year doctoral student in the Department of Strategy and Innovation at Boston University's Questrom School of Business, working under the supervision of Professor Timothy Simcoe and Professor Rena Conti. I am writing to express my strong interest in participating in the NBER Innovation Research Boot Camp.

My research examines how the design of financial contracts and the associated allocation of control rights influence the lifecycle of innovation and the allocative efficiency of technology markets. This interest is rooted in a broader desire to understand how the architecture of entrepreneurial finance shapes innovation outcomes. As venture-backed firms become a primary source of innovation and remain private longer backed by various financing arrangements, understanding how these financial institutions affect the innovation ecosystem is critical for designing policies that facilitate efficient asset reallocation and maintain competitive market dynamics.

The Boot Camp is uniquely timed for my development. Having recently completed my comprehensive exams and entered the core empirical phase of my dissertation, I am eager to engage with the program's focus on frontier measurement methods and to discuss the policy implications of financial governance in innovation—an area where I believe the diverse empirical contexts and vibrant intellectual community in the Boot Camp would be invaluable for my growth as a scholar.

Enclosed please find my curriculum vitae, doctoral course list, and a one-page research statement. A letter of recommendation from Professor Timothy Simcoe has been submitted separately.

Thank you for your time and consideration. I look forward to the possibility of participating in the Boot Camp and contributing to the discussions on innovation economics.

Sincerely,

Ruyue Li

Ruyue Li

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Department of Strategy and Innovation, Questrom School of Business
Boston University, 595 Commonwealth Avenue, Boston, MA 02215

Education

Boston University, Questrom School of Business — Boston, MA
Ph.D. in Business Administration (Strategy and Innovation) — 2023–present
· Advisors: Timothy Simcoe and Rena Conti
· GPA: 3.84/4.00

Bocconi University — Milan, Italy
M.Sc. in Economic and Social Sciences — 2020–2023
· Thesis: "Can Centralized Procurement Stimulate Innovation? Evidence from China's Pharmaceutical Industry"
· Advisor: Christoph Carnehl
· GPA: 28.3/30
· Bocconi Graduate Merit Award

Shanghai Jiao Tong University — Shanghai, China
Bachelor of Economics — 2016–2020
· Exchange: Sciences Po (Institut d'Études Politiques de Paris), Spring 2019

Research Interests

Market for technology, Entrepreneurial finance, Economics of innovation, Industrial Organization

Experience & Skills

Pfizer Upjohn, Strategy & Business Development — 2019–2020
Quantitative analysis of pharmaceutical market dynamics and competitive landscape mapping.

Technical Skills:
· **Analysis:** Python (Pandas/Polars), Stata, R, SQL
· **Data:** Experience merging USPTO (PatentsView) with financial (PitchBook/Crunchbase) and regulatory (FDA) data.
· **Languages:** Mandarin Chinese (Native), English (Fluent), Italian (Beginner).

Doctoral Coursework

Ruyue Li · Ph.D. Program, Strategy and Innovation
Questrom School of Business, Boston University · Cumulative GPA: 3.84/4.00

Fall 2023

GRSEC 701	Microeconomic Theory
GRSEC 705	Introduction to Mathematical Economics
GRSEC 707	Advanced Statistics
QSTDS 906	Philosophy of Science Research

Spring 2024

GRSEC 703	Advanced Microeconomic Theory
GRSEC 708	Advanced Econometrics I
GRSMA 751	Statistical Machine Learning
HBS 4561	Empirical Studies of Innovation

Fall 2024

CASEC 717	Advanced Topics in Microeconomics I (Network Theory and Social Learning)
CASEC 731	Market Organization and Public Policy
QSTDS 925	Causal Inference in Strategy
QSTMO 923	Field Studies Seminar

Spring 2025

CASEC 732	Topics in Industrial Organization
ENGEK 800	Ethics and Research
QSTSI 917	Technology Strategy and Innovation
QSTSI 920	Organizations in Strategy and Economics
HBS 4350	Theoretical and Empirical Perspectives on Entrepreneurship and Innovation

Non-Course Milestones

The Art & Practice of Teaching Seminar (Completed Aug 2025)

Research Statement

My research investigates how financial architecture governs the lifecycle of innovation. Beyond capital provision, I examine how financial contract design and the resulting allocation of control rights influence the movement and productivity of technological knowledge. Motivated by the rise of venture lending and secondary markets, my work seeks to characterize the relationship between the micro-foundations of financial contracting and broader patterns of allocative efficiency.

My primary project analyzes how specialized debt financing influences innovation trajectories in biopharma. While traditional secured creditors can lead to the sale of core, technologically critical patents during bankruptcy—often resulting in slower technology diffusion and acquisition by non-practicing entities (Ma, Tong, and Wang, 2022)—venture lenders position themselves as relational intermediaries with deep industry expertise. I examine whether this expertise mitigates such liquidation frictions or whether the use of patents as collateral (Hochberg, Serrano, and Ziedonis, 2018) inevitably replicates the inefficiencies observed in traditional debt settings. Drawing on Williamson (1988), I hypothesize that the efficacy of this governance is moderated by asset specificity. For patents of intermediate specificity—those too niche for liquid markets but valuable to sector-specific incumbents—the lender's role in coordinating redeployment is most critical. Using clinical trial failures as the trigger of control shift, I merge USPTO assignment data with financing histories to test whether debt-backed control facilitates productive redeployment or merely reinforces the established frictions of creditor-driven liquidation.

A second project explores how shifting venture capital fund structures, such as continuation vehicles and GP-led secondary markets, relate to the long-term direction of R&D. As fund structures decouple from the traditional 10-year horizon, I explore whether these arrangements encourage a pivot toward breakthrough innovation by extending investor patience or systematically favor the incremental "evergreening" of existing assets.

My research bridges financial economics and the economics of innovation. By participating in the Boot Camp, I hope to gain substantial insights into the latest research on the economics of innovation to further sharpen my thoughts on how financial intermediaries and contract design influence the composition and continuity of R&D. Beyond frontier methodological training, I look forward to engaging with this community to sharpen the policy relevance of my findings and better situate my work within the literature on technological reallocation and creative destruction as I progress toward the job market.

References

Ma, Song, Joy Tianjiao Tong, and Wei Wang. 2022. "Bankrupt Innovative Firms." Management Science 68 (9): 6971–92.

Hochberg, Yael V., Carlos J. Serrano, and Rosemarie H. Ziedonis. 2018. "Patent Collateral, Investor Commitment, and the Market for Venture Lending." Journal of Financial Economics 130 (1): 74–94.

Williamson, Oliver E. 1988. "Corporate Finance and Corporate Governance." The Journal of Finance 43 (3): 567–91.

Boston University Questrom School of Business
595 Commonwealth Avenue
Boston, Massachusetts 02215

February 10, 2026

Dear Organizers,

I write to recommend Ruyue Li, a 3rd-year PhD student in Strategy and Innovation at Boston University, for the NBER Innovation Research Boot Camp.

Ruyue's research investigates how financing instruments shape the management of innovation assets. Her primary project examines venture debt in biopharma startups, asking how its hybrid governance—combining contractual rights with relational discretion—affects patent reallocation following adverse shocks. Using clinical trial failures as exogenous events, she tests whether the efficiency of this reallocation depends on the match between governance structure and asset specificity. A second project explores how evolving venture capital structures, such as continuation vehicles, affect the lifecycle and direction of innovation assets.

Ruyue has taken a number of seminar courses in entrepreneurship and innovation at Boston-area schools, and he is well versed in the fundamentals of a variety of literatures in this area. The Boot Camp would help her deepen her knowledge of frontier measurement methods and sharpen the policy dimensions of her work regarding private credit in innovation-driven firms.

Ruyue is also an outgoing student who I believe would be an engaged, valuable contributor to these sessions.

Please feel free to reach out with any additional questions.

Best regards,



Timothy Simcoe
Professor of Strategy and Innovation
Boston University Questrom School of Business