Chun Zhao
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February 6, 2025
Selection Committee
NBER Innovation Research Boot Camp
National Bureau of Economic Research
Subject: Application for the NBER Innovation Research Boot Camp 2025

Dear Selection Committee,

I am writing to apply for the 2025 NBER Innovation Research Boot Camp. As a PhD student in Finance at Stanford GSB, my current research interests are entrepreneurship and innovation. Attending this boot camp would allow me to deepen my understanding of the field, engage with leading researchers, and refine my methodological approach. The opportunity to participate in the NBER Summer Institute Innovation Policy meeting would further enrich my perspective.

Attached are my CV and research statement. Professor Emanuele Colonnelli, will submit a letter of recommendation separately.

Thank you for your time and consideration. I look forward to the opportunity to contribute to and learn from this program.

Sincerely,
Chun Zhao

PhD Student in Finance
Stanford Graduate School of Business

CHUN ZHAO

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EDUCATION

Graduate School of Business, Stanford University 2023 - Present
PhD Student in *Finance*

Tsinghua University 2018 - 2023
BA in *Economics & Finance* (Highest Honor), Minor in *Law*

University of California - Berkeley 2021
Visiting Student in Economics

Booth School of Business, University of Chicago 2021 - 2022
Visiting Student in Business

PHD COURSES

Graduate School of Business, Stanford University 2023 - 2025

- Econometric Methods I (A+) by Hong Han
- Microeconomic Analysis I (A) by Takuo Sugaya
- Macroeconomics I (A+) by Monika Piazzesi and Martin Shneider
- Microeconomic Analysis II (A+) by Weijie Zhong
- Financial Markets I (Theoretical Asset Pricing, A+) by Antonio Coppola
- Macroeconomics II (A) by Adrien Auclert and Pete Klenow
- Applied Econometrics (A) by Guido Imbens
- Empirical Asset Pricing (A+) by Hanno Lustig
- Corporate Finance Theory (A+) by Jeffrey Zwiebel
- Macroeconomics (Advanced Growth, A+) by Chad Jones and Pete Klenow
- Macroeconimics and Financial Markets (A+) by Arvind Krishnamurthy and Monika Piazzesi
- Dynamic Asset Pricing Theory (A+) by Darrell Duffie
- Heterogeneous Macro & Finance (In Progress) by Martin Shneider and Christopher Tonetti
- Empirical Corporate Finance (In Progress) by Juliane Begenau and Vikrant Vig
- Advanced Corporate Finance (In Progress) by Zhiguo He

University of California - Berkeley 2021

- Econometrics II (A) by Demian Pouzo and James Powell

PUBLICATION

1. Does Fintech Improve Your Fund Investment? Analysis Based on Fund sales channels (with F. Gao, C. Zhong, T. Wang and Q. Wang) [forthcoming at **Journal of Financial Research** (in Chinese)]
   - Probably no. Overconfident retail investors tend to over-trade facing lower transaction fee.

WORKS IN PROGRESS

Startups in Africa
with Emanuele Colonnelli (Booth), Marcio Cruz (IFC), Mariana Pereira-Lopez (IFC) and Tommaso Porzio (Columbia GSB)
Presented at NBER Summer Institute 2024 - Entrepreneurship

- *Abstract*: We document a drastic increase in the flow of high-growth (venture) capital to "startups" in Africa over the past decade. We build a new data infrastructure to characterize the features of this new and growing entrepreneurial ecosystem. Startups are digital, have highly educated founders, and cluster around high-density high-human capital hubs. While several of these facts are common to other emerging markets, one feature stands out as unique to Africa: the role of foreign influence. We show that the bulk of investment flows to white entrepreneurs who studied or worked outside of Africa, primarily comes from foreign investors from rich countries, and displays homophily patterns based on common language and past colonial linkages. To disentangle between a demand and supply channel of foreign influence, we conduct a real-stakes, large-scale field experiment in collaboration with the International Finance Corporation to identify the preferences of Africa's high-potential startups using incentive-compatible surveys. Entrepreneurs do not care about the source of capital (foreign or not) and place nearly zero value on forms of non-financial support. Instead, they display a strong preference for equity investments coming from investors with local experience, but do not want to give up control of the firm. Our findings point to a "missing" local equity financing market for startups in Africa leading to a dominance of foreign investors' influence on Africa's entrepreneurial ecosystem.

Government Failure in Fixing Market Failure: Evidence from Chinese Bank Lending Market
with Feng Gao (Tsinghua University) and Zhiguo He (Stanford GSB)

- *Abstract*: Over the past decade, the Chinese government has implemented a large-scale policy requiring all banks to provide more and cheaper loans to small businesses, which has caused the proportion of small business loan balances to increase from 18% in 2008 to 40% in 2023. Combining loan level data and company-level data, we evaluate the impact of this policy. We find sizeable real effects of the policy around the cutoff line between small and median-sized firms that increase growth, investment, and job creation among small firms and harm medium-sized firms. The average effect of the policy is negative.

RESEARCH EXPERIENCE

Booth School of Business, University of Chicago 2021 - 2022
Research Assistant to Emanuele Colonnelli

Booth School of Business, University of Chicago 2021 - 2022
Research Assistant to Zhiguo He

Tsinghua University 2019 - 2021
Research Assistant to Feng Gao

SEMINARS, CONFERENCES, AND WORKSHOPS

(* Indicates presentation by co-author)

- **2024**: NBER Summer Institute 2024 - Entrepreneurship*, Stanford GSB Finance Brownbag, Columbia Business School*, Harvard Business School*

PROFESSIONAL EXPERIENCE

Guolian Securities 2020
Summer Intern, Quantitative Researcher, High Frequency Trading Division *Beijing, China*

RESEARCH GRANTS

Future Scholar Program Research Grants, Tsinghua University 2021 - 2023
Tsinghua University - UChicago Joint Center for Economic and Finance 2022 - 2024

SKILLS AND INTERESTS

Software LaTeX, R, Python, STATA, Matlab, C, C++, SPSS
Languages Chinese (native), and English (fluent)
Interests Cooking; Sake; Film; Japanese Literature

Research Statement

Chun Zhao
Stanford Graduate School of Business

My research interests lie at the intersection of innovation and entrepreneurship, with a particular focus on how financial and institutional frictions shape firm dynamics. I aim to integrate micro-level empirical data with macroeconomic perspectives to examine how political, financial, and institutional constraints influence innovation outcomes, particularly in emerging markets.

One of my current projects, co-authored with Emanuele Colonnelli, Marcio Cruz, Mariana Pereira-Lopez, and Tommaso Porzio, examines the role of foreign financial and human capital in shaping Africa's startup ecosystem. We document the absence of a well-developed local equity market, which has led to a heavy reliance on foreign investors, despite African startups exhibiting a strong preference for equity over debt. This reliance has far-reaching effects beyond financing—it influences the composition of startup founders and the types of business models pursued by firms. By linking venture capital investment data from PitchBook with LinkedIn-based founder microdata, we show that startups with foreign investors and internationally educated founders are significantly more likely to replicate business models from the countries where their investors are based, rather than developing innovations tailored to local market needs. These findings provide new empirical evidence on how financial frictions and institutional constraints shape innovation, firm growth, and the long-term sustainability of entrepreneurial ecosystems in emerging economies.

For my second-year paper, I seek to explore a broader and more fundamental question at the intersection of institutions, venture capital, and innovation. While existing research has documented how legal and institutional frameworks shape financial contracts and how innovation outputs vary across institutional environments, there is limited empirical work linking these contractual frictions to firm-level innovation outcomes. My goal is to establish microfoundations for how institutions influence the structure of financial contracts in venture capital and private equity (VCPE) investments, and in turn, how these contractual variations shape firms' incentives to invest in innovation. Using global PitchBook data on VCPE contracts and patent records from Google Patents, I plan to analyze how different legal regimes—such as strong versus weak investor protection—affect the prevalence of convertible securities, board control rights, and staged financing. By investigating the connection between financial contract design and subsequent innovation outcomes, my research seeks to bridge institutional theory with firm-level entrepreneurial decision-making.

Broadly, my research is driven by a deep curiosity about economic growth and its most fundamental driver—innovation. I am particularly interested in understanding how major frictions, such as political institutions, inequality, and financial market constraints, shape the incentives and mechanisms that drive technological progress. Hence, attending the NBER Innovation Research Boot Camp will be instrumental in advancing my research in multiple ways. First, the boot camp will expose me to cutting-edge research at the intersection of innovation, finance, and institutions, which directly aligns with my research agenda. Learning from leading scholars such as Chad Jones, Ben Jones, and Heidi Williams will help refine my theoretical foundations and empirical strategies. Second, the opportunity to engage with faculty and fellow researchers will provide valuable feedback and insights that can shape my approach to studying financial frictions in innovation. Third, participating in the NBER Summer Institute Innovation Policy meeting will allow me to connect my work to broader policy implications, particularly regarding the role of government and institutional quality in fostering high-growth entrepreneurship. Lastly, given my long-term interest in technology diffusion, venture capital, and startup ecosystems, this boot camp offers a unique setting to build collaborations with researchers who share similar interests.

THE UNIVERSITY OF CHICAGO
BOOTH SCHOOL OF BUSINESS
CHICAGO, ILLINOIS 60611

EMANUELE COLONNELLI

PROFESSOR OF FINANCE AND ENTREPRENEURSHIP AT THE UNIVERSITY OF CHICAGO, BOOTH SCHOOL OF BUSINESS

EMANUELE.COLONNELLI@CHICAGOBOOTH.EDU

February 4th 2025

Dear Committee,

Recommendation for Chun Zhao

I am writing this letter of support for Chun, whom I have known for about 3.5 years. He's now a very committed coauthor of mine on my new paper on "Startups in Africa".

Chun would be a tremendous addition to the Bootcamp and has my highest possible recommendation. Having done the bootcamp myself in the past at the same time of my PhD career, I am sure it will benefit him massively and would help shape his path to become a young leader in the field. At Stanford, he's working with Amit Seru, Ilya Strabulaev, and Zhiguo He, who I know are very very excited about Chun. I offered to write this letter as a former participant in the bootcamp, and the person who knows his research and interest in innovation and entrepreneurship the most at this early stage of his career.

Chun is currently at the top of his cohort of PhD students in Finance at Stanford GSB, where he's developing a very strong focus on the intersection between entrepreneurship and innovation, and more specifically on the role of regulation and institutions in the development of venture capital and private equity industries around the world.

Emanuele Colonnelli

