Harvard Business School

FROM: Haiyang Zhang

Harvard Business School
700 Soldiers Filed Road
Boston MA 02163

January 24, 2025

Dear NBER Innovation Research Boot Camp 2025 Organizers,

Please find my contact information below:

Applicant: **Haiyang Zhang**

Email: hzhang@hbs.edu

Phone: 215-824-9400

Letter writer: **Shane Greenstein**

Email: sgreenstein@hbs.edu

Institution: Harvard Business School

Sincerely,

Haiyang Zhang

Haiyang Zhang

Updated January 23, 2025

hzhang@hbs.edu
700 Soldiers Field Road, 2027 HBS Mail Center, Boston, MA 02163
(215) 824-9400

EDUCATION

Harvard Business School — Cambridge, MA
PhD, Strategy — 2022 –

Harvard Kennedy School — Cambridge, MA
MPA/ID — 2016 – 2018

Columbia University — New York, NY
MA in Economics — 2015 – 2016

University of Virginia — Charlottesville, VA
BA in Philosophy Politics and Economics (Distinction) — 2009 – 2013

WORKING PAPERS

Haiyang Zhang. "Strategic Focus: Evidence from the U.S. Power Generation Sector." Working Paper.

Haiyang Zhang, **Shane Greenstein, Roberto Fontana, Do Yoon Kim**. "Regulatory Change and Innovation Strategy: Evidence from the U.S. Unlicensed Spectrum Market." Working Paper.

Haiyang Zhang, **Soctt Counts**. "Entrepreneurship and AI: Evidence from GPT-Powered Bing" Working Paper.

Haiyang Zhang, **Aticus Peterson**, and **Andy Wu**. "Entrepreneurial Projection Strategy." Submitting to SMJ.

Haiyang Zhang. "Incorporating Google Trends Data in Predicting Consumer Confidence" Working Paper.

OTHER PUBLICATIONS

Shelley Stewart III, Michael Chui, James Manyika, JP Julien, Dame Vivian Hunt, Bob Sternfels, Jonathan Woetzel, and **Haiyang Zhang**. "Economic State of Black America." McKinsey & Company, June 2021.

Haiyang Zhang. "Cross-Country GDP Comparison: Purchasing Power Parity Sexennial Update." The Financial Times (FT), June 2020.

Marion Laboure, **Haiyang Zhang**, and Juergen Braunstein. "The Rise of Silicon China." Project Syndicate, April 2018.

Haiyang Zhang. "The Low U.S. Unemployment Should Not Be Celebrated." Harvard Kennedy School Review, August 2017.

Haiyang Zhang. "U.S. Manufacturing Jobs Are Not Coming Back." Harvard Kennedy School Review, February 2017.

PRESENTATIONS

2024: Strategy Science Annual Conference (Ann Arbor, MI)
DRUID (Nice, France)
SMS Annual Conference (Istanbul, Turkey)
2023: AOM Annual Conference (Boston, MA)

INVITED CONSORTIA & WORKSHOPS

2025: DRUID PhD Academy (Aalborg, Denmark)
2024: Strategy Science Doctoral Workshop (Ann Arbor, MI)
2023: Strategic Management Society (SMS) Doctoral Workshop (Toronto, Canada)
Theoretical Organizational Models Society Summer School (Boston, MA)
Wharton Innovation Doctoral Symposium (Philadelphia, PA)

TEACHING

Teaching Fellow for Josh Lerner and Shai Berstein, Harvard Business School
Teaching Fellow for Andy Wu, Harvard Business School
Teaching Fellow for Carmen M. Reinhart, Harvard Kennedy School
(Spring 2023, Spring 2018)
Teaching Fellow for Laurence H. Summers, Harvard University (Fall 2017)

AWARDS

Doctoral Fellowship, Harvard Business School, 2022 – Present
Frédéric Bastiat Fellowship, Mercatus Center, 2024
Research Grant, Ash Center for Democratic Governance and Innovation, HKS, 2018
Degree Programs Student Affairs Research Grant, Harvard Kennedy School, 2018
NG Teng Fong Graduate Fellowship, Harvard University, 2016-2018
Harvard International Development Internship Fund, Harvard University, 2017
Research Grant, Mossavar-Rahmani Center for Business & Government, HKS, 2017
Marco Polo Fellowship, Harvard University, 2016-2017
Travel Grant, Central European University, 2016
Pforzheimer Fellowship, Pforzheimer Foundation, 2016
Toyota Scholarship, Toyota Motors Scholarship Fund, 2015

SKILLS

Language: Chinese, Portuguese, English
Computing: Python, R, Stata, SQL, MATLAB, Colab, TensorFlow
Data visualization: JavaScript, Tableau
Other: FAA Private Pilot License

INDUSTRY POSITIONS

McKinsey & Company, Engagement Manager
McKinsey Global Institute, secondment
World Bank Group, Researcher
Central Bank of Sri Lanka, Researcher
Nodal Exchange, Researcher (Market Design)

REFERENCES

Shane Greenstein
Juan Alcacer
Maria Roche

Harvard University

Cambridge, Massachusetts 02138

Harvard Kenneth C. Griffin Graduate School of Arts and Sciences

Zhang, Haiyang

HUID: **51244729**

Good Academic Standing

Beginning of Harvard Kenneth C. Griffin Graduate School of Arts and Sciences Record

2022 Fall

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
ECON 2020A	Microeconomic Theory I	4.000	A-
ECON 2110	Econometrics I	4.000	A-
HBSDOC 3000	Reading and Research	4.000	
HBSDOC 4110	The Foundations of Strategy	4.000	A

2023 Spring

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
ECON 2020B	Microeconomic Theory II	4.000	A-
ECON 2726	Theoretical and Empirical Perspective on Entrepreneurship: Economics and Finance	4.000	A
HBSDOC 4430	Field Experiments	4.000	A
HBSDOC 4561	Empirical Studies of Innovation and Digitization	4.000	A
HBSDOC 4913	Advanced Topics in Strategy	4.000	A

2023 Fall

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
HBSDOC 3000	Reading and Research	4.000	
HBSDOC 4070	Design of Field Research Methods	4.000	A
HBSDOC 4115	Analytical Methods for Strategy Research	4.000	A
HBSMBA 2292	War & Peace: The Lessons of History for Strategy, Leadership, Negotiation, Policy, and Humanity	4.000	II

2024 Spring

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
ECON 2727	Empirical Methods in Financial Economics	0.000	INC
HBSD 3000	Reading and Research	4.000	
HBSDOC 4906	Teaching Time	4.000	SAT
HBSDOC 4913	Advanced Topics in Strategy	4.000	A-

2024 Fall

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
ECON 2610	Industrial Organization I	4.000	B+
HBSDOC 3000	Reading and Research	0.000	

2025 Spring

Program: Doctor of Philosophy
Subject: Business Administration

Course	Description	Earned	Grade
ECON 2611	Industrial Organization II		
HBSDOC 3000	Reading and Research		

End of Harvard Kenneth C. Griffin Graduate School of Arts and Sciences Record

UNOFFICIAL TRANSCRIPT

Erika J. McDonald, Registrar

Not official unless signed and sealed

As a doctoral candidate at Harvard Business School, I study how firms innovate and adapt their strategies in response to transnational shocks, emerging technologies, and regulatory changes. Broadly, my research aims to address fundamental questions at the intersection of strategy, innovation, and policy. Specifically, I investigate how a firm's strategic decisions, incentive structures, and operational processes jointly influence innovation pace, direction, and outcomes in technology-intensive industries such as telecom, energy, and manufacturing.

Innovation is central to my research agenda. In **"Regulatory Change and Innovation Strategy: Evidence from the U.S. Unlicensed Spectrum Market"** (with Shane Greenstein et al.), we analyze how regulatory change affects incumbent innovation strategies and new entrant technologies. Using three decades of administrative filings, we find that while deregulation initially advantages incumbents through their existing technological capabilities, it ultimately creates opportunities for new entrants to introduce disruptive innovations. This work reveals how institutional changes can simultaneously reinforce incumbent advantages while seeding longer-term market transformation.

Building on this foundation, I explore how firms combine technological and organizational innovation to address emerging challenges. In a solo work, **"Strategic Focus: Evidence from the U.S. Power Generation Sector,"** I examine how ownership structures drive technological advancement and productivity gains. By pairing high-frequency production data with two decades of acquisition patterns, I document that a strategic focus on core technologies, enabled by private equity ownership, leads to efficiency improvements and novel operational approaches—highlighting the complementarities between ownership decisions and innovation strategies.

In parallel, a third project extends these themes by examining how firms innovate in response to environmental pressures, particularly in technology-sensitive industries such as breweries. Using geospatial analysis and econometric methods, I study how firms develop strategies and technological solutions to build resilience against environmental risks. This research aims to shed light on how sustainability imperatives drive both technological and organizational innovation.

I am eager to attend the NBER Innovation Research Boot Camp to refine and expand these lines of research. The Boot Camp complements my curriculum and research in the tradition of Empirical Studies of Innovation and Digitization (taught by Shane Greenstein) and will help situate my findings in a broader innovation context. I also look forward to engaging and learning from scholars such as Heidi Williams, Kyle Myers whose scholarship intersects with my work.

Harvard Business School

Shane M. Greenstein
he/him/his
Martin Marshall Professor of Business Administration, Technology and Operations Management

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Haiyang Zhang

February 4, 2025

I highly recommend Haiyang Zhang for the 2025 NBER innovation boot camp. I know Haiyang from a Ph.D. level course, his qualifying exam in technology strategy, and as a co-author of research about Wi-Fi equipment markets. I am well-positioned to attest to Haiyang's research skills, qualifications, and interests. There are several reasons that I am confident Haiyang would greatly benefit from and contribute to the entrepreneurship boot camp this summer.

Haiyang was a top-performing student in my doctoral course, "Empirical Studies of Innovation and Digitization." He excelled in the course, which involves rigorous quantitative analysis of empirical papers to understand the economics and strategic issues central to studying firm conduct in innovation-intensive industries. He was always prepared for class and eager to contribute to the discussion. He raised interesting and important questions about the papers, demonstrating a deep understanding of the range of discussion topics, methodologically and substantively.

Since successfully passing his qualifying exams, Haiyang has worked with me on a project about Wi-Fi equipment markets. He has helped with the empirical analyses, and I expect the paper to circulate this spring. The focus of his research is technology commercialization. He is in the midst of his third year and is just beginning to formulate his research direction, so the camp could be influential.

I recommend Haiyang for the NBER innovation boot camp this summer. He would greatly benefit from the boot camp by joining a larger cohort of rising scholars in the field and because of greater exposure to leading scholars and research at the intersection of innovation and economics, which is where her interests lie.

Please do not hesitate to contact me should you have any follow-up questions.

Sincerely,

