NBER Entrepreneurship Research Boot Camp Application

Applicant: Shibo Zhou, Postdoctoral Researcher, Department of Strategy & Innovation, Copenhagen Business School

PhD Graduate School: Georgia Tech, the US

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Area of Interest: Innovation, entrepreneurship, economics of science

Year of Entry into PhD: 2017 Georgia Tech, Scheller College of Business

Year of Completion: 2023 July

Reference: José Mata, Maersk Mc-Kinney Møller Professor of Entrepreneurship

Department of Strategy & Innovation, Copenhagen Business School

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SHIBO ZHOU

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RESEARCH INTEREST

Economics of Innovation, Entrepreneurship, Economics of Science

EMPLOYMENT

Postdoctoral Researcher 2023 -

Copenhagen Business School

EDUCATION

Ph.D., Strategy and Innovation 2017- 2023

Scheller College of Business, Georgia Institute of Technology, Atlanta GA
Committee: Peter Thompson (Chair), Alex Oettl, Marco Ceccagnoli, DK Lee (Boston University)
Minor: Economics

M.Sc., Business Management 2015-2017

Rotterdam School of Management, Erasmus University Rotterdam, the Netherlands

B.Sc., Psychology 2010-2014

Peking University, China

WORKING PAPERS

Impact of User Reviews on Product Development: Do Producers Learn from Users? (Ready to Submit to *Strategic Management Journal*)

Conference Proceedings: Zhou, S. (2020). How Do Users' Reviews Matter for Corporate Innovation?. *Academy of Management Proceedings*. Vol. 2020, No. 1, p. 12700.

Other Conference Presentation: DRUID, France, 2024.

ABSTRACT Online user reviews are an important external information source for both consumers and producers. While the reviews' impact on consumer purchasing behaviors has drawn much attention in the literature, whether it can influence producers in terms of future product development remains unclear. In this paper, I examine the role of user reviews on product development and assess how the impact varies across different types of reviews. Analyzing textual data from a two-sided platform using the NLP technique, I evaluate the effect of review ratings on video game updates. The empirical results show that games with more design-related reviews have a higher probability of updates in the following month when users are not satisfied. Moreover, firms with more resources and capabilities can learn from reliability-related reviews for more complicated product development. The developed updates are positively correlated with the re-engagement of inactive users. My finding shows that producers learn from users to absorb ideas about subsequent product development, and the relationship is heterogeneous across different dimensions of the reviews and producers. I discuss the implications of the results for platform owners and producers for further development.

Fight or Flight: Timing Innovation in Competitive Markets with José Mata (Ready to submit to *Management Science*)

ABSTRACT Product commercialization has been extensively studied, yet little is known about the innovation processes that unfold after a successful launch. Digital products, such as software, video games, and connected appliances, offer an ideal setting to explore post-launch innovation due to their frequent and flexible update cycles. Entrepreneurs, in particular, play a critical role in driving these innovations, often leveraging updates to refine their offerings, respond to competition, and engage users. This paper investigates the timing of updates in digital products, focusing on Kickstarter-funded video games on Steam. Using survival analysis, we examine how startups strategically release small updates (e.g., bug fixes) and major updates (e.g., feature expansions). Small updates are frequent early in the product lifecycle, addressing initial uncertainties, while major updates are spaced more evenly to sustain long-term engagement. The impact of competition is complex: competitive intensity at launch accelerates early updates, while post-launch competition reduces update frequencies. Moreover, the effects of competition vary by lifecycle stage and are moderated by the type of competitor, with startups and incumbents exerting differing influences on firms' update strategies. These findings provide new insights into how entrepreneurship, competition, and lifecycle dynamics shape post-launch innovation in digital products.

Impact of Foreign Policy on Domestic Corporate Innovation - A Perspective of Knowledge Spillover with Kedong Chen and Xiaojin Liu

Conference Proceedings: Zhou, S., Chen, K., & Liu, X. (2024). Impact of Foreign Policy on Domestic Corporate Innovation. In *Academy of Management Proceedings* (Vol. 2024, No. 1, p. 16871). Valhalla, NY 10595: Academy of Management.

ABSTRACT In 2009, the Chinese government launched the "National Innovative cities" policy to support firms' innovation in selected regions. However, besides the explicit purpose of facilitating local innovation, the unintended consequence of the policy outside the country is unclear. *How does foreign government support influence domestic inventors who have collaborated with supported foreign firms before?* By employing the difference-in-differences (DiD) technique in the quasi-experimental setting, we examine the influence of foreign government (China) intervention on domestic partners (the US inventors). We find that domestic inventors who have established collaborative relationships with firms in selected Chinese cities experience an increase in new collaborators and innovations, compared to the US inventors who have collaborated with firms in unselected cities. We further show that inventors with less patent stock take better advantage of cross-border government support. Taken together, the findings of the study suggest a win-win outcome of the policy: foreign government support can facilitate unintended cross-border knowledge flows and strengthen the innovation performance of "treated" domestic inventors.

Status Gain and Knowledge Exploration with Zeren Li, Jesscia Li, and Xiao-Ping Chen. Conferece

Conference Presentation by Co-author: AOM, Chicago, 2024.

The Trajectory from Patient Innovators to Patient Entrepreneurs with José Mata and Pedro Oliveira (Collecting Data)

The Effect of Motherhood on Research Commercialization with Yining Luo and Ziyi Chen (Collecting Data)

CONFERENCE & WORKSHOP ATTENDANCE

Academy of Management, Chicago, IL, August 2024
DRUID, Nice, the US, June 2024
International Conference on the Science of Science & Innovation, Evanston, IL, June 2023
Emerging Markets Theme - PhD Research Day, Cornell University, New York, NY, November 2022
TIM Doctoral Consortium, Academy of Management Annual Meeting, Seattle, WA, August 2022
Academy of Management, Seattle WA, August 2022
Advanced Causal Inference Workshop, Northwestern University, Chicago, IL, August 2022.
Platform Strategy Research Symposium, Boston University, Boston, MA, July 2022
Academy of Management, Virtual, August 2021
Academy of Management, Virtual, August 2020
Roundtable for Engineering Entrepreneurship Research (REER), Scheller College of Business, Georgia Institute of Technology, Atlanta, GA, November 2019
Allied Social Sciences Associations (ASSA) Annual Meeting, Atlanta, GA, Januray 2019
STR Doctoral Consortium, Academy of Management Annual Meeting, Boston, MA, August 2019
Roundtable for Engineering Entrepreneurship Research (REER), Scheller College of Business, Georgia Institute of Technology, Atlanta, GA, November 2018
Academy of Management, Chicago, IL, August 2018

TEACHING EXPERIENCE

Copenhagen Business School, Denmark
Summer 2024, Fall 2024 *Technology Strategy* (Master)

Scheller College of Business, Georgia Institute of Technology
2019 - 2021 *Strategy and Innovation* (Undergraduate, MBA, Evening MBA) TA for Marco Ceccagnoli
2020 *Foundation of Strategy* (Undergraduate) TA for Eunhee Sohn

SERVICE

Ad-hoc Reviewer: Management Science
Reviewer: Academy of Management Annual Meetings 2019-2024
Associate Editor: Academy of Management Annual Meetings TIM Division 2021-2022

TECHNICAL SKILLS

Stata, Python(Natural Language Processing), R, SPSS, LaTeX

Motivation Letter

As a Ph.D. in Management, I have found that while discussions of entrepreneurship are not rare, they are far from mainstream in strategic management. My research, however, has been shaped by my training at Georgia Tech, where the faculty have a strong background in economics. As a result, I feel a stronger connection when discussing with economists how econometric analyses can identify causal relationships regarding how market dynamics impact entrepreneurship. Therefore, I am motivated to deepen my understanding of entrepreneurship research at the NBER Boot Camp.

As a postdoctoral scholar in Denmark, I missed my opportunity to attend the NBER Entrepreneurship Research Boot Camp as a Ph.D. student at Georgia Tech due to several reasons, with the most significant being COVID-19. However, I am confident that my participation at this stage of my career will yield greater benefits than if I had attended earlier. I regard myself as a late bloomer—I struggled to fully understand research during graduate school, but years of independent research and collaboration with economists have profoundly enhanced my perspective. I now feel ready to maximize the opportunities at the Boot Camp and contribute to peers facing similar challenges. Additionally, my decision to join Copenhagen Business School was driven by a desire to build international networks and access valuable registry data that can address questions beyond the scope of US datasets. Nordic data, despite some criticisms, offers unique insights into economic questions, such as how personal background and experience shape entrepreneurship. My long-term goal is to return to the US after my postdoctoral training, where I can share this data with collaborators and contribute to future research collaborations.

My research addresses the interplay between entrepreneurship and innovation. Building on my Ph.D. work, I am collaborating with Dr. José Mata on the temporal patterns of entrepreneurial innovation in the software industry. We focus on post-launch continuous R&D, revealing that entrepreneurs' incremental innovation efforts increase initially but decline over time, whereas major innovations remain less sensitive to time. This trend is moderated by external factors such as market demand and competition. This project exemplifies my dedication to understanding the processes of entrepreneurship and innovation using rigorous econometric methods. In another joint project with Dr. José Mata and Dr. Pedro Oliveira, I am studying the healthcare industry to investigate why some patients successfully disseminate their innovations by starting their own firms while others share their innovations for free or license them to larger firms. This research bridges the gap between user innovation and user entrepreneurship, shedding light on how "accidental" entrepreneurs shape economic outcomes differently than larger corporations.

Taking these research streams together, my future work aims to further explore the entrepreneurial process, particularly how entrepreneurs learn and improve over time. This requires detailed taxonomies and granular data, which is why I am delving deeply into Danish registry data. Additionally, my training in economics has fueled my interest in understanding the impact of factors such as market dynamics, institutional frameworks, and resource allocation. For example, in my second paper, we analyze how founding conditions, such as the competitive environment shaped by incumbents and startups, influence the innovation trajectories of new firms. Digitalization, which provides individuals with access to resources and information, has increased entrepreneurial entry rates by reallocating resources and overcoming traditional barriers, such as consumer research through user review systems and financial resources through crowdfunding. Consequently, my future research will focus on how digitalization transforms these factors, particularly how ecosystems and market designs influence competition and innovation dynamics post-entry.

Thank you for considering my application. I look forward to the possibility of joining this exceptional program and am happy to provide additional information if needed.

CBS DEPARTMENT OF STRATEGY AND INNOVATION

January 21, 2025

To Whom It May Concern,

I am writing to recommend Shibo Zhou for the NBER Entrepreneurship Bootcamp.

Shibo has been a post-doc at Copenhagen Business School since September 2023. He was offered this position to work primarily on a project that studies innovations developed by patients concerning their diseases. Shibo is investigating the process by which these patients developed their innovations and the extent to which they engaged in their dissemination, namely through commercialization and entrepreneurship. This project is based on a pre-existing sample of patient innovators; Shibo has developed a questionnaire and is engaged in obtaining responses from innovators. He has been coordinating a group of research assistants that have been doing qualitative interviews with a subset of these innovators.

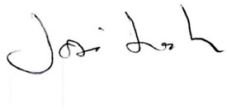
In parallel, we are developing another research project, which studies the updating frequency of online games. For digital products, releasing updates are a form of solving the tension between the pressure to go to market early and the need to assure product reliability. Firms release updates of different types: minor updates correct bugs, while substantive updates roll out new features. In this study, we show that the two types of updates are determined very differently by product life cycle and competition. I was quite impressed by Shibo's JMP and these ideas developed from discussions of this paper. Shibo came up with most of the ideas of this new study, engaged in new data collection, did the econometric analysis and wrote a first draft.

Shibo has a good knowledge of the literature on innovation and wide interests in the area. He can use different types of research methods and has done it diligently and competently. He has been teaching an elective on Technology Strategies and has been doing it quite independently and with good students' evaluations.

In short, I believe he is well prepared to take advantage of the Bootcamp and can benefit a lot from it; therefore, I strongly support his application.

Do not hesitate to contact him if there is anything else you would like to discuss.

Best regards,



José Mata

Maersk Mc-Kinney Møller Chair of Entrepreneurship
Professor of Strategy and Entrepreneurship

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