Roham Rezaei

PhD student in Finance at the UNSW, Sydney, Australia

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Application Packet for the NBER Entrepreneurship Research Boot Camp 2023

Application Essay
Roham Rezaei

In my first project, I study how venture capital (VC) financing responds to the emerging threats from deep-pocketed incumbents. In recent years, concerns have been raised about a decline in business dynamism and an increase in market concentration and markups across various industries, with negative implications for entrepreneurship (Decker, Haltiwanger, Jarmin, and Miranda, 2014). The "*kill zone*" or "*killer acquisitions*" hypotheses argue that incumbents can make it difficult for startups to enter and grow through their market power (Kamepalli, Rajan, and Zingales, 2020; Cunningham, Ederer and Ma, 2021). Also, anecdotal evidence suggests big tech incumbents, with their record-high levels of cash, tend to put pressure on startups through various means, such as copying startups' novel ideas and developing similar products, heavy marketing spending, or pricing strategies. Also, these deep-pocketed incumbents may control platforms that startups depend on or have established distribution networks and customer bases that startups may find hard to replicate. Such observations, nonetheless, do not seem to have hindered VC investments. In fact, VC investments peaked in the last decade in terms of both the dollar amount and the number of companies receiving funding, even in the tech sector.

This led me to study how VCs have adapted their financing and contracting to incorporate the competitive threats posed to their portfolio companies. My empirical research draws on Bolton and Scharfstein's (1990) theory of contracting, which explores the trade-off between predation risk and addressing agency problems. I develop a novel textual analysis method, in the spirit of Hoberg and Phillips (2016), to determine the listed competitors of each startup firm. I then examine how the cash holding of the competitors, as a proxy for their deep pockets, affects the financing of VC-backed startups. I find evidence that VC investors are more patient in financing startups under competitive threats and are less sensitive about short-term performance metrics. Instead, they monitor and interact with these startups more frequently. The VCs backing these firms are also larger and more specialized. My results highlight the crucial role financing plays in fostering entry and mitigating the competitive pressure of incumbents.

I am also interested in the governance of entrepreneurial firms. In another project, I examine the monitoring role of VC-appointed directors who sit on startup boards. In the past, after growing beyond a certain stage, startups would go public to access additional capital, but now the ability to stay private for longer has given rise to a new set of governance challenges. These firms can avoid regulatory requirements to establish transparent governance structures by staying private. In a private company, VCs are expected to play a key role in governance by serving on the board of directors and providing monitoring and oversight. However, the growth of private capital markets has raised questions about the effectiveness of VCs as monitors for various reasons.

Chernenko, Lerner and Zeng (2021) show that the arrival of late-stage non-VC investors can dilute the governance authority of VCs in startup boardrooms. Furthermore, VCs themselves have become increasingly busier, with growing numbers of startups in their portfolios while their human capital resources are limited. Similarly, their fundraising events can create distractions and disrupt their ability to monitor the startups they are invested in effectively. Additionally, as the number of VCs investing in

a startup increases, the board size can become excessively large, causing unnecessary complexity with adverse implications for the board's effectiveness. Currently, I am examining how distractions and complexity within the VC's portfolio and the size of the board can impact the effectiveness of the VC as a monitor.

I also plan to study the role of venture capital in human capital retention and attraction of startups. Human capital can often be the core asset of an entrepreneurial firm. However, rivals, either an incumbent or another startup, can poach the startup's employees for strategic reasons. Losing key employees can adversely impact the startup's intellectual property and trade secrets, as the employee may take confidential information and business strategies to their new employer. Also, such losses might disrupt workflow and productivity. Moreover, the cost of recruiting and training new employees can be a significant drain on the startup's financial resources, especially if the startup does not have the resources to compete with larger, more established firms for talent. I plan to explore whether venture capital can play a role in mitigating these challenges and helping startups retain and even attract top talent from rivals. VCs, through their expertise and resources, can enable the startup to provide competitive (equity) compensation packages, employee benefits and development schemes, and build a strong company culture. The study will contribute to the literature that studies the incentives that prompt employees to switch jobs between startups and incumbents, as well as the literature on the role of labor in product market competition and innovation.

As a PhD student, I have enormously benefitted from the advice of my advisors, Prof. Ron Masulis and Jason Zein as well as other scholars at UNSW. I have also been actively seeking ways to expand my knowledge by learning from top scholars in the field of entrepreneurial finance. As a PhD fellow at the Workshop on Entrepreneurial Finance and Innovation (WEFI), among ten other PhD students, we have regular biweekly meetings with Prof. Michael Ewens of Columbia University, where we receive mentoring and feedback on our research. At WEFI, I have also been a co-organizer of student-led workshops. Additionally, last year, I was fortunate to present my research to Prof. Gordon Phillips, who was visiting my home university. Our interactions led to his invitation to host me for a research visit at Dartmouth College. I am also honored that Prof. David Robinson has agreed to host me for a research visit to Duke University. I plan to visit both institutions later this year.

Attending the NBER Entrepreneurship Boot Camp will be an exceptional chance to expand my knowledge of the economics of entrepreneurship. It is an excellent opportunity to gain a thorough overview of the literature and learn from the leading scholars in the field. I will have the chance to hear from these experts on the most important topics in entrepreneurship and gain insights into their perspective on the direction of future research. As a junior researcher, these opportunities and the possibility of discussing my research with and receiving feedback from the top scholars in the field will be invaluable in further improving my research and advancing my career as an economist.

References:

Bolton, P., & Scharfstein, D. S. (1990). A theory of predation based on agency problems in financial contracting. The American economic review, 93-106.

Chernenko, S., Lerner, J., & Zeng, Y. (2021). Mutual funds as venture capitalists? Evidence from unicorns. The Review of Financial Studies, 34(5), 2362-2410.

Cunningham, Colleen, Florian Ederer, and Song Ma, 2021, Killer acquisitions, Journal of Political Economy 129, 649–702.

Decker, R., Haltiwanger, J., Jarmin, R., & Miranda, J. (2014). The role of entrepreneurship in US job creation and economic dynamism. Journal of Economic Perspectives, 28(3): 3–24.

Gompers, P., Lerner, J., & Scharfstein, D. (2005). Entrepreneurial spawning: Public corporations and the genesis of new ventures, 1986 to 1999. The Journal of Finance, 60(2), 577-614.

Hoberg, G., & Phillips, G. (2016). Text-based network industries and endogenous product differentiation. Journal of Political Economy, 124(5), 1423-1465.

Kamepalli, Sai Krishna, Raghuram Rajan, and Luigi Zingales, 2020, Kill zone, Working Paper 27146, National Bureau of Economic Research.

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Research interests

Entrepreneurship, Venture Capital, Innovation, Corporate Finance, Corporate Governance

Education

- 2020 – Present: **PhD in Finance** at UNSW, Sydney, Australia

  Supervisors: Ron Masulis, Jason Zein
- 2019 – 2020: **Master of Pre-Doctoral Studies in Finance** at UNSW, Sydney, Australia
- 2016 – 2018: **Research Master (MPhil) in Finance** at Erasmus University, Rotterdam, Netherlands

  Thesis: Political Connections as the Substitute of Innovation
- 2014 – 2015: **MSc in Business Administration**, TIAS Business School, Utrecht, Netherlands
- 2009 – 2014: BSc in Civil Engineering, Iran University of Science and Technology

Working papers

- **Patient VCs vs. Deep-Pocketed Incumbents: VC Financing Strategies in the Presence of Competitive Threats** (with Peter Pham and Jason Zein)

  Featured in BusinessThink: Is big business threatening your venture capital-funded start-up? See: https://www.businessthink.unsw.edu.au/articles/venture-capital-startup
- **Political Connections and Incumbent's Restrictive Innovation**

Work in Progress

- **Allocation of Human Resources in Venture Capital Investments** (with Ron Masulis, Peter Pham and Jason Zein)
- **Competition and human capital retention and attraction of VC-backed startups**

Conference Presentation

- 2022: EFA, CICF, SFS Cavalcade Asia Pacific, AsianFA (paper and discussion), Workshop on Entrepreneurial Finance, FMCG (paper and discussion), FMA (paper and discussion), FIRN (paper and discussion), FMA Asia-Pacific (paper and discussion), AFBC (paper and discussion)
- 2021: FMCG

Experience

- 2020 – Present: Tutoring Venture Capital at UNSW
- 2020 – Present: Tutoring International Corporate Governance at UNSW
- 2020 – 2020: Course Design and Tutoring of FinTech at UNSW
- 2019– 2019: Research Assistant of Prof. Jason Zein
- 2017– 2018: Research Assistant of Prof. Wolf Wagner and Thomas Lambert
- 2015 – 2016: Portfolio Management Intern at Blacktower Financial Management, The Hague, Netherlands

Workshops

- 2022 – Present: Workshop on Entrepreneurial Finance and Innovation (WEFI) Fellow
  Biweekly PhD workshops in entrepreneurial finance & innovation (under the supervision of Prof. Michael Ewens, Columbia University)
- 2022: FIRN Workshop: Corporate Finance Master Class by Prof. Gordon Phillips
- 2018: Topics in FinTech by Prof. David Yermack
- 2017: Executive Compensation and other Managerial Incentives by Prof. David Yermack

Service

- 2022: Co-organizer and moderator of Student-led Workshop on Entrepreneurial Finance and Innovation (SEFI)
- 2022: VCs and Entrepreneurship Session Chair, FMA Asia-Pacific
- 2019 – 2021: President of the Iranian Students Association (IRANSA)
- 2017– 2018: Student Representative of MPhil Program Committee

Fellowships, Scholarships, Honors and Awards

- 2020– Present: SYLFF Fellowship, Tokyo Foundation for Policy Research
- 2022: UNSW Business School HDR Grant
- 2022: Sylff Research Grant
- 2022: European Finance Association Travel Grant
- 2022: Three Minute Thesis (3MT) Finalist, UNSW Business School
- 2022: UNSW Business School Teaching Fellowship
- 2019: RTP Scholarship and UNSW Business School Supplementary Scholarship

- 2014: TIAS Academic Excellence Scholarship
- 2009: Top 0.5% ranked in Iran National University Entrance Examination (more than 350,000 participants)

Software Skills

- Stata, Python, R, Latex, MATLAB

PhD Courses

Corporate Finance Theory	Empirical Corporate Finance
Asset Pricing Theory	Empirical Corporate Governance
Industrial Organization	Seminar Corporate Finance
Microeconomic Theory	Empirical Asset Pricing
Economic Foundations (Game Theory)	Seminar Asset Pricing
Econometric Analysis	Research Methods in Finance
Applied Econometric	Continuous-Time Finance
Policy Evaluation Methods	Topics in the Philosophy of Science
Mathematics and Statistics	Behavioural Foundations
Programming	Management Foundations
Microstructure of Markets	

15 February 2023

Addressee's Name
Title
Company Name
Street or Postal Address
City State Post Code
Country

Dear NBER's Entrepreneurship Research Boot Camp Committee,

Re: Roham Rezaei's application for the NBER's Entrepreneurship Research Boot Camp 2023

I am writing to recommend my PhD student, Roham Rezaei, who is applying for the NBER's Entrepreneurship Research Boot Camp 2023.

Roham is a highly motivated and talented student working on his thesis under my supervision. His research interests are entrepreneurial finance, venture capital, innovation and corporate governance. Roham has a thorough understanding of entrepreneurial finance and venture capital (VC) literature and is exploring several important questions in the field. His work encompasses topics such as the impact of competition on entrepreneurial firms' dynamics, private equity financing, acquisition of skilled labour, as well as the governance of these firms.

In his first paper, Roham investigates how venture capitalists (VCs) adjust their financing strategies in response to competition from incumbents faced by startups. In this context, Roham is able to test the Bolton and Scharfstein theory of contracting, which explores the trade-off between predation risk and addressing VC-entrepreneur agency problems. He uses a novel textual analysis method to measure the competitive threats to startups in the spirit of Hoberg and Phillips (2016). Roham's findings show that VCs are more lenient in the staged financing milestones of startups facing competitive threats, and they instead substitute reduced staging intensity with stricter monitoring, more downside protection clauses, and the investment by larger, more specialized VC funds. This research makes two significant contributions to the literature: it highlights the importance of strategic considerations in venture capital financing and shows that well-funded, experienced VC funds can facilitate the entry and growth of promising entrepreneurial projects in competitive markets. To date, Roham has presented this research at multiple top conferences in Asia and Europe, including EFA, CICF, SFS Cavalcade Asia-Pacific.

Roham plans to broaden this agenda by exploring the role of venture capital in human capital acquisition and labour mobility between startups and competing established incumbents and the implications for startup innovation. He is interested in exploring the incentives that motivate skilled workers to join startups and to leave them, and how this affects the ability of their employers to innovate. The study will provide valuable insights into the relationship between venture capital, human capital and innovation, and how it impacts the competitiveness of startups and established public firms. By examining the role of venture capital in shaping the mobility of skilled workers, the study will advance our understanding of the labour market dynamics in the context of innovation and entrepreneurship.

In a joint project with myself, Roham studies the governance practices of VCs. The fact that startups remain private for longer has prompted Roham to consider the implications for the governance of these firms. By staying private, these firms avoid regulatory requirements to establish transparent governance structures. In this context, we study how a critical aspect of a firm's governance, its board of directors, evolves under extended private ownership. The study will examine the monitoring role of venture capitalists (VC) who sit on these boards. The research will analyse whether VC monitoring can be seriously disrupted by distractions generated by organisational crisis or challenges at other startups in their portfolio, and relatedly, by the number of portfolio firms the VC is committing to fund and its periodic need for capital raising efforts to establish new VC funds. The research will also examine how boards evolve when the number of VCs that fund a startup in a syndicate grows very large. It will question whether this introduces inefficiently large boards with unnecessary complexity and slower responsiveness to unanticipated competitive challenges.

Roham has a comprehensive skill set, which enables him to tackle complex research problems and deliver high-quality results. Roham has a strong foundation in financial economics, and his PhD courses in industrial organizations, microeconomics, and policy evaluation methods should make him well-suited for the Boot Camp. Roham also possesses strong programming and database management skills and an extensive econometrics background, enabling him to execute his research ideas effectively.

As an empirical researcher, Roham is well-equipped to handle data challenges in entrepreneurial finance research. He has the necessary skills to identify, acquire and work with relevant VC data. He knows the strengths and weaknesses of various databases related to this field. In one of my courses, I asked Roham to present to junior PhD students the various databases available in venture capital and private equity research, which he did very effectively. Roham also has a knack for finding and working with new and proprietary data; he has obtained LinkedIn and parts of the Pitchbook database through independent internal and external research grants (e.g., Tokyo Research Institute). He also has experience in collecting data from the SEC EDGAR database for startup firms. The data that Roham has collected during his PhD enables him to pursue a meaningful research agenda in entrepreneurship.

Roham has been in regular contact with Prof. Michael Ewens at Columbia University, who has been mentoring and advising him on his research as a part of the Workshop on Entrepreneurial Finance and Innovation (WEFI) that he runs. Roham is a PhD fellow at WEFI, among 10 other promising PhD students who are undertaking independent research projects in the entrepreneurship area. Roham also plans to visit Prof. Gordon Philips at Dartmouth College and Prof. David Robinson at Duke University later this year to develop his work further. These interactions with the top scholars in the entrepreneurship and related areas highlight Roham's passion for the field as well as his proactiveness.

This entrepreneurial bootcamp will be a valuable opportunity for Roham to deepen his understanding of the economics of entrepreneurship and entrepreneurial finance. The Boot Camp would greatly benefit Roham as it aligns closely with his research interests. All the research projects that Roham is working on can substantially benefit from the insight and exposure Roham would gain from interacting with the top scholars of entrepreneurship at the Boot Camp. I am confident that Roham will make the most of this opportunity and make valuable contributions to the program. I strongly endorse Roham's participation in the Entrepreneurship Boot Camp and recommend him without hesitation.

Sincerely yours,



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