NBER Entrepreneurship Research Boot Camp 2025 Application

Roger Masclans
Ph.D. Candidate in Business Administration
The Fuqua School of Business, Strategy Area, Duke University

Area of interest: Entrepreneurship, Innovation, Commercialization of Science

Year of PhD entry: 2020
Year of PhD completion: 2026

Letter of Recommendation:
Professor Ashish Arora, Duke University, The Fuqua School of Business (ashish.arora@duke.edu)

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Dear Admissions Committee,

I study Entrepreneurship and Innovation topics related to the commercialization of scientific innovations. Being part of the Boot Camp would enhance my skill set and provide a rigorous exposure to the field's most relevant literature and ideas. Moreover, I will have the opportunity to learn directly from leading scholars and fellow students from diverse institutions. Participation in the Boot Camp would significantly contribute to the development of my research, ultimately making a positive impact on our community. Please find my CV and a one-page essay attached below.

Thank you in advance for the time devoted to reviewing my candidacy,

Roger

Roger Masclans

Duke University, The Fuqua School of Business
roger.masclans@duke.edu

Education

2026 PhD in Business Administration (Strategy), Duke University—The Fuqua School of Business

Advisors: Ashish Arora, Wesley M. Cohen, and Sharique Hasan

2016 MS, BS in Industrial Engineering, Polytechnic University of Catalonia—ETSEIB

Major in Industrial Organization

2014 BA in Business Administration, University of Barcelona

Honors Program

Research

Working Papers and Under Review

1. Scientific Innovation, Outside Options, and Hold Up: Evidence from Startup Acquisitions
2. Measuring the Commercial Potential of Science (with S. Hasan and W. Cohen) *NBER Working Paper 32262.*

   Presented at the Department for Science, Innovation & Technology, U.K. Government, 2023; U.S. Army & Duke Innovation Workshop, 2023; Wharton Innovation Doctoral Symposium, 2024; Workshop on The Organisation, Economics and Policy of Scientific Research, 2024; Academy of Management, 2024; Innovator Diversity Pilots Initiative, 2024.
3. Taste Before Production: The Role of Judgment in Entrepreneurial Idea Generation (with A. Chatterji, S. Hasan, and R. Larrick) *Working paper.*

Other publications

1. The Future of Employment and New Professional Competencies: The Business Perspective (with M.L. Blazquez and J. Canals) *IESE Publishing (2019)*
2. The Professional Competences of the Future: A Diagnosis and An Action Plan to Promote Youth Employment After Covid-19 (with M.L. Blazquez and J. Canals) *IESE Publishing (2020)*

Other research activities

Summer 2024 Innovation Research Boot Camp, National Bureau of Economic Research

2020-present Referee—Manuscript reviewer for Management Science and Strategic Management Journal.

2018-20 RA for Prof. Jordi Canals, IESE Business School

Case Studies

2020 Ingka in 2021. Corporate Governance, Purpose and Transformation. IESE, SM-1698-E. (with J. Canals)

2020 Fluidra. IESE, SM-1697 (with J.Canals and J. Tàpies)

2020 PromoFarma 2018. IESE, SM-1692 (with J. Canals)

2020 Amadeus: Boosting Long-Term Growth. IESE, SM-1691-E (with J. Canals)

Courses Taught

University of Barcelona

2015-2020 Corporate Finance - Lecturer (BA Business Administration)

Pompeu Fabra University & TecnoCampus

2015-2017 Corporate Finance - Lecturer (MA Entrepreneurship & Innovation)

Industry experience

2015-2022 nowordlost (tech startup) - Co-Founder, CEO (2015-17)

2013-20 AMG Consulting (M&A, Strategy Boutique) - Partner

Computational skills

Python, R, Stata, Java, Javascript, SQL, NoSQL, HTML, CSS

Languages

English, Spanish, Catalan, French

Last updated: January 2025

Current and future research, Roger Masclans

My research examines the commercialization of science-based innovations, focusing on entrepreneurship. In my JMP, I investigate why there is little activity around startups commercializing scientific innovations in industries such as energy, industrials, and materials—key for addressing social challenges. The issue is often attributed to the high risks and low value associated with these innovations. I propose a complementary explanation: limited value capture caused by a hold-up problem. Startups developing scientific innovations often lack independent commercialization pathways and rely on a small set of incumbents, reducing outside options and, thus, weakening bargaining power. To test the theory, I estimate value creation and capture by examining stock market reactions to startup acquisition announcements, filtering out unrelated noise. I also assess outside options using fine-tuned Large Language Models and textual data. Estimates show that in areas where the hold-up problem is more severe, science-based startups capture 53 cents per dollar of surplus generated when acquired, compared to 70 cents for non-science-based ones—a 24% penalty. Furthermore, this lower value capture is offset by higher value creation, which explains entry. The findings suggest that the hold-up problem is pervasive, reducing upstream incentives for investment and potentially leaving valuable innovations underfunded. I argue that policy and management, beyond subsidizing R&D at early stages, should focus also on fostering competitive markets for technology and enhancing commercialization pathways.

In follow-on work, I investigate the extent to which there is underinvestment driven by the hold-up problem described above. Specifically, I focus on a set of clean energy technologies commercialized by startups and use a difference-in-differences design that exploits the introduction of pilot plants as an exogenous shock to outside options, estimating the causal impact of enhanced outside options on VC funding. The study provides evidence that expanding commercialization pathways increases upstream incentives for investment, ultimately affecting the direction of innovation.

In recent work, with W. Cohen and S. Hasan, we developed a novel measure of the commercial potential of scientific findings using large language models and deep neural networks. Our analysis highlights two key findings. First, significant frictions in science commercialization emerge early on, when scientists decide whether to push their research for commercialization. Second, scientific articles with high commercial potential are 14.1% more likely to be successfully commercialized when originating from leading institutions.[1] Our measure helps study the extent to which there is a "realization gap", i.e., scientific research with the potential to be commercialized left behind.

With W. Cohen and R. Nanda, we are exploring variations in the commercial impact of scientific research between the U.S. and the U.K. This research analyzes the competitive models of both countries, with a specific focus on superstars and their spillovers, contributing to a better understanding of economic growth and innovation policy.

With A. Chatterji, S. Hasan, and R. Larrick, in a field experiment, we explore the role of judgment in the entrepreneurial idea generation process. We find that developed market judgment tend to generate higher-quality entrepreneurial ideas.[2]

[1] Masclans, R., Hasan, S., & Cohen, W. M. (2024). Measuring the Commercial Potential of Science. *NBER WP*

[2] Chatterji, A., Hasan, S., Larrick, R., and Masclans, R. (2023). Taste Before Production: The Role of Judgment in Entrepreneurial Idea Generation. *Working paper.*

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Dear NBER Entrepreneurship Research Bootcamp Application Evaluation Committee:

I would like to enthusiastically recommend Roger Masclans for the NBER Entrepreneurship bootcamp. I am on his thesis advisory committee and his job market paper is on differences between deep-tech and other startups. Specifically, he is trying to assess empirically the extent to which the concentration of startups in software and life sciences (e.g., Lerner and Nanda) is due to value creation problems (e.g., higher cost of experimentation) or value capture (fewer commercialization options). He has a novel empirical design and intriguing preliminary results.

Roger is a fifth year PhD candidate in the Strategy Area at the Fuqua School of Business, Duke University. Roger's main interest is the economics of innovation and entrepreneurship. Before coming to graduate school, he founded a deep-tech company (in the water purification for utilities), and also has some experience evaluating acquisition deals. He is unquestionably one of the best students I've ever worked with, and is one of the best students in our program (and we currently have a couple of truly excellent students).

His initiative, capacity for creative, critical thinking, ability to distill the essence of academic articles, and ability to master new material and skills are truly impressive. He has a co-authored paper with Wes Cohen and Sharique Hasan on "The commercial potential of science and its realization: Evidence from a measure using a large language model," which displays some of the more technical skills in computer programming and data analysis. His in-progress job market paper is on a different topic, is an excellent example of his broader aptitude for research.

I could not recommend anyone more highly for the Bootcamp. I think he would benefit enormously from the Bootcamp, and I think the Bootcamp faculty and fellow students will benefit from his participation. On a more personal note, he is a delight to work with.



Ashish Arora
Rex Adams Professor
Fuqua School of Business, Duke University