Universidad Carlos III de Madrid

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Innovation Research Boot Camp (IRBC) 2023
NBER

Dear Committee,

With this letter, I would like to express my genuine interest in the second Innovation Research Boot Camp (IRBC). I'm currently in the third year of my P.h.D at Universidad Carlos III de Madrid, Department of Business Administration. I came to know about this Boot Camp through the online Ph.D. course Economics of Ideas, Science, and Innovation, sponsored by the Institute for Progress.

I am applying for the Boot Camp because I am fascinated by the topics of innovation but find it difficult to engage the foundational ideas and frontier questions in this critical sphere. As the first generation of postsecondary institutions in my village, my experience captivates me towards the importance of human capital and team collaboration in knowledge creation and innovation, further boosting the local economy. I deeply understood, from my childhood in the past years, how the local economy in my village is constrained by lacking skilled labor and creative ability.

I was genuinely fascinated by the topics of innovation with a goal to devote my professional career to investigation in this area. It is my dream job to do research that facilitates firms and policy makers and fuels economic growth in the end. However, in the past three years of my Ph.D., I found it challenging to engage the foundational ideas and provide rigorous empirical evidence for the frontier questions. The Innovation Research Boot Camp 2023 is exactly what I am looking for, thanks to NBER for hosting and to Open Philanthropy for generous support.

My curriculum vitae and one-page essay that describes my research are enclosed. I'm available for additional questions and look forward to hearing from you soon. Thank you for your time and consideration regarding my application.

Sincerely yours,

LI LIU

Enclosure:
Curriculum Vitae
One-page essay: research and motivation

LI LIU

Contact Information

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Education

Sept 2020 - Now	**PhD in Business and Finance** Universidad Carlos III de Madrid, (UC3M), Spain Advisors: Neus Palomeras; Eduardo Melero
Sept 2018 -July 2020	**MRes in Business and Finance (Research)** Universidad Carlos III de Madrid, (UC3M), Spain
Sept 2011 -July 2015	**BA in Business Administration and Finance (Double degree)** Southwestern University of Finance and Economics, Chengdu, China

List of Completed PhD Courses

Economics for Business I	7.6 (/10)
Economics for Business II	7.5 (/10)
Personnel Economics	8.4 (/10)
Microeconomitrics	7.9 (/10)
Statistics for Economics and Business	8.5 (/10)
Quantitative Methods I	9.8 (/10)
Quantitative Methods II	9 (/10)
Research Methods	8 (/10)
Strategic Management	8 (/10)
Research in Strategy, Entrepreneurship & Innovation	8 (/10)

Research Interests

Human capital, Inventor mobility, Intellectual property, Innovation

Working Papers

Who learns from whom? Intrafirm network centrality and knowledge recombination in a hiring context
This paper explores how intrafirm network centrality affects knowledge recombination in a post hiring context.

The effect of collaboration on inventor mobility: quasi-experimental evidence from inventor death (*coauthored with Neus Palomeras & Eduardo Melero*)
This paper aims to explore whether it is complementarity or substitutability that dominates between collaborators, leveraging inventors' premature death as an exogenous shock for collaboration break.

Conferences

Feb. 2023	Reviewer of AOM 2023
Dec. 2022	Reviewer of Chinese AOM in HongKong
July 2022	KID 2022 in Nice
June 2022	DRUID 2022 in Copenhagen
May 2022	MWOW 2022: Madrid Work Organization Workshop
May 2022	AMJ workshop in IE
Sept. 2021	EPIP 2021: European Policy for Intellectual Property

Teaching Experience

All the courses listed below were taught in English.

2021,2020	Organizational Economics (Undergraduate)
2019	Operation Management (Undergraduate)

Working Experience

Melbourne, Australia	GAP Year		2017.06 - 2018.06
Shenzhen, China	China Mobile	Marketing Analyst	2015.07 - 2017.06

Scholarships and Prizes

Sept 2020 - Sept 2024	Ayudas FPI 2019 (Predoctoral grants of Madrid Community)
Sept 2018 - Sept 2020	Ayudas al Estudio de Matsteres Universitarios (Master Scholarship)

Programming Skills

Stata, Python (beginner), LaTeX

Languages

Mandarin Chinese (Mother Tongue), English (Fluent), Spanish (Beginner)

One-page essay: research and motivation

My research aims to address the question: How does R&D team collaboration affect firm innovation?

My first research project has helped to answer this question by investigating the effect of within-firm collaboration network patterns on learning by hiring in a post-hiring context. Firms learn knowledge by poaching employees from competitors. Upon the arrival of new hires, both the new hires and incumbents learn from each other and create knowledge. I found that with a small network structure, firms face a trade-off between new hires' learning and incumbent inventors' learning. In other words, a small network structure allows a firm to learn more from the new hires at the cost of new hires' learning from the incumbent inventors within a firm.

My second research project investigates the effect of team collaboration on team members' mobility. I am interested in exploring the impact of team collaboration break on team members' mobility rate. This research suggests that team members who experienced a collaboration break will be more likely to leave the firm than others who did not experience a team collaboration break but are otherwise similar. This research provides evidence that teams who experienced a break are less likely to collaborate again and team members who experience a break are more likely to leave the firm.

My future research will build off my previous projects to further understand the effect of team collaboration on firm innovation activity organization in different contexts, particularly in the context of R&D project failures. How team collaboration works through the failed R&D projects and rises from the ashes. Innovation is of high risk and R&D projects face high failure rates. By investigating the role of team collaboration on failures, I aim to study when and how team collaboration can be used to offset the cost of failures and turn dust into gold.

The main reason that I apply this Boot Camp, as stated before, is that I am deeply interested in the topics of innovation but find it difficult to engage the frontier questions. My Ph.D. training is strategy oriented with quantitative research methods. However, two-year coursework training without a framework of the economics of innovation barely offers a full picture of innovation. As a fresh researcher approaching the end of my Ph.D. journey, I found it challenging to identify foundational ideas and frontier questions. My passions lead me to work on innovation topics while research skills constrain my career passage. To be successful as a starting researcher, I appreciate Boost Camp which offers green hand researchers an opportunity to pursue their academic dreams. The Boost Camp is exactly what I am looking for to work with what I am passionate about!

My attendance at this Boost Camp will contribute to other participants. I am full of passion in research about innovation and knowledge creation. I would always like to talk to people about research and give them feedback about their project as well. I am confident you will find my attendance at this summer school is a wise investment and I would highly appreciate to be one of the selected participants. I am very grateful for the time you have taken to consider my application and hope that I have been able to convince you of my passionate motivation for Boot Camp 2023. Please do not hesitate to contact me if you have any questions about my application.

Madrid, January 31st, 2023

Letter of Recommendation on Behalf of **Li Liu**: NBER Innovation Research Boot Camp

Dear Profs. Bryan, Ganguli, and Myers,

I am writing this recommendation letter in support of my PhD student, Li Liu, who has applied to the NBER Innovation Research Boot Camp 2023. Li Liu is enrolled in the *PhD in Business and Finance* at *Universidad Carlos III de Madrid*. Li started to work on her PhD thesis under my supervision (co-supervisor: Prof. Eduardo Melero) on November 2020 and has made very satisfactory progress since then.

Li's research focus lies at the heart of Innovation Studies. So far, she has worked on a solo-authored article (entitled *"Learning after Hiring in Small World Networks")* that studies the process of knowledge integration of newly-hired inventors at companies. This first article is now being circulated in conferences. She also has a second project on the role of coinventors' network on inter-firm mobility, in collaboration with Prof. Eduardo Melero and myself. This second project, though still in process, has just reached the phase of manuscript preparation.

Although our PhD program at the Business Department of *Universidad Carlos III de Madrid* is relatively eclectic, it includes a good training in Economics of Innovation and Econometric Methods, that she complemented with some courses from the Economics Department. Therefore, I expect her to be familiar enough with the topics discussed in the Boot Camp, and ripe enough to incorporate them in her own research projects. Li has also attended the *Economics of Ideas, Science and Innovation (Fall 2022)* online course, taught by some of the professors who will also lecture at the Boot Camp.

Li is eager to learn, hard-working and extroverted, and I am sure that she would make the best of this bootcamp. On February 1st she will start a 6-month research stay at the Fuqua School of Business (Duke University) under the supervision of Prof. Asish Arora. Therefore, the NBER Bootcamp would come in a perfect moment of her career.

Should you have any question regarding Li's application, please do not hesitate to contact me.

Best regards,

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