To
The Selection Committee for the NBER Innovation Research Boot Camp 2024
1050 Massachusetts Avenue
Cambridge, MA 02138
United States of America

Munich, January 24th 2024

Application to the NBER Innovation Research Boot Camp 2024

Dear committee members,

Thank you for reviewing my application to the NBER Innovation Research Boot Camp 2024. Please see my CV and research statement as part of the application.

Presently, I am a third-year doctoral student at the Max Planck Institute for Innovation and Competition in Munich. I would be thrilled to get the opportunity to attend the NBER Innovation Research Boot Camp this year!

My advisor Dietmar Harhoff will send the recommendation letter directly to your institution.

Many thanks in advance for organizing the event.

Sincerely,

Elisabeth Hofmeister

Elisabeth Hofmeister

Elisabeth Hofmeister | Doctoral Student and Junior Research Fellow
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Research Interests

Innovation Economics | Pharmaceutical Innovation | Strategic Management | Science of Science

Education

Since 2021	Doctoral Student and Junior Research Fellow, Max Planck Institute for Innovation and Competition
2023	Visiting Scholar, Boston University (Host: Jeff Furman)
2018 – 2021	M.Sc. Management & Technology with a major in Chemistry, Technical University of Munich
2016	Visiting Student, The University of Hong Kong
2014 – 2018	B.Sc. Management & Technology with a minor in Chemistry, Technical University of Munich

Industry Experience

2020 – 2021	Working Student Consulting Services, IQVIA Commercial GmbH & Co. OHG, Munich
2019	Internship Business Development, Fresenius Kabi Asia Pacific Ltd., Hong Kong
2018 – 2019	Working Student Business Development, InGeneron GmbH, Munich
2018	Internship CFO Office / Global Business Services, Fresenius Kabi Deutschland GmbH, Bad Homburg
2017 – 2018	Internship Audit Corporate, KPMG AG Wirtschaftsprüfungsgesellschaft, Munich
2015 – 2016	Working Student Consulting, ROI Management Consulting AG, Munich

Publications

Discussion Papers

- Kim, Daria; Hilty, Reto M.; **Hofmeister, Elisabeth**; Slowinski, Peter R.; Steinhart, Miriam (2022). CRISPR/Cas Technology and Innovation: Mapping Patent Law Issues, Max Planck Institute for Innovation & Competition Research Paper, No. 22-06. (SSRN)

Professional Engagement

Organizer

- Workshop on the Organisation, Economics and Policy of Scientific Research (WOEPSR) 2023
- Research on Innovation, Science and Entrepreneurship (RISE) Workshop 2023
- Internal Innovation Reading Group (bi-weekly meetings)

References

Prof. Dietmar Harhoff, Ph.D.
Director, Max-Planck Institute for Innovation and Competition
dietmar.harhoff@ip.mpg.de

Prof. Matthew J. Higgins, Ph.D.
Emma Eccles Jones Chair and Professor of Entrepreneurship and Strategy, The University of Utah
Research Associate, National Bureau of Economic Research
matt.higgins@eccles.utah.edu

Ph.D. Level Courses

While I work at the Max Planck Institute for Innovation and Competition, the Ludwig Maximilians University (LMU) Munich will grant my doctoral degree (Dr. oec. publ.). I completed most of my Ph.D. level courses at the LMU Munich as part of their required course catalogue and expanded my knowledge through auditing specific courses of interest.

Courses with examination

- Quantitative Methods (LMU Munich)
- Experimental Methods (LMU Munich)
- Simulation Methods (LMU Munich)
- Qualitative Methods (LMU Munich)
- Causal Inference I & II (LMU Munich)
- Econometrics II (Technical University of Munich)
- Scientific Publications (LMU Munich)
- Text Analysis (LMU Munich)
- Basic Readings in Information Systems & Digital Business (LMU Munich)
- Theoretical Foundations of Strategy (Technical University of Munich)

Audited courses without examination

- Economics of Ideas, Science and Innovation (Institute for Progress)
- Economics of Ideas, Innovation and Entrepreneurship (MIT)
- Advanced Econometrics II (Boston University)
- Causal Inference (Boston University)

Elisabeth Hofmeister – Research Statement

My research is centered around the determinants of R&D productivity, specifically challenges in translating inventions to actual innovations. I use empirical methods and employ the life sciences as a setting. The latter is a deliberate choice, first due to the field's profound impact on global challenges related to the environment, food and health. Second, my institutional and industrial expertise enables me to see relevant questions in real-life observations and derive valid conclusions. Given the reliance on firms to commercialize inventions, I take a firm perspective in current projects. In future work, I am keen to also study corporate and academic scientists, based on their role as drivers behind R&D projects.

My dissertation closely investigates 'shelved' innovation

In the pharmaceutical industry, many drug projects are discontinued prior to approval, fueling concerns around decreasing R&D productivity and rising cost per approved drug. Yet, not all discontinued projects necessarily exhibit scientific failure. Some projects are discontinued despite positive clinical results. Given the option to re-start development, these are 'shelved' rather than abandoned for good. Accounting for shelved projects is vital to accurately interpret R&D cost and output as well as to translate concerns around R&D productivity into actions. However, shelving lacks the empirical focus it deserves. With a newly constructed dataset linking clinical trials to publications and with natural language processing to distinguish positive and negative trial results, I identify shelved projects within the industry. In my dissertation, I explore the reasons behind shelving, how firms utilize shelved projects and if shelving can present a source of competitive advantage.

Future work examines the diffusion and impact of new research tools under heterogeneous regulation

New research tools promise an increase in R&D productivity. In the life sciences, CRISPR-Cas stands for a cheaper, more precise and easily implementable genome-editing method, applicable both upstream and downstream. The novelty of the technology raises uncertainty about its regulation, mirroring the challenges seen with general-purpose technology AI. The global heterogeneity of CRISPR-Cas regulation is intriguing for two reasons. First, the regulatory variation allows to estimate its direct effect on R&D in the respective jurisdiction. Second, firms' and scientists' decision-making in this heterogeneous landscape has implications for the direction of R&D, firms' competitiveness and scientists' mobility. Plant breeding and medical uses provide valuable settings for future work on the diffusion of CRISPR-Cas and its impact on productivity.

Research knowledge should have real-life value and applications

My research objective includes providing value to decision makers, whether within firms or legislative bodies. To this end, I am currently working with the German Federal Agency for Disruptive Innovation (SPRIND) on the design of a pull-mechanism to incentivize the development of broad-spectrum antivirals. Our proposal has recently been selected as a Phase I winner of the Innovation Challenge at the University of Chicago's Market Shaping Accelerator, an initiative headed by Christopher Snyder, Michael Kremer and Rachel Glennerster. Presently, we are working on an expanded proposal for the challenge's Phase II.

Engaging with people at the research frontier is my goal at the NBER Boot Camp

Building on my fundamental knowledge of innovation economics, the NBER Boot Camp is an excellent opportunity to engage with the most recent research in the field. The group of senior leading scholars will certainly facilitate this, yet I especially hope to engage in the community of juniors that is active in the space and pushes the research frontier. I am looking forward to in-depth discussions about shared interests, which is uniquely fostered by the Boot Camp's setup.

Max Planck Institute for Innovation and Competition

MAX-PLANCK-GESELLSCHAFT

NBER Innovation Research Boot Camp
National Bureau of Economic Research

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Letter of Recommendation for Elisabeth Hofmeister

Dear members of the selection committee,

Elisabeth Hofmeister is applying for admission to the NBER Innovation Research Boot Camp.

I confirm that Elisabeth Hofmeister is a 3rd year PhD student at the Max Planck Institute for Innovation and Competition. She is enrolled in the collaborating PhD program at Ludwig-Maximilians-Universität in Munich.

Elizabeth is a truly outstanding student. She is singularly successful in her course work, and she has embarked on two highly ambitious research projects related to pharmaceutical innovation. Among the about thirty-five doctoral students we have had here at the MPI in the past 15 years, she stands out in terms of talent, ambition and perseverance. She has excellent analytical and writing skills, and both intellectually and socially, she will make an great contribution to the NBER Boot Camp, should you decide to select her. I recommend her with great enthusiasm.



Prof. Dietmar Harhoff, Ph.D.