Max Fidelius Vellguth
550 Memorial Drive, Apt 21A
02139 Cambridge, MA
maxvel@mit.edu
US Cell: +1 857 350 0335

February 2nd, 2023

Application to the NBER Entrepreneurship Research Boot Camp 2023

Dear Professor Bloom, Professor Hochberg, Professor Lerner, Professor Robinson, Professor Schoar, and Professor Stern,

I am writing to apply to the NBER Entrepreneurship Research Boot Camp (ERBC) 2023. I am a second year Ph.D. candidate at the Technical University of Denmark (DTU), and currently a visiting Ph.D. student at Massachusetts Institute of Technology Sloan School of Management in the Technological Innovation, Entrepreneurship and Strategy (TIES) group. My research interests lie at the nexus of the economics of entrepreneurship and strategic management. The objective of my research is to illuminate the role of new ventures as a driver for innovation and to explore the contribution of the ventures' board of directors in the process of commercializing inventions. Currently, I am in the process of collecting empirical data in the MIT entrepreneurial ecosystem and co-authoring two articles with MIT Sloan Professor Dame Fiona Murray. Furthermore, I have a highly relevant academic background in entrepreneurship and innovation studies at the M.Sc. and Ph.D. levels as well as accepted submissions to both the Entrepreneurship Division of the Academy of Management Conference as well as the Babson College Entrepreneurship Conference.

I am extremely interested in participating in the NBER ERBC 2023. The research topic of the workshop is at the core of my own research and I would very much appreciate the opportunity to further increase and solidify my expertise, both foundational and frontier. Moreover, I am excited to engage in discussions about entrepreneurship research and build my network with leading and aspiring scholars in the academic community of NBER.

I am enclosing my curriculum vitae and statement of research interests which underlines the relevance of the ERBC to my research by drawing a connection to the work of the lecturers. A letter of recommendation will arrive under separate cover for your consideration from MIT Sloan Professor Dame Fiona Murray. If you require any additional materials or information, I am glad to provide it to you. I am grateful for your time and consideration.

Sincerely,



Research Statement

My research is centered on the intersection of entrepreneurship, strategic management and venture governance. I strive to understand the role of the board of directors in the development of new ventures and particularly the board's function as a catalyst to commercialize science-based inventions. Research shows not only the relevance of entrepreneurship for innovation but the increasing competitive advantage of startups over other market participants like incumbents (Kolev, Haughey, Murray & Stern, 2022). I believe gaining a holistic picture of the success criteria of new ventures requires investigating all relevant stakeholders, including investors and the board of directors. Venture boards are at the apex of a venture's organizational hierarchy, typically composed of the founders, VCs or Business Angels, and have a significant influence on the most important decisions related to venture strategy, technology or fundraising (Garg, 2017). In the past, scholars have looked at boards primarily in the light of the principal–agent relationship and control function (Bernstein, Giroud & Townsend, 2016). Given the rising relevance of new ventures, I am driven to shed light on the phenomena of venture boards from a value-adding perspective and to explore how the human and social capital of boards contribute to the performance of the venture and ultimately the commercialization of new technologies. New ventures are, by nature, resource-scarce and recent advancements in research show that the board of directors represents a significant resource particularly through providing their expertise and experience (Wasserman, 2017), sharing their network and reputation (Gompers & Lerner, 2001), or by engaging in strategy-making (Garg & Eisenhardt, 2017). However, academia left a paucity of knowledge in regard to the impact of venture boards on the commercialization of technology.

Following the theorizing of Botelho, Fehder & Hochberg (2021) who emphasize the diversity of entrepreneurship, I focus my research efforts on highly innovative ventures providing "science-based technology solutions" associated with "critical dimensions of uncertainty" (Murray, de Apodaca & Frolund, 2023), commonly referred to as "deeptech ventures". At the frontier of technological advancement, deeptech ventures play a crucial role to provide breakthrough innovations that tackle the most pressing global issues. I believe researching the commercialization of deeptech ventures gives my research the opportunity to create meaningful value for both practitioners and policymakers. My research is in collaboration with Professor Dame Fiona Murray and my objectives are twofold. In my first paper, I am aiming to shed light on human and social capital complementarity in the process of commercialization by analyzing quantitative data on board and founding team composition as well as venture development. Deeptech founders typically spin-out of higher education institutions possessing extensive technical expertise but limited business and leadership experience. Their social network is often greatly advanced among academia and science but limited in regard to investors or potential customers. Such deficits are typically covered by board members who provide expertise, experience and a professional network in the business domain. My data shows high complementarity between the founders and the board of directors'

human capital and a positive effect on the firms' commercialization performance. From a venture governance perspective, however, such complementarity inhibits risks for investors due to a lack of insights into the technology and creates friction points between founders and board members. Therefore, my second study explores the interactions between the founding team and the board of directors through qualitative methods. I am interested in understanding the processes of how founders unlock the full potential of the human and social capital of their boards to enhance the ventures' development. Moreover, I aim to understand what interactions mitigate the increased governance risks. The qualitative study will be presented at the Babson College Entrepreneurship Conference 2023. My third paper, a systematic literature review and future research agenda on venture boards, was driven by the burgeoning research on venture boards and a lack of a full picture of the current state-of-the-art of research. The full paper has previously been presented at the RENT Conference 2022 and a revised version has recently been submitted to the Academy of Management Conference 2023 while a journal submission is planned this spring.

Attendance at the 2023 NBER Entrepreneurship Research Boot Camp will benefit my research greatly. My motivation to apply stems from the ambition to strengthen my expertise of the economics of entrepreneurship, both foundational and frontier. I am confident participation in the Boot Camp will ultimately improve my skillfulness as a scholar with a lasting imprinting effect. Moreover, I believe participation is an outstanding opportunity for building a network among leading scholars in the field of entrepreneurship. Networking in the academic community is an exciting and important step for early-career scholars, and the NBER Boot Camp is a unique chance to create relationships not only with established but also aspiring scholars. Furthermore, I am confident participation will create particular value for one of the publications I am working on with Professor Murray, which we are planning to submit to NBER later this year. The lecturers from previous Boot Camps have been guiding scholars and provided seminal work for conceptualizing and theorizing my own research. In this regard, I am particularly interested in gaining insights into the perspectives of Professor Yael Hochberg on innovation-driven entrepreneurship and the governance of such ventures. In line with this, I am very curious to learn from Professor Josh Lerner and Professor Shai Bernstein about the role of venture capital in innovation. I am excited to discuss insights from my current research about the value-adding role investors inhibit through their human and social capital in the process of commercializing inventions from the lab to the market. Moreover, I am interested in learning about strategy making in entrepreneurial firms from Professor Scott Stern and to discuss how a board of directors shapes the technology commercialization strategy of science-based ventures.

References

Bernstein, S., Giroud, X., & Townsend, R. R. (2016). The Impact of Venture Capital Monitoring. The Journal of Finance, 71(4), 1591–1622.

Botelho, T., Fehder, Daniel, & Hochberg, Yael. (2021). Innovation-Driven Entrepreneurship. National Bureau of Economic Research. Working Paper.

Garg, S., & Eisenhardt, K. M. (2017). Unpacking the CEO-Board relationship: How strategy making happens in entrepreneurial firms. Academy of Management Journal, 60(5), 1828–1858.

Gompers, P, & Lerner, J. (2001). The Venture Capital Revolution. Journal of Economic Perspectives, 15 (2): 145-168.

Kolev, J., Haughey, A., Murray, F., & Stern, S. (2022). Of Academics and Creative Destruction: Startup Advantage in the Process of Innovation. National Bureau of Economic Research. Working Paper.

Murray, F., de Apodaca, K. & Frolund, L. (2023). What is "Deep Tech" and what are Deep Tech Ventures?. Working Paper.

Wasserman, N. (2017). The throne vs. the kingdom: Founder control and value creation in startups. Strategic Management Journal, 38(2), 255–277.

List of completed courses

A note to preface this list: As with many European Ph.D. programs, a prerequisite for my Ph.D. program was a research-oriented 2 year M.Sc. degree. Therefore, my program includes less structured coursework in comparison to US Ph.D. programs. Hence, I have listed the courses of my Master of Science in Economics and Business Administration below. Moreover, I have listed courses that I have taken during my Ph.D. studies. I can provide academic transcripts and more detailed syllabi if necessary.

PhD level courses:

- Financial Economics of Climate and Sustainability (in progress at HBS, finished by May 2023)
- Economics and Management of Innovation and Technological Change
- Quantitative Research Methods
- Qualitative Research Methods
- Research Methods in Economics and Management Studies
- Sustainability in Management
- Generating Impactful Research
- Value-Creating Board of Directors

Master level courses

- Management Control and Finance
- Innovation and Knowledge
- Business Research
- Entrepreneurship Research
- Strategy and Market Development
- Project Management and Product Development
- Green Ventures
- Digital Entrepreneurship

MAX FIDELIUS VELLGUTH

maxvel@mit.edu

RESEARCH INTERESTS

Economics of Entrepreneurship and Innovation, Strategy, Venture Capital, Venture Governance, Technology Commercialization

DOCTORAL STUDIES

Massachusetts Institute of Technology **11/2022 - 10/2023**
Visiting Ph.D. at Sloan School of Management (TIES Group)

University of California, Berkeley **01/2022 - 02/2022**
Visiting Ph.D. at Haas School of Business

Technical University of Denmark (DTU) **04/2021 - 03/2024**
Ph.D. candidate at the Centre for Technology Entrepreneurship ***(exp.)***

PRIOR EDUCATION

Copenhagen Business School, Denmark **09/2018 - 07/2020**
M.Sc. in Economics and Business Administration

Hankuk University, South Korea **08/2015 - 12/2015**
B.Sc. in Economics and Business Administration

Freie Universität Berlin, Germany **10/2013 - 07/2016**
B.Sc. in Economics and Business Administration

RELEVANT POSITIONS AND TEACHING EXPERIENCE

RA for Prof. Thomas J Howard, DTU **since 2021**
Lecturer and Examiner for the DTU Executive Board Education **2021-2022**
TA for The Management of Technology Entrepreneurship, M.Sc. course **2021-2022**
Supervision of two master theses **2022**

SCHOLARSHIPS AND GRANTS

Fellowship, Danish Agency for Higher Education and Science ***(€10.000)*** **2022 - 2024**
Research Grant, Otto Mønsted Foundation ***(€5.000)*** **2022**
Merit Scholarship, Jorcks Foundation ***(€5.000)*** **2022 - 2023**
Merit Scholarship, Fisker Foundation ***(€3.500)*** **2022 - 2023**
Merit Scholarship, Augustinus Foundation ***(€2.500)*** **2022 - 2023**
Merit Scholarship, William Demant Foundation ***(€2.000)*** **2022 - 2023**

PROFESSIONAL ACTIVITIES

Conceptualization, organization, submission and presentation of Professional Development Workshop (PDW) at the Academy of Management Conference 2022.

Conference presentation at the Research in Entrepreneurship and Small Business Conference (RENT) 2022.

Upcoming conference presentation at Babson College Entrepreneurship Research Conference (BCERC) 2023 (paper accepted, presentation in June 2023).

WORK IN PROGRESS

Vellguth, M; Howard, T; Gabrielsson, J; Lomberg, C. (2022). Venture Boards: A Systematic Literature Review and Future Research Agenda. Presented at RENT Conference 2022.

Vellguth, M; Murray, F; Howard, T; Lomberg, C. (2023). Support vs. Monitoring: The Evolving Role of Venture Boards. Accepted at Babson College Entrepreneurship Research Conference (BCERC) 2023.

Vellguth, M; Murray, F; Howard, T; Lomberg, C. (2023). The Role of Venture Boards in Entrepreneurship.

Vellguth, M. (2023). Board Games: How the Board of Directors Make or Break Start-ups.

Vellguth, M. (2021). Business Model Innovation in Ecosystems.

INDUSTRY EXPERIENCE

Grundfos A/S, Denmark; Strategy, Mergers and Aquisitions	**2020 - 2021**
Plartform A/S, Denmark; Co-Founder	**2019 - 2020**
Mercedes-Benz Asia-Pacific Ltd., Singapore; Business Development	**2018**
Daimler AG, Germany; Product and Innovation Management	**2016 - 2017**

SKILLS

Languages: German (native), English (fluent), Danish (basic)
Software: Microsoft Office, LaTeX, R Studio, Nvivo

PERSONAL INFORMATION

Citizenship: German
Date of Birth: March 20, 1993

REFERENCES

Prof. Dame Fiona Murray
Massachusetts Institute of Technology
Sloan School of Management
100 Main Street
Cambridge, MA 02142
fmurray@mit.edu

Prof. Jes Broeng
Technical University of Denmark
Centre for Technology Entrepreneurship
Akerlungsvej 12
2800 Lyngby, Denmark
jesbo@dtu.dk

MIT MANAGEMENT SLOAN SCHOOL

Professor Dame Fiona Murray DCMG
William Porter Professor of Entrepreneurship
Associate Dean Innovation+Inclusion

Danielle Tarpley
Assistant
Phone: 617-324-9702
Email: dchajin@mit.edu

Brett Maranjian
National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA, 02138

To whom it may concern,

It is my pleasure to recommend PhD candidate Max Fidelius Vellguth for admission to the NBER Entrepreneurship Research Boot Camp 2023.

I met Max when he applied to MIT as a visiting scholar to pursue his research interests at the nexus of innovation and entrepreneurship. Based on strong recommendations from his home institution – Technical University of Denmark, and mutual colleagues at the European Innovation Council, I have invited Max to serve as a research fellow at MIT Sloan School of Management. Our mutual research interests stem from a desire to understand the process of commercializing inventions through new ventures, more specifically understanding the relevance of the board of directors. Under my supervision, Max seeks to illuminate the complementarity of human and social capital between the board of directors and the founding team of deep tech ventures and the degree to which the board role and competition varies from more traditional boards of VC-backed startups. In building more intellectual depth to his research, Max explores the underlying processes that take place between entrepreneurs and their boards to expose how founders unlock their board's abilities and network in the best interest of the venture development particularly in periods of uncertainty.

The output of our research collaboration is in progress with co-authored working papers. The first was accepted to the 2023 Babson Entrepreneurship Conference and will be presented in June 2023. I believe a participation in the NBER Research Boot Camp will benefit Max's expertise as an entrepreneurship scholar.

Since the start of his research stay, Max has proven his strong intellectual abilities, his willingness to immerse himself in the academic community at MIT Sloan School of Management and his determination to seek conversations and qualitative interviews with founders and investors. I am confident that this proactive attitude will contribute to the academic exchange with other participants as well as lecturers at the NBER Research Boot Camp. Based on his relevant educational background, expertise in the economics, and management of entrepreneurship as well as his perceptible passion for the topic, Max will be a full contributor to the Bootcamp. He is a team player who seamlessly engages with fellow PhD students and colleagues in English of great fluency. As a person, Max is empathetic and connects well with new people as well as the audience of his presentations.

MIT MANAGEMENT
SLOAN SCHOOL

I am confident that Max's education and expertise in the field of entrepreneurship, his passion for the topic, and his warm personality will be a valuable asset to the NBER Entrepreneurship Research Boot Camp.

I give my strongest recommendation to Max and hope you accept his application. If I can be of any further assistance, or provide you with any further information, please do not hesitate to contact me.

Sincerely,

Fiona Murray

.



Professor Dame Fiona Murray DCMG CBE
William Porter Professor of Entrepreneurship
Associate Dean for Innovation + Inclusion
Faculty Director, MIT Office of Innovation
Faculty Director, Legatum Center for Development & Entrepreneurship

MIT Sloan School of Management
Office of the Dean
E62-488
100 Main Street
Cambridge, MA 02142 USA
mitsloan.mit.edu