Vitalii Tubdenov

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Department of Economics
Harvard University

February 02, 2025

Selection Committee
NBER Innovation Research Boot Camp
Cambridge, MA

Subject: Application for the 2025 Innovation Research Boot Camp

Dear Members of the Selection Committee,

I am writing to express my strong interest in attending the fourth Innovation Research Boot Camp, hosted by the NBER in July 2025. As a second-year PhD student in the Department of Economics at Harvard University, I am eager to deepen my understanding of innovation research through this program.

My research interests lie in economic theory, with a focus on mechanism design. I am interested in economics of innovation and believe theoretical tools can provide valuable insights into innovation policy, firm strategy, and contract design. The boot camp would help me identify key questions and cases where theory is most useful and offer perspective on how it can complement empirical research.

I meet all eligibility requirements for the program and have included my CV, a list of PhD coursework, and a one-page research statement in my application materials. Additionally, Professor Shengwu Li (shengwu_li@fas.harvard.edu) at Harvard University has agreed to provide a letter of recommendation in support of my application.

Thank you for your time and consideration. I would be honored to participate in the 2025 Innovation Research Boot Camp and look forward to the opportunity to engage with and learn from this research community.

Sincerely,
Vitalii Tubdenov

Vitalii Tubdenov

Contact Information
Email: vtubdenov@g.harvard.edu
Phone: 312-978-5261

Education

Harvard University
Ph.D. in Economics, 2023 to 2029

Lomonosov Moscow State University
Bachelor of Economics with Honors, 2021

Employment

Northwestern University
Research Fellow at the Kellogg School of Management, 2021– 2023

Moscow State Institute of International Relations
Research Fellow at the Institute for International Studies, 2019– 2021

Publications

Pol Antràs and Vitalii Tubdenov (*forthcoming*): "Measuring the Average Production Period", *AEA Papers and Proceedings,* (115) *(non-refereed)*

> Building on Böhm-Bawerk (1889), we propose a measure of the *average period of production* defined as a weighted average temporal distance between the time at which a firm employs its inputs and the time at which these inputs deliver finished goods to consumers. Under stationarity conditions, this measure corresponds to the ratio of a firm's total inventories to the cost of the goods it sells in a given period. Using data from publicly traded companies, we compute this measure for various industries and countries, and show that, consistent with theory, it is lower, the higher is the cost of capital.

Phillip Kartaev and Vitalii Tubdenov (2021): "The Transparency of Monetary Policy and the Effect of Exchange Rate Pass-Through", *Voprosy Ekonomiki*, (6), 32-46 *(in Russian)*

> The work is devoted to the study of the influence of changes in the transparency of monetary policy on the effect of exchange rate pass-through in consumer prices. Based on econometric modeling of cross-country panel data, it is shown that an increase in the transparency of communication between the central bank and the population leads to a decrease in the elasticity of domestic prices with respect to the exchange rate in countries that target inflation and adhere to other monetary policy regimes. The effect is observed for both developed and developing economies; it is stronger in the second case. The obtained result can be interpreted as an argument in favor of the advisability of the Bank of Russia transition from a verbal description of its future actions to the publication of a quantitative forecast of the interest rate trajectory.

Presentations (* selected coauthor presentations)

2025
ASSA Annual Meeting (San Francisco) *

2020
Modern Econometric Tools and Applications (Higher School of Economics)

Research Experience

Research Assistant for Professors (in alphabetic order):
Pol Antràs (2023–2024), Benjamin Golub (2023),
Brett Gordon (2021–2023), Ilya Morozov (2022),
Dmitry Mukhin (2018–2021), Oksana Savchina (2018),
Jesse Shapiro (2024–2025), Andrey Simonov (2020–2021),
Ilya Strebulaev (2018), Anna Tuchman (2021–2013),
Caio Waisman (2021–2023)

Teaching Experience

Teaching Assistant, Methodology of Mathematical Proofs in Economics, Lomonosov MSU, 2019

Lecturer, Introduction to Economics
School of Economics and Mathematics at Lomonosov MSU, 2017–2019

Academic Service

Referee for:
Journal of Economic Theory (x2)

Awards

Nikolai Kondratiev Fellowship (Lomonosov MSU, 2020)

Fellowship in Memory of Serezha Kravchenko (Lomonosov MSU, 2017)

Languages

Russian (native), English (fluent)

Software skills

Python (fluent), R (fluent), Stata (intermediate)

Vitalii Tubdenov

PhD Coursework – Harvard University

Core Courses

- Econ 2010A – Economic Theory (Microeconomics) – Glaeser and Maskin
- Econ 2010B – Economic Theory (Microeconomics) – Strzalecki and Green
- Econ 2010C – Economic Theory (Macroeconomics) – Laibson and Eichenbaum
- Econ 2010D – Economic Theory (Macroeconomics) – Bilal and Gabaix
- Econ 2120 – Principles of Econometrics – Heiler
- Econ 2140 – Econometric Theory – Arkhangelsky

Electives

- Econ 2003 – Computing for Economists – Shapiro
- Econ 2040 – Experimental Economics – Enke
- MIT 14.281 – Contract Economics – Ball and Morris
- MIT 6.7700 – Fundamentals of Probability – Gamarnik

Electives In Progress

- Econ 2030 – Psychology and Economics – Laibson and Rabin
- Econ 2052 – Game Theory I: Equilibrium Theory – Li
- Econ 2060 – Contract Theory – Hart
- MIT 6.7720 – Discrete Probability and Stochastic Processes – Bresler and Liu

Cumulative GPA: 3.834 out of 4.000

Vitalii Tubdenov

Research Statement

My current research focuses on mechanism design. In collaboration with Mikael Mäkimattila (Aalto University), I study the optimal allocation of tasks and information within organizations.

We examine organizations where individuals are assigned tasks and hold private information relevant to their decisions. Each person chooses an action based on their information and preferences, while overall payoffs depend on collective actions and the state of the world. The organization is led by a designer who, in the most general setup, assigns tasks, controls access to information, and determines the level of discretion granted to individuals, all based on their publicly known preferences.

A key example is a pharmaceutical company's R&D department, where the head of research assigns tasks—such as conducting clinical trials, analyzing data, writing reports, or managing research funds—to scientists developing new drugs. Each task generates private information, such as trial results or study costs, which influences researchers' decisions. However, individual incentives may not always align with organizational objectives. For instance, career considerations might lead researchers to prioritize projects that enhance their promotion prospects over those with greater commercial or medical value.

Our project investigates how the head of R&D should structure the organization to best achieve the company's objectives. We analyze how tasks and information should be allocated and when limiting researchers' discretion improves outcomes, such as company profits or innovation metrics. The goal is to offer practical recommendations for organizational design that account for differences in individual preferences.

Methodologically, we contribute to the delegation literature in mechanism design, extending results to settings with multiple agents and interdependent tasks. Beyond studying optimal discretion levels, we also analyze task and information assignment, broadening the scope of traditional delegation models.

Currently, we are in the early stages of this project, developing simple models to explore key mechanisms. Since our goal is to provide practical recommendations for structuring research organizations, it is essential that our model captures the most relevant economic forces. Attending the workshop will help refine our models by deepening my understanding of how innovation is organized within firms and the incentives that drive researchers. Insights from the research presented at the workshop will help us prioritize the most important mechanisms in our model, ensuring its relevance to real-world innovation settings.

More broadly, my future research will explore how economic theory can enhance our understanding of the economics of innovation, with the aim of informing better policy and firm strategy. I hope to develop theories that can be empirically tested, including through my own work. Attending the workshop will also help me become more familiar with available innovation-related data and strategies for accessing it for research purposes.

Dear Brett,

I'm writing to strongly recommend Vitalii Tubdenov for the NBER Innovation Research Boot Camp. Vitalii is a second-year PhD student at Harvard economics. I meet with Vitalii about once a month to discuss research, and he is also taking my field course in game theory.

Vitalii is one of the most mathematically capable PhD students in his batch. I mainly talk to Vitalii about theory projects, but it's clear from our conversations that his intellectual horizons are broad, and that he wants to write models that address real policy problems. He is exactly the kind of young scholar who could be drawn to make meaningful contributions to an emerging field, such as the economics of innovation.

Sincerely,

Shengwu Li

Professor of Economics

Harvard University