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February 3, 2026

National Bureau of Economic Research
1050 Massachusetts Ave.
Cambridge, MA 02138

Re: NBER Innovation Research Boot Camp

Dear Economists,

I am a third year PhD student in Economics at Yale University studying economic history. Within economic history, I explore questions of scientific development and innovation in the broader Soviet context with implications applicable to modern settings. I am writing to express my interest in attending the 2026 NBER Innovation Research Boot Camp. Please expect a reference letter from my advisor, Dr. Leah Boustan (leah.boustan@yale.edu).

My research explores non-market innovation incentive structures commonly associated with the Soviet bloc and parts of modern Asia. In these settings, incentive structures found in the West (including but not limited to intellectual property rights systems, firm's profit incentives, and private investments for start-up firms) are modified or absent. Yet, remarkably, the Soviet Union engaged in many competitions involving scientific innovation with the West, and independently developed technologies including a nationwide information network, nuclear weapons, and space satellites. I examine these historical episodes using modern economic theories of innovation with the goal of explaining how non-market systems can induce technological advances. I argue that answers to this question will (1) help us better understand the effectiveness of the Soviet science race, (2) offer valuable lessons about the conditions and pace of innovation in modern China, and (3) provide insight on supplementary incentive methods that can be adopted in the West to increase the effectiveness of innovation.

The boot camp would greatly accelerate my knowledge of the frontier of economic research on innovation. To date, most of the work I have studied and cited in my research has been on the historical adoption of technology (ie. Feigenbaum & Gross (2024), Kastis & Vipond (2025)) and the effects of innovation shocks in historical settings (ie. Ashraf et al. (2025), Juhasz et al. (2024), Lane (2025)). These areas of research are very active in the economic history community and I believe that the community would welcome research I produce with frontier knowledge from the boot camp.

Best regards,
Elizaveta (Liza) Brover

Elizaveta Alexandra (Liza) Brover
Curriculum Vitae

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Education

Ph.D.	Economics	Yale University	Expected 2029
M.A.	Economics	Yale University	2025
B.A.	Mathematical Economics	University of Pennsylvania	2023

Interests

Economic history

Honors and Awards

Lawrence R. Klein Prize for Outstanding Research, University of Pennsylvania, 2023
Simon Kuznets Fellowship Award in Economics, University of Pennsylvania, 2021
Phi Beta Kappa, University of Pennsylvania, 2021
College Federal Reserve Challenge regional qualifier, 2019, 2020, 2021

Grant Awards

ISPS Survey Grant (2024-2027)
National Science Foundation GRFP (2023-2028)
Penn Undergraduate Research Mentorship Award (2019)

Works in Progress

"Rise of the Red: Ideology and Dissent in Early Republican China" with Kexin Feng, working draft.

"Elite Selection: Party Composition and Purges in the Soviet Union" with Igor Kolesnikov.

Teaching

University of Pennsylvania: Managerial Economics, Fall 2020, Spring 2021

Conference Presentations

REEESNe Student Conference, 2023
New York University Jordan Center Undergraduate Research Symposium, 2023

Service

Yale Economic History Lunch organizer, 2024-2025, 2025-2026
Yale Pitch Pizza seminar organizer, 2025-2026

Advisors

(Yale University) Leah Boustan, Jose-Antonio Espin-Sanchez
(University of Pennsylvania) Mike Abito, Jere Behrman, Frank Diebold, Petra Todd

Personal: US Citizen

Language skills: Russian (native), French (proficient)

Current and Completed PhD Coursework

(At Yale University, during PhD)

Spring 2026
(Audit) ECON 5581: American Economic History

Spring 2025
ECON 582: Comparative Economic History of Eurasia
ECON 631: Labor Economics II
HIST 687: Russia, USSR, and the World 1855-1945

Fall 2024
ECON 556: Topics in Empirical Economics and Public Policy
ECON 600: Industrial Organization I
ECON 630: Labor Economics I
ECON 730: Economic Development I

Spring 2024
ECON 501: General Economic Theory: Microeconomics II
ECON 511: General Economic Theory: Macroeconomics II
ECON 552: Econometrics III
ECON 581: American Economic History

Fall 2023
ECON 500: General Economic Theory: Microeconomics
ECON 510: General Economic Theory: Macroeconomics
ECON 550: Econometrics I
HIST 688: Russian and Eurasian History

(At University of Pennsylvania, during undergrad)

ECON 7310: Econometrics II
ECON 7300: Econometrics I
ECON 682: Game Theory and Applications
ECON 681: Microeconomic Theory

Current and Future Research

The project I am developing for my job market paper examines the effects of the Soviet ban on genetics research that took place from 1948 to 1964. In 1948, the Soviet state issued a statement rejecting Mendelian genetics on the basis of its incompatibility with dialectical materialism, the official philosophy of the Soviet Union. The ban was enforced by an institutional rejection of genetics research in which genetics institutes were closed, hundreds of geneticists were fired or repressed, and university curricula were altered in favor of the state-sponsored Lysenko genetic theory. This historical example offers an opportunity to examine the effects of top-down suppression of scientific research on innovation as well as spillovers into innovation in other fields.

I first propose a method to capture the spread of a research topic using patent data from the United States and validate the method on equivalent data from the Soviet Union. Using a combination of keyword search and in-patent citations, I construct a network of the development of topics within biology research adjacent to genetics. I identify the transition from research that uses neutral keywords to the incorporation of genetics terminology in the United States patent data with a particular focus on the adoption of high-yield variety (HYV) seeds. I crosswalk this transition into the Soviet patent data to identify the structural break induced by the genetics ban.

I next propose several empirical methods to evaluate the effect of the structural break on innovation outcomes such as patent counts, citation-weighted counts, and topic share. The first method uses a triple difference-in-differences strategy to examine the effects of the ban on innovation outcomes by country and by field of science. The second method exploits event study designs to examine the saturation and contents of genetics-adjacent fields compared to other scientific fields during the phase in and phase out periods of the genetics ban. I finish with a counterfactual exercise in which I quantify the welfare loss associated with the late adoption of HYV seeds in the Soviet Union.

Future research directions include tracing the career trajectories of Soviet scientists affected by the genetics ban to study how repression and institutional exclusion reshaped the allocation of scientific talent. Another direction inspired by this project would explicitly examine the incentive structure behind the Soviet patenting system of inventor's certificates, which did not provide the scientist with property rights over their invention. A third research direction applies the patent examination approach to modern Asian innovation systems that rely less on market-based incentives and more on administrative evaluation to elicit scientific achievement. A separate but interesting direction would be to study the institutional conditions that led to the prolific achievements of Soviet physicists, mathematicians, and chemists.

The innovation boot camp would provide me with valuable insight into methods, trends, and current questions in the area of economics of innovation. I would particularly benefit from learning about the measurement and estimation of innovation processes that are outside the areas of intellectual property rights incentives or the scientist-level labor market. I would also enjoy meeting other early career researchers pursuing research with similar motivations to my own.