William Cockriel
Ph.D. Candidate in Business Economics
University of Chicago Booth School of Business
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January 29, 2024

Dear Reviewers,

I am writing to apply for the NBER Innovation Research Boot Camp in 2024. My curriculum vitae and list of completed courses are included with this file.

Professor Richard Hornbeck at the University of Chicago Booth School of Business has agreed to submit a letter of recommendation on my behalf (Richard.Hornbeck@chicagobooth.edu).

My research agenda is driven by a desire to understand the economic response to (1) technology growth and (2) increased market integration. My work on these topics benefits from a full-time research position with Professor Hornbeck prior to graduate school as well as my subsequent coursework in trade and spatial economics and applied microeconomic methods.

As my attached research statement will emphasize, I believe I am prepared to benefit from this Boot Camp as well as prepared to apply what I learn directly into research. I am interested in understanding the complex roles of innovation and entrepreneurship that determine the production of new innovations and the subsequent economy-wide adjustments.

I am enthusiastic about the opportunity to learn and expand my capacity to produce valuable research in the field of innovation. Thank you for your consideration, and feel free to contact me with any questions.

Sincerely,



William M. Cockriel

Research Statement, William Cockriel

Ph.D. Candidate in Economics, University of Chicago Booth School of Business

My research asks how workers and firms adapt to (1) new technologies and (2) increased market integration. I leverage historical data to study decades of adjustments and even intergenerational consequences. As economists look at future technologies and increasing globalization, my work informs scholars about important factors to consider as the economy experiences similar shocks going forward. I combine quasi-experiments with both reduced form methodologies and structural models to discern the extent to which adaptations were successful.

In my job market paper, titled "***Machines Eating Men: Shoemakers and their Children After the McKay Stitcher***", I document persistent, long-run losses to displaced incumbents as well as their children. I also show that this deskilling technology opens the industry to new entrants from lower wealth and less literate families.

Another work in progress explores the impact of lowering transportation costs on the specialization choices of firms and the physical productivity gains from increasing market integration in the 19th century. I find that specialization does not occur at the regional level, but rather at the firm level. Becoming more integrated pushes establishments to produce fewer products, thus specializing within an industry.

Understanding what drives innovation and how the economy adapts to it can benefit from the long-run perspective of history. I plan to inform our understanding of innovation and technologies over decades of changes and adjustments. While my current work is focused on the adjustments after innovations, I am greatly interested in expanding my toolkit to evaluate the steps leading up to innovation.

I am excited about the possibility of attending the innovation bootcamp to expand my skillset in understanding the process of innovation. Encouraging, directing, and acclimating to new innovations has fundamental value for the world economy in general. I expect to be a dynamic participant in this field throughout my career.

Completed Coursework:

University of Chicago, Booth School of Business

2019-2021

- Price Theory I, II, and III
- Empirical Analysis I, II, and III
- Theory of Income I and II
- Advanced Industrial Organization I, II, and III
- International Macroeconomics and Trade
- Firm Dynamics and Economic Growth
- Topics in International Trade and Growth
- Applied Microeconometrics
- Applied Microeconomics in Economic History
- Political Economy of Development

WILLIAM M. COCKRIEL

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EDUCATION

University of Chicago **August 2019 - Present**
Ph.D. in Business Economics
Booth School of Business

Brigham Young University **June 2017**
Bachelor of Science, Mathematics GPA: 3.9, Cum Laude
Bachelor of Arts, Economics
Brigham Young University Presidential Scholar, Graduated with Honors

REFERENCES

Each reference has an affiliated administrator handling requests for letters of reference.

Richard Hornbeck: john.melling@chicagobooth.edu

Rodrigo Adao: megan.jennings-quist@chicagobooth.edu

Anders Humlum: daniel.owings@chicagobooth.edu

PREVIOUS POSITIONS

Research Professional, Booth School of Business, Chicago **July 2017 - August 2019**

Research Assistant, Brigham Young University, Provo **April 2016 - July 2017**

FELLOWSHIPS AND HONORS

Economic History Association Dissertation Fellowship **2023 - 2024**

Katherine-Dusak-Miller Fellowship **2019 - 2021**

PRESENTATIONS

Nebraska Labor Summit (2024, planned), Florida State University (2024), Harvard Business School, Entrepreneurial Management (2024), Utah State University (2023), Southern Economic Association Meeting (2023), Economic History Association Graduate Student Poster Session (2023), National Bureau of Economic Research Summer Institute: Development of the American Economy Graduate Student Seminar (2023), Mountain West Economic History Conference (2023)

RESEARCH AND TEACHING INTERESTS

Research Interests: Technology and Innovation, Business History, Labor Economics

JOB MARKET PAPER

"Machines Eating Men: Shoemakers and their Children After the McKay Stitcher"

Abstract: I examine the long-run impacts of a deskilling technology on workers and their children. The McKay stitcher dramatically changed shoe production in the late 19th century by replacing skilled artisans with machines and less-skilled workers. It was licensed in only a few counties and impacted workers across counties unevenly through the transportation network. More-exposed shoemakers left traditional shoemaking for lower wages and did not migrate. The transfer of occupation from father to son was disrupted, and the children of shoemakers entered lower income occupations. New entrants to shoe factories came from poorer and less educated families. Using a model of occupation selection, I infer the change in life-time earnings implied by the impact of the technology on occupation exit. I find that the most exposed shoemakers and their children lost 2.2 and 2.5 years of wages, respectively.

SELECTED WORKS IN PROGRESS

"Futures Contracts and the Spot Market Response," with Martin Rotemberg and Anne Krahn

Abstract. How do futures markets affect prices? We study an important historical event in order to shed light on this question: in 1865, the Chicago Board of Trade suddenly set up formal futures markets. We digitize weekly information on spot prices and storage for traded commodities. Futures markets lead both prices and storage to fall in the short run, but prices recover within a year. We develop a model of forward-looking buyers and sellers with access to storage that can fit this pattern.

"Occupation Destruction," with Joseph Price.

Abstract. The proliferation of automobiles in the early 20th century led to the rapid decline of occupations related to horse-driven transportation, including teamsters and drivers of wagons and buggies. Using newly digitized data on state highways in this period and data on motor vehicle registrations, we create a measure of exposure to automobiles to examine the long-run consequences for incumbent horse-related workers. We characterize the workers who adjusted best and who bore the largest burden.

"Manufacturing Establishments and Market Access," with Richard Hornbeck, Anders Humlum, and Martin Rotemberg.

Abstract. We examine economic adjustments at the establishment level caused by the rapid expansion of the railroad system in the 19th century United States. Using recently digitized establishment level data from the Census of Manufacturers in 1850, 1860, 1870, and 1880, we find that greater market access did not lead to industry specialization but did lead to establishment-level specialization at the product level. Establishments produced fewer products and used correspondingly fewer inputs in production.

PUBLICATIONS

"The influence of dispersion on journal impact measures," with James McDonald. *Scientometrics* 116 no. 1 (2018): 609-622. (Undergraduate)

"Two multivariate generalized beta families," with James B. McDonald. *Communications in Statistics-Theory and Methods* 47, no. 23 (2018): 5688-5701. (Undergraduate)

TEACHING

Microeconomics (MBA), Teaching Assistant	Fall 2024
Business in the Historical Perspective (MBA), Teaching Assistant	Winter 2023, 2024
Introduction to Economics (Undergraduate), Teaching Assistant	Fall 2015 - Winter 2016