Matthew Hockert

Contact Information
PhD Student in Applied Economics
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Education

PhD in Applied Economics
University of Minnesota, Minneapolis, MN, September 2022 • Present
• Fourth year PhD student during 2025-2026 school year.
• Research Fields: land use, housing, transportation, and public finance.

Master of Science in Applied Economics
University of Minnesota, Minneapolis, MN, September 2020 • June 2024
• Graduate minor: Data Science.
• Thesis: "A Spatial Approach to Agrifood Supply Chain Structure" under the guidance of Hikaru Peterson, Professor of Applied Economics.
  • Examined the structural dynamics of U.S. agrifood supply chains during COVID•19, using spatial regression models to measure the effect of food capacity on food flows at county levels across the supply chain.
  • Utilized many datasets, including IMPLAN and Census data, such as County Business Patterns Survey, American Community Survey, USDA ERS, Department of Transportation, and others.
  • Generated results from spatial regression models, which captured the effects of neighboring county capacity variations have on the flow of goods through the supply chain, providing insights into the potential fragility or resilience of the supply chains.
  • Chosen to be a Selected Paper Presenter at AAEA.

B.A. in Economics and Political Science
University of Minnesota Duluth, 2017 • 2020
• GPA: 3.7/4.0
• Clubs: Men's Club Lacrosse, Treasurer of local Mortar Board chapter.
• Honors: University Honors Program, Dean's List, Cum Laude, Economic Department Honors, Omicron Delta Epsilon.

Works in Progress

Dissertation Essays

• "*Conservation and Externalities: The Effect of Conservation Easements on Neighboring Residential Parcels*"
• *"Rent Control and Housing Supply: Evidence from a Staggered Difference-in-Differences Approach"*
• *"Measuring Rent Control Intensity with Natural Language Processing and Generative Models"*

Additional Research

• *"Transportation Changes Land Use: How the St. Croix Bridge Shaped Accessibility, Housing Values, and Travel Behavior"*

Research Experience

Conservation Economist – Intern II
Hennepin County, Minneapolis, MN, June 2024 • Present
• Evaluated the impact of conservation easements and programs (Green Acres, Agricultural Preserve, and Rural Preserve) on property values, tax burden, and neighboring parcels.
• Studied spillover effects on neighboring parcels, including shifts in housing values and tax liability from nearby conservation easements.
• Simulated conservation easement scenarios to estimate fiscal impacts and illustrate tax implications for municipal budgets and finances.
• Used R, QGIS, and ArcGIS to analyze spatial patterns in how conservation and tax policy shape local property values and public finance outcomes.
• Analyzed costs of Best Management Practices and Nature-based Climate Solutions, including installation, maintenance, and funding options (grants, bonding, CIP, in-kind contributions).
• Developed cost analyses and forecasts for contract specifications, including labor, equipment, and long-term maintenance, incorporating depreciation and capitalization of tools and vehicles in partnership with Hennepin County, TRPD, and Great River Greening.
• Assisted with survey administration and data management using Survey123, including collecting responses, organizing results, and supporting integration into project workflows.

Graduate Research Assistant (GRA)
Accessibility Observatory, Minneapolis, MN, September 2022 • Present
• Created public datasets on accessibility of transportation types (bike, car, and transit) using Pandas and SQL.
• Developed Python pipeline taking data from AWS, cleaning it, and generated weighted average data of jobs accessible from blocks to state level within the US.
• Built and utilized additional pipelines to generate access data for ad hoc deliverables for Met Council and States Department of Transportation.
• Created Rshiny application using leaflet package to display job accessibility nationally from block group to state level and distributed to partners.
• Experienced with GitHub and Git commands.

Data Science Intern
Federal Reserve Bank of Minneapolis, Minneapolis, MN, June 2022 • March 2024
- Assisting the production team in Stress Testing to convert code from MATLAB to R to build forecasting models such as VAR and Kalman Filtering for assessing bank resiliency against various macroeconomic shocks.
- Analyzed data of U.S. banking conditions under the new CECL policy and presented findings to examiners and supervisors.
- Created Rshiny applications providing analytics and incorporating risk models to identify bank risk levels by loan and asset types.
- Investigated changes in rural banking quality and agricultural output in the Ninth District.
- Using data from the U.S. Census ACS survey and Federal Reserve, created Rshiny dashboard displaying differences in counties' economies and banking conditions.
- Experience pulling data from servers within the Federal Reserve to use locally for models and dashboards.
- Utilized Gitlab and Linux with Stress Testing team.

Graduate Research Assistant (GRA)
Project: Foodshed • Agricultural Commodities
University of Minnesota, Minneapolis, MN, September 2020 • 2022
- Conducted literature review for future publication.
- Examined regional food system resiliency during the COVID•19 Pandemic.
- Built comprehensive dataset using Census and IMPLAN data for OLS and spatial regression models in R.

Undergraduate Research Assistant
Bureau of Business and Economic Research, Duluth, MN, September 2019 • May 2020
- Generated local economic data and performed data analysis on IMPLAN, Excel, and SPSS.
- Cleaned and interpreted survey data on Qualtrics and Excel.
- Worked with fellow research assistants to write publications that were later published on the university website.
- Helped in crafting literature review and public outreach for labor market research.

Skills

• Programming languages: R, Python, SQL, SPSS, SAS, EViews, GAUSS
• Database Management Tools: AWS (S3, EC2), DBeaver
• Data visualization tools: Tableau, Rshiny
• Survey platforms: Qualtrics
• Version control: Git

Presentations

• "*A Spatial Approach to Agrifood Supply Chain Resiliency*" — Selected Paper Presenter, Agricultural & Applied Economics Association (AAEA) Annual Meeting, July 2023

• "*Calculating the Total Travel Time from Crash to Emergency Care in Rural Minnesota*" — Transportation Research Conference, Center for Transportation Studies, November 2024

• "*Transportation Changes Land Use: How the St. Croix Bridge Shaped Accessibility, Housing Values, and Travel Behavior*" — Transportation Research Conference, Center for Transportation Studies, November 2025

Honors and Awards

• University Honors Program
• Dean's List (2017•2020)
• Cum Laude
• Economic Department Honors
• Omicron Delta Epsilon

Professional Memberships

Agriculture and Applied Economic Association (AAEA)