Kristin Vrona

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CAREER HIGHLIGHTS

- Adaptive Economist with experience in applied econometrics and microeconomics, policy analysis, consulting, and logistics
- Professional record implementing effective resource allocation and cost savings in both private and public sectors
- 10 years of experience in data management and analysis; 8 years of statistical analysis and applied econometrics

EDUCATION

Northern Illinois University (NIU)   DeKalb, IL

Ph.D., Economics (GPA: 3.95)   May 2025

Degree specializations: applied econometrics, labor economics
Secondary fields: health economics, strategy and game theory, public policy
NIU Dissertation Fellowship, academic year 2022 - 2023

M.A., Economics (GPA: 3.97)   Dec 2018

NIU Graduate School's Outstanding Graduate Research Award, May 2018
NIU Department of Economics' Outstanding Master's Student Award, Dec 2017

B.S., Economics (GPA: 3.93), *summa cum laude*   May 2016

Dissertation

An Analysis of Mental Health and Workplace Absenteeism: This dissertation investigates how untreated mental illness affects employee absenteeism and the role of fringe benefit package design on the magnitude of productivity loss attributed to mental illness. Using MEPS data (2010-2014), I apply several econometric frameworks to isolate the causal impact of mental health on labor outcomes and examine the possibility of non-random selection into employment that biases the magnitude of estimates. A key innovation is a spectral approach to mental illness measurement that captures symptom variation beyond formal diagnosis. The findings support the business case for early intervention and tailored health benefits to improve productive time losses.

FIELD EXPERIENCE

Freelance Economist: *Applied Microeconomics, Econometrics*   Nov 2024 - present

- Currently contracted by Snorkel AI to evaluate and refine machine learning models
- Designed and executed adversarial overload strategies to expose model limitations in real-world applications

Institute for the Study of the Environment, Sustainability, and Energy   DeKalb, IL
Graduate Research Fellow   Aug 2022 – Sep 2024

- **Fellowship sponsored by Illinois Department of Natural Resources (IDNR)**
- Consulted IDNR on improving scoring indexes that determine funding allocations
- Integrated qualitative data (e.g., clean water and environmental risk assessments, town hall transcripts, follow-up surveys) with quantitative measures (e.g., localized Gini indices and GIS analytics) to inform allocation of $59M in funding
- Contributed to a 20% increase in funding for high-need communities; team efforts formally recognized by state senate (Feb 29, 2023) and governor (March 1, 2023)
- Managed undergraduate researchers conducting community outreach throughout the development of the Statewide Comprehensive Outdoor Recreation Plan (SCORP)

MOL Logistics (US corporate office)   Lombard, IL
Business Planning and Cost Savings Analyst   May 2016 – Jul 2017

- Increased forecasting accuracy by 5-8% in three months
- Monitored and assessed projection model performance, identified trends, presented actionable insights to domestic and international executive management
- Launched and led weekly operational audits that reallocated idle container assets, boosting fleet utilization and cutting storage costs
- Developed standard operating procedures (SOPs) to inform and implement new policy cross-departmentally
- Recognized with **MOL Spot Award**, June 2017

OTHER SELECTED DOCTORAL RESEARCH

Project: *Equilibrium Outcomes Under Mental Health Parity Enforcement* (working paper)
In collaboration with Dr. Anna Klis, Department of Economics (NIU)
Topics: Game theory, strategy, healthcare policy, employer compliance, mechanism design

- Developed a model of employer compliance to mental health parity enforcement under the Affordable Care Act (ACA)
- Use game theory to evaluate behavioral responses of employees and employers in different states of parity enforcement
- Conducted mechanism design analysis to explore strategic insurance design under varying regulatory pressures

ADDITIONAL EXPERIENCE

Department of Economics (NIU)   DeKalb, IL
Instructional Teaching Assistant   Jan 2019 - Aug 2022

- Independently instructed undergraduate macroeconomics courses for 15 - 38 students
- Promoted innovative team-based learning (TBL) initiatives
- Led graduate level recitation sessions in applied microeconomic analysis
- Lectured graduate students on public economics and the intersection of health & labor economics
- Represented the Economics Department at university events, promoting the program and recruitment

TECHNICAL SKILLS

Programming Languages
- Proficient in R, SAS, VBA, LaTeX
- Intermediate experience with Python, GitHub, STATA

Operational Database & Public Fund Management
- SQL, BI software, ODS management, STARNET (contract management & auditing), AmpliFund (public grant management software)

Econometric Methods
- Time-Series Analysis, Instrumental Variables, Panel Methods, Regression Discontinuity, Duration & Survival Analysis, Simultaneous Regression
- Matching, Simulation, Bias Reduction & Re-Sampling Techniques (Bootstrap, Jackknife), Sensitivity Analysis