Curriculum Vitae

Ryan Hastings

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(he/him)

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Education

2022 **Duke University**. Durham, North Carolina. Bachelor of Science, *summa cum laude*.

Majors in and Minor in Economics, with High Distinction; Statistical Science, with Concentrations in Mathematical Statistics & Data Science; Mathematics.

Honors: Allen Starling Johnson, Jr. Best Thesis Prize in Economics, 2022 (shared).
Phi Beta Kappa, 2021.

2018 **Unionville High School**. Kennett Square, Pennsylvania.

Field Interests

Primary: Spatial & Urban Economics.
Secondary: Public Economics, Empirical Industrial Organization, International Trade.

Working Papers & Work in Progress

The Heterogeneous Value of a Statistical Life: Evidence from Pandemic Cell Phone Movements.
(Undergraduate Thesis)
Presented at the 2022 Society for Benefit-Cost Analysis European Conference.

Abstract: To examine heterogeneity in the value of statistical life (VSL) across age groups, I study the risk trade-offs that consumers faced when choosing whether to visit establishments like stores and restaurants during the COVID-19 pandemic. First, I estimate heterogeneous fatality rates conditional on infection using the health outcomes of millions of COVID-19 patients. I interact these with local infection rates to create measures of mortality risk that vary across time, space, and demographic groups. Then, using a panel of cell phone GPS data tracking visits to millions of establishments before and during the pandemic, I examine how the responsiveness to infection-related mortality risk varied across age groups. My results suggest that older people's visit behaviors are less sensitive to mortality risk. Under weak assumptions, this implies that older people have a lower willingness to pay for marginal reductions in the probability of death. This finding has implications for the cost-benefit analysis of policies that mitigate adverse health outcomes, such as pandemic movement restrictions and pollution remediation, and for the VSL literature more broadly.

Food Retailers and SNAP: Who Captures the Federal Food Dollar?
(with Lin Fan, Jessie Handbury, Ilya Rahkovsky, and Erik Scherpf)
Presented at the 2023 Agricultural and Applied Economics Association Annual Meeting.

Abstract: SNAP benefits buy 14 cents of every dollar spent on food in U.S. supermarkets and are a large, volatile component of retail demand. However, the effect of SNAP on the prices charged by food retailers is far from clear; the only two studies examining this issue find opposite results. We use administrative data on SNAP transactions and scanner data on retail prices and household

expenditures, along with state-level variation in the generosity of benefits along both the intensive and extensive margins that are plausibly exogenous to local macroeconomic trends. We find that prices tend to increase following an increase in the per-recipient generosity of SNAP benefits but decrease following an increase in the number of eligible households. We present a model of consumer store choice and retailer price-setting featuring travel costs and liquidity constraints that can rationalize these diverging price responses. We then test its predictions and estimate its key parameters to quantify the incidence and welfare effects of intensive and extensive margin program expansions, in terms of the surplus split by beneficiaries and retailers and their spillover effects on non-recipient households.

Remote Work, Local Service Economies, and the Supply of Consumption Amenities.
(with Jessie Handbury and Lindsay Relihan)

Abstract: Over the past two decades, the availability of non-tradable services has become an important feature explaining residential neighborhood choice and local economic performance. However, surprisingly little is known about the size of investments that are required to support a local service-based economy or how such investments affect the service demand of existing residents. This paper leverages the resorting of residential and employment locations induced by the widespread adoption of remote work following the COVID-19 pandemic to investigate how the supply of consumption amenities responds to changes in local density and demographics. We use credit card transactions to measure consumer expenditures and create a high-frequency panel of establishment openings and closures. We estimate both the elasticity of non-tradable service supply with respect to local customer density and the elasticity of non-tradable service demand with respect to establishment density. We use a model of retail demand to study the distributional effects of the growing suburbanization of consumption amenities in recent years.

Research Experience

Economics

2022-2024 **Research Assistant to Professors Jessie Handbury & Sophie Calder-Wang.**
2019-2022 **Research Assistant to Professor Christopher Timmins.**

Other Disciplines

2021 **Statistical Programming Intern, *Acumen, LLC*.**
- Analyzed claims and patient outcomes to evaluate a novel Medicare hospice insurance design.

2021 **Research Assistant, Duke Law School, *Wilson Center for Science and Justice*.**
- Cleaned data and performed exploratory analysis for empirical legal research on criminal justice and bail reform.

2020 **Research Assistant, Duke Sociology, *Improving Life Chance Outcomes Project*.**
- Designed and piloted a questionnaire for an international survey about the effects of COVID-19 on students and families.

2019 **Research Assistant, Duke Energy Initiative, *Bass Connections: Coal and America*.**
- Collected oral histories and conducted archival research about employment and migration in Central Appalachian coal communities.

2019 **Research Assistant, Kenan Institute for Ethics, *Kenan Refugee Project*.**
- Conducted field interviews with Iraqi, Syrian, and Palestinian refugees in Amman, Jordan and Jerash Camp.

Teaching Experience

2020-2022 **Teaching Assistant**, Duke University.

2021(x2), 2022	ECON 205: Intermediate Microeconomics II.
2021	MATH 343/STAT 432: Mathematical Statistics.
2021	MATH 216: Linear Algebra & Differential Equations.
2020	MATH 212: Multivariable Calculus.
2020	ECON 201: Intermediate Microeconomics I.

2018-2024 **Front Ensemble Instructor**, Unionville High School Percussion Ensemble.

Technical Skills

R, Python, Stata, SQL, SAS, Matlab, Git, Make, Unix, Slurm, SGE, LaTeX, Markdown.

Other Experience

2018-2022	Project Leader, Duke Citizenship Lab.
2021-2022	President, Duke Ethics and Global Citizenship Living-Learning Community.
2017-2021	Percussionist, Cadets Drum and Bugle Corps & GMU Indoor Drumline.