

William Brasic

Doctoral Candidate in Economics

Industrial Organization, Applied Microeconomics

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ABOUT ME

Doctoral Candidate in Economics specializing in Industrial Organization and Applied Microeconomics. Combines structural modeling with causal inference and machine learning to study firm and consumer behavior in imperfectly competitive markets. Experienced analyzing large-scale transaction and consumer data along with using computer simulations in R, MATLAB, C++, Julia, Python, Git/GitHub, Docker, and Slurm to answer real-world economic questions related to health economics, artificial intelligence, and antitrust and competition policy.

EDUCATION

The University of Arizona <i>Ph.D., Economics</i>	May 2027 (Expected) <i>Tucson, AZ</i>
University of Nevada – Las Vegas <i>M.S., Data Intelligence and Applied Economics</i>	May 2022 <i>Las Vegas, NV</i>
University of Nevada – Las Vegas <i>B.A., Economics (Magna Cum Laude)</i>	August 2020 <i>Las Vegas, NV</i>

PROFESSIONAL EXPERIENCE

Analysis Group <i>Associate Extern</i>	July 2025 <i>Boston, MA</i>
- Selected as 1 of 14 externs (4% acceptance rate) for Analysis Group's inaugural Associate Externship Program - Conducted qualitative research on a high-profile legal complaint involving a carriage fee dispute, synthesizing key facts and the regulatory landscape - Analyzed subscriber and financial data to uncover trends, estimate damages, and deliver actionable insights to support strategic recommendations during a case - Collaborated with Associates on live case discussions and client deliverables, concluding the externship with a team presentation of research findings to Analysis Group colleagues	

RESEARCH PAPERS

Job Market Paper

Hooked on Flavor: Addiction, Present Bias, and the Consequences of E-Cigarette Flavor Policy

- Flavored e-cigarettes have captured millions of users, disproportionately teens and young adults, amid controversy over how best to regulate them. To evaluate e-cigarette flavor policy, I develop a dynamic model of cigarette and e-cigarette demand featuring addiction and flavor stocks, heterogeneous flavor preferences by household age composition, and unobserved heterogeneity. Using NielsenIQ scanner data for 2021–2023, I document substantial habit persistence, heightened flavored e-cigarette demand among households with younger individuals, and a strong preference for non-FDA-authorized e-cigarettes. I estimate the dynamic finite mixture model under rational and time-inconsistent discounting to simulate counterfactual flavor policies. Three findings emerge among e-cigarette-persistent households. First, the dominant response to a ban on flavored e-cigarettes is abstention, not cigarette substitution: consumption falls by 14 to 20 cigarettes (1 pack) per month. Second, full enforcement against non-FDA-authorized brands captures 87% of the addiction reduction that results from the comprehensive flavor ban while also cutting new initiation by 44% for households with younger individuals. Third, a \$2.78/mL excise tax achieves roughly 75% of the comprehensive ban's addiction reduction at close to zero consumer-surplus cost, versus \$1,400 per household under the ban. Present bias preserves this ranking but reframes part of the loss as an internality correction for over-consumption, turning the tax's effect into a \$481 net gain per household.

Working Papers

Algorithmic Pricing, Recommendation Systems, and Competition

Revise and Resubmit at The International Journal of Industrial Organization

Award: The University of Arizona Ed Zajac Prize for Best Third-Year Paper

- AI-powered pricing algorithms raise concerns about supracompetitive outcomes without explicit coordination. Meanwhile, digital platforms use recommendation systems (RSs) to influence product visibility. This paper models Bertrand-Markov price competition in a differentiated product market with heterogeneous consumers, where both sellers' pricing and the platform's recommendations are AI-driven. The findings show that RSs can autonomously inhibit algorithmic anticompetitive conduct, resulting in prices even below the Bertrand-Nash benchmark. The results hold when the platform only prioritizes profits, as well as with variations in consumer heterogeneity, market conditions, and underlying learning parameters.

Works in Progress

When Asymmetric Pricing Algorithms Collide

Award: The University of Arizona Steve Manos Prize for Best Second-Year Paper

- Algorithms are increasingly superseding humans in the pricing of goods and services, enabling firms to adapt to shifting market dynamics with greater precision. Despite the widespread adoption of these algorithms, there remains a scarcity of knowledge regarding their specific configurations and their impact on competition. I assess whether asymmetric reinforcement learning-based pricing algorithms can learn to engage in tacit collusion within a repeated Bertrand-Markov pricing environment. My analysis reveals that diverse algorithms can indeed learn to tacitly collude, consistently setting and sustaining prices above competitive levels. This practice results in enhanced firm profitability, while concurrently diminishing consumer welfare.

RESEARCH ASSISTANTSHIPS

Arizona Residential Utility Consumer Office

Spring 2026

Research Assistant

Tucson, AZ

- Supported expert witness testimony for [Professor Stanley Reynolds](#) by conducting data-driven impact assessments of proposed electricity rate increases, projecting damages based on consumer demographics and income
- Gathered, aggregated, and cleaned 10+ gigabytes of retail electricity billing records and U.S. Census income data to analyze energy affordability for Arizona utility customers across ZIP codes and socio-economic groups

TEACHING

Sole Instructor of Record

ECON 418-518: Introduction to Econometrics

Fall 2024

- Developed curriculum and independently instructed 20+ students on econometrics and machine learning, receiving a mean evaluation grade of 94%
- Guided students in using R for data science, econometrics, and machine learning using real-world examples and data

Head Graduate Teaching Assistant

ECON 200: Basic Economic Issues

2022 – 2025

- Led teams of 10+ undergraduate and graduate students as the head teaching assistant in this 500+ student course
- Coordinated between the course instructor and TAs/preceptors on meetings, deadlines, and deliverables

Graduate Teaching Assistant

ECON 435: Public Sector Economics

Spring 2026; Fall 2026

ECON 460: Industrial and Antitrust Economics

Fall 2025; Fall 2026

ECON 502B: Computational Methods and Dynamic Models (Ph.D.)

Spring 2025

TECHNICAL SKILLS

Programming Languages

R; MATLAB; C++; Julia; Python; SQL

Tools

Microsoft Office; Git/GitHub; Shell; Docker; Slurm; LaTeX

CONFERENCES, SEMINARS, AND WORKSHOPS

Southern Economic Association Annual Meeting

Presenter

November 2026

Houston, TX

Arizona State University

Presenter

October 2026

Tempe, AZ

Economics Graduate Student Conference at Washington University in St. Louis

Presenter

October 2026

St. Louis, MO

The University of Arizona Econometrics Seminar

Presenter

May 2026

Tucson, AZ

NBER Digital Economics and AI Meeting

Invitee

February 2025

Stanford, CA

FELLOWSHIPS, GRANTS, AND SCHOLARSHIPS

Michael B. Bidwell Scholarship in Economics

\$1,965.00

2025

The University of Arizona

Ed Zajac Prize for Best Third-Year Paper

\$1,500.00

2025

The University of Arizona

Data Science Roots for Resilience Fellowship

\$7,000.00

2024

The University of Arizona

Steve Manos Prize for Best Second-Year Paper

\$2,000.00

2024

The University of Arizona

Joseph Smeeding Memorial Scholarship in Economics

\$1,549.00

2023; 2024

The University of Arizona

George W. Coleman Scholarship in Economics

\$2,000.00

2023; 2025

The University of Arizona

Graduate Access Fellowship

\$8,000.00

2022

The University of Arizona

REFERENCES

Professor Matthijs Wildenbeest

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