

Hansen Pen

hansen.pen@rice.edu — (512) 289-2190 — Citizenship: Canada, Taiwan

RESEARCH FIELDS

Empirical Industrial Organization, Quantitative Marketing

EDUCATION

Ph.D. Economics, Rice University	Expected 2026
B.A. Economics & B.S. Mathematics, University of Texas at Austin	2020

AWARDS AND FELLOWSHIPS

Graduate Fellowship, Rice University	2020 - Present
Center for Computational Insights on Inequality and Society Grant, Rice University	2025
Dissertation Research Improvement Grants, Rice University	2025
Samuel Fain Carter Fellowship in Economics for outstanding academic performance, Rice University	2024
Undergraduate Research in Economics Fellowship, UT Austin	2020
Unrestricted Endowed Presidential Scholarship, UT Austin	2019

WORKING PAPERS

Market Power and Inertia in the Vaping and Tobacco Industry, with Joon Ha Kim (Job Market Paper)

Using detailed sales and pricing data from the NielsenIQ marketing database, we estimate a structural model to analyze the evolving competition and dynamic market structure in the vaping and tobacco industry. Our model incorporates state dependence and unobserved heterogeneity to capture substitution patterns within this highly addictive market. We propose a demand estimation approach that integrates both individual- and aggregate-level data while accounting for state dependence. With these demand estimates, we first examine how manufacturers adjust to potential market structure shifts, such as mergers and acquisitions. Next, driven by the frequent implementation of tax policies in the vaping sector, we simulate different state-level tax rates to investigate the resulting tax pass-through effects.

Evaluating the Cost Effectiveness of Subsidies: A Case Study of Solar Panels in New York State, with Joon Ha Kim

This paper examines the effectiveness of generous governmental policies aimed at promoting residential solar panel adoption in New York. Specifically, we analyze the impact of the NY-capacity-based subsidy program, net metering policy, and tax rebates on residential solar adoption. Using a dynamic discrete choice model, we evaluate how forward-looking households respond to these governmental incentives. With these estimates, we run counterfactual scenarios to assess the impact of various policies on solar panel adoption.

WORK IN PROGRESS

Horizontal Merger and Complementary Availability in the Video Game Industry (Third Year Paper)

Net-Metering Matters More than You Think: Evidence from California, with Joon Ha Kim

Market-Varying Price Sensitivity in the Soft-Drink Market and Implications for Optimal Taxation with Jeremy Fox

TEACHING AND RESEARCH EXPERIENCE

Teaching Assistant, Rice University	2020 - Present
Computational Economics (G), Econometrics I (G), Econometrics II (G), Econometrics (UG), Game Theory (UG), Market Design (UG), Principles of Economics (UG)	
Teaching Assistant, University of Texas at Austin	2019
Applied Statistics (UG), Discrete Mathematics (UG)	
Research Assistant, Rice University	
Professor David H. Zhang	Summer 2023
Professor Jeremy Fox	Summer 2022

PROFESSIONAL EXPERIENCE

Applied Scientist Intern, LinkedIn	Summer 2025
------------------------------------	-------------

CONFERENCE AND SEMINAR PRESENTATIONS

United States Association for Energy Economics (USAEE)	2024
Third Year Paper Conference, Rice University	2023
Brownbag Seminar, Rice University	2023

SKILLS

Programming: Julia, Python, Matlab, Stata, SQL
Languages: English, Mandarin

REFERENCES

Professor Jeremy Fox (Committee Chair)
Shatto Professor of Economics
Department of Economics, Rice University
jeremyfox@gmail.com

Professor Xun Tang
Professor of Economics
Department of Economics, Rice University
xun.tang@rice.edu

Professor David H. Zhang
Assistant Professor of Finance
Jones Graduate School of Business, Rice University
dzhang@rice.edu