Lance Gui

gui@arizona.edu
Cell: 801-897-7578
lancegui.github.io
Last Update: Dec. 2025

McClelland Hall, 401
Department of Economics
Eller College of Management
Tucson, AZ 85721

Placement Director: Price Fishback
fishback@arizona.edu 520-621-4421
Administrative Director: Liz Jenkins
ejenkins@arizona.edu 520-626-7743

EDUCATION

University of Arizona, Tucson, Arizona USA

Ph.D. in Economics, 2020-2026 (expected)

M.A. in Economics, 2021

Pepperdine University, Malibu, California USA

B.S. Mathematics and B.A. Economics, Minor in Computer Science, *Magna Cum Laude*, 2020

FIELDS

Industrial Organization, Health Economics

REFERENCES

Professor Mo Xiao
mxiao@arizona.edu

Professor Matthijs Wildenbeest
wildenbeest@arizona.edu

Professor Hidehiko Ichimura
ichimura@arizona.edu

WORKING PAPERS

The Last Mile to First Treatment:
Searching for Opioid Use Disorder Medication *SSRN Link*
Job Market Paper

Despite growing policy support for buprenorphine, the leading medication for opioid use disorder, treatment initiation remains low. Comprehensive insurance data from Washington State show that fewer than half of first-time patients fill their prescriptions, well below rates for other chronic conditions. Initiation is hindered not only by the physical cost of visiting pharmacies (e.g., distance) but also by uncertainty about availability. I estimate their joint effect using a structural sequential search model where patients search over pharmacies with unknown availability. Normalizing the default (most frequently visited) pharmacy's search cost to zero, I identify search costs by comparing non-default choices (utility net of search costs) to default choices (utility only). I find that search costs account for 70% of observed treatment failures. Counterfactuals show that simple prescriber guidance on pharmacy availability could raise initiation rate by 17%.

Closing the Opioid Use Disorder Treatment Gap:
Expanding Nurse Practitioners' Prescriptive Authority *SSRN link*

The Comprehensive Addiction and Recovery Act (CARA) of 2016 enabled Nurse Practitioners (NPs) to prescribe buprenorphine, a safe treatment for opioid withdrawal. Leveraging pre-existing state-level NP prescribing authority and comparing pre- and post-CARA periods, I find that allowing NPs to prescribe buprenorphine independently expands the pool of active buprenorphine prescribers, increases buprenorphine dispensation, and reduces opioid-related mortality by over 20%, without replacing specialized treatment. Gains were concentrated in underserved counties, with limited effects elsewhere. Finally, there is suggestive evidence of increased diversion into the secondary market.

Anatomy of Opioid Diversion: Examining Supply-Side Curtailment *SSRN link*
With Mo Xiao, Chuan Qin

Rogue pharmacies worsen the opioid epidemic by diverting opioids to non-medical users. Using pharmacy-level opioid shipment and hospital diagnosis data, we examine the spatial redistribution of opioid shipments after targeted shutdowns by the Drug Enforcement Administration. The structural model reveals that over half of pharmacy-distributed opioids were diverted to non-medical use. Aggressive pharmacy crackdowns may drive non-medical users who lose previous access to the black market.

Anatomy of a Scandal: #Batterygate and Consumer Choice

I link over 35,000 individuals' Twitter behaviors to their offline phone purchases to examine the heterogeneous consumer response to Batterygate, where Apple slowed down iPhone processors without acknowledgment in 2017. Using a novel trend-extrapolated Differences-in-Differences technique, I find that Batterygate only negatively impacts potential consumers, not the current user base, highlighting the importance of consumer heterogeneity in determining customer responses to negative media sentiment.

PRESENTATIONS	Association for Public Policy Analysis & Management (APPAM), Tsinghua University	2025
	International Industrial Organization Conference (IIOC)	2024
	SUFE-Jinan Empirical IO Conference	
	Chinese Economist Society (CES) Annual Conference	2023
	The European Association for Research in Industrial Economics (EARIE) Annual Conference	
	EARIE Inaugural Summer School	
	Chinese Economist Society (CES) Annual Conference	2022

TEACHING — University of Arizona, *Sole Instructor*
ECON300 Microeconomics Analysis For Business Decisions Online

University of Arizona, *Teaching Assistant*

ECON460 Industrial Organization	ECON462 Firms, Markets, and Competition
ECON551 (MBA) Business Strategy	ECON407 Economics of Strategy
ECON508 (Ph.D.) Applied Economic Analysis	ECON453 Data Analytics and Modeling

FELLOWSHIP AND AWARDS	Moshe Dror Research Excellence Award	2025
	Edward E. Zajac Prize for the Best Third-Year Paper (Honorable Mention)	2023
	Steve Manos Prize for the Best Second-Year Paper (Honorable Mention)	2022
	University of Arizona Graduate Fellowship	2020

RESEARCH GRANTS	Lundgren Retail Collaborative Grant ($2000) with Professor Mo Xiao	2024
	Center for Management Innovations in Healthcare (CMIH) Research Grant ($5000) with Professor Mo Xiao	
	CMIH Data Grant ($2000) with Professor Mo Xiao	
	Eller Small Grant ($3000) with Professor Mo Xiao	2023

RESEARCH ASSISTANT	Research Assistant to Mo Xiao, University of Arizona	2023 - 2024
	Research Assistant to Eric Hamilton, Pepperdine University	2016 - 2020

ACADEMIC SERVICE — Referee for International Journal of Industrial Organization (ad-hoc)

OTHER PUBLICATIONS — Lee, S.B., **Gui, X.**, Manquen, M. and Hamilton, E.R., 2019, October. "Use of Training, Validation, and Test Sets for Developing Automated Classifiers in Quantitative Ethnography." In International Conference on Quantitative Ethnography (pp. 117-127).

Lee, S., **Gui, X.**, and Hamilton, E. 2020. "Application of AutoML in the Automated Coding of Educational Discourse Data." In Gresalfi, M. and Horn, I. S. (Eds.), The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 5 (pp. 2597-2600).

NON-HUMAN LANGUAGE SKILLS — R, Julia, Python, MATLAB, C++ (*in order of usage*)