Sixia Xie

Address:
Department of Economics
University of Toronto
150 St. George St.
Toronto, Ontario M5S 3G7, Canada

Email:
sixia.xie@mail.utoronto.ca

Website:
sixiaxie.com

Citizenship: Canadian

Research Field: Empirical industrial organization

Research Interests: Collusion; product variety and welfare; mergers and acquisitions; industry dynamics; banking

Education

Ph.D. in Economics, University of Toronto — 2027 (Expected)

Medical leave of Absence: 2022–2023

Committee: Mitsuru Igami, Yanyou Chen, Victor Aguirregabiria

M.A. in Economics, University of Toronto — 2019

MSc. in Management, Smith School of Business at Queen's University — 2015

Bachelor of Business & Bachelor of Laws, Nankai University — 2014

Research

Collusion beyond Prices: Product Variety and Welfare in the LCD Panel Industry
(Job Market Paper)

Estimation of Cost Efficiency in a Consolidating Banking Industry

Selection in Product Variety and Welfare Measurement

Capital Requirements and Lender Competition in the U.S. Mortgage Industry

Awards and Grants

Faculty of Arts and Science Top Award, University of Toronto — 2019–2025

University of Toronto Fellowship — 2020, 2024–2025

Department of Economics Graduate Program Award, University of Toronto — 2020, 2022, 2024–2025

School of Business Award, Queen's University — 2014–2015

Professional Experience

Teaching Assistant

University of Toronto 2018 – present

- ECO2404: Empirical Applications of Economic Theory
- ECO1400: Econometrics
- ECO375: Applied Econometrics I
- ECO359: Financial Economics II: Corporate Finance
- ECO349: Money, Banking and Financial Markets
- ECO310: Empirical Industrial Organization
- ECO220: Quantitative Methods
- ECO200/ECO204/ECO206: Microeconomic Theory

Queen's University 2015

- COMM172: Managerial Economics

Research Assistant

Gueorgui Kambourov: reimplement Stata code in R 2020

Zachary Zhong: data analysis, result replication 2019

Languages and Computer Skills

Mandarin (Native), English (Fluent)

Programming: Python, R, Stata, Julia, Shell, LaTeX

Computer: Git, Cloud Computing

References

Mitsuru Igami
Department of Economics
University of Toronto
mitsuru.igami@utoronto.ca

Yanyou Chen
Department of Economics
University of Toronto
yanyou.chen@utoronto.ca

Victor Aguirregabiria
Department of Economics
University of Toronto
victor.aguirregabiria@utoronto.ca

Nazanin Khazra (Teaching)
Department of Economics
University of Toronto
nazanin.khazra@utoronto.ca

Abstracts

Collusion beyond Prices: Product Variety and Welfare in the LCD Panel Industry

(Job Market Paper)

How does a price-fixing cartel affect product variety and welfare? A cartel can coordinate not only prices but also which products firms offer. Once collusion can extend beyond prices, the total welfare impact of a cartel depends on how far its members coordinate their product offerings and becomes *a priori* ambiguous: changes in product variety may reinforce or offset the damages from higher prices. I study this question in the LCD panel industry, where six major firms operated a cartel from 2001 to 2006. Antitrust case documents show price coordination and suggest some coordination of product offerings. Using sales and engineering cost data, I estimate a model of demand with endogenous product choices, and I infer bounds on fixed costs from the products that firms offer. I find that the product variety observed after the cartel's collapse was *not* socially excessive and may have been insufficient. Counterfactual simulations show that, had the cartel not collapsed, it would have raised the number of products by 12% if its members colluded only on prices and reduced it by 14% if they also coordinated their product offerings. Regardless of product coordination, however, the price effect dominates: buyer surplus would have been 19% and 23% lower, and total surplus 10% and 11% lower, respectively. Measured against the socially optimal portfolio, Bertrand competition attains 93% of its total surplus, whereas the two forms of collusion attain 83% and 82%.

Estimation of Cost Efficiency in a Consolidating Banking Industry

The U.S. banking industry was historically highly regulated, with strong restrictions on interstate banking and branching. Deregulation since the 1980s has led to a wave of mergers and acquisitions, resulting in a significant reduction in the number of banks. Estimating cost efficiency without accounting for banks' beliefs about future market structures can overestimate the cost savings. This paper estimates a dynamic oligopoly model that endogenizes banks' merger decisions to account for banks' incentives to merge due to their beliefs about future market structures. The model allows for differentiation in bank characteristics and banks' branch networks, and features a sequential acquisition game with private information to account for unobserved heterogeneity in banks' merger decision making.

Selection in Product Variety and Welfare Measurement

(Work in Progress)

Welfare analysis of product variety relies on demand estimated from the products firms chose to offer. Firms make these choices using information about demand that the researcher does not observe, so the observed product variety is selected. Ignoring this selection biases demand estimates and can lead to mismeasured welfare. Using data from the LCD panel industry, I estimate demand with and without the selection correction of Aguirregabiria, Iaria, and Sokullu (2026) and measure how much the correction changes the estimated welfare effects of product variety.

Capital Requirements and Lender Competition in the U.S. Mortgage Industry

(Work in Progress)

Non-bank lenders, who are not subject to banking regulations, have become increasingly popular in the U.S. mortgage market over the past decade, particularly among high-risk borrowers. Banking regulations including capital requirements affect banks' lending behaviour toward borrowers with different risk profiles. Descriptive evidence shows that non-bank lenders receive a larger share of applications from higher-risk borrowers, suggesting that they adopt different pricing strategies compared to banks. I develop a model in which lenders set individualized mortgage rates that reflect heterogeneous costs across lenders for the same borrower. I use this model to quantify how capital requirements influence banks' lending behaviour and to assess their implications for borrower welfare across different risk profiles through counterfactual analysis.