Junyan Guan

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Northwestern Economics

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Fields

Research: Industrial Organization

Teaching: Industrial Organization, Microeconomics

Education

Ph.D., Economics, Northwestern University, 2022 (expected)
Dissertation: Empirical Studies of Auctions and Consumer Demand
Committee: Robert Porter (Co-Chair), Vivek Bhattacharya (Co-Chair), Mar Reguant

M.S., Economics, University of Wisconsin-Madison, 2016

B.A., Finance, Fudan University, China, 2014

Fellowships & Awards

Graduate Dissertation Fellowship, Northwestern University, 2021-2022

University Fellowship, Northwestern University, 2016-2017

Academic Excellence Award, University of Wisconsin-Madison, 2016

People's Scholarship, Fudan University, 2011 & 2012

Teaching Experience

Teaching Assistant, Northwestern University, 2017-2020
Econ 202: Introduction to Microeconomics
Econ 310: Intermediate Microeconomics
Econ 281: Introduction to Applied Econometrics
Econ 349: Industrial Economics
Econ 350: Monopoly, Competition, and Public Policy

Conferences & Seminars

2021: Young Economist Symposium, Northwestern University IO Seminar, European Winter Meeting of the Econometric Society (scheduled)

Job Market Paper

"Reserve Price Signaling with Public Information: Evidence from Online Auto Auctions" with Boli Xu

The "linkage principle" in auction theory states that the seller can gain more profits by revealing all available information, positive or negative, about the object's value. However, in real-world auctions, sellers often hide their reserve price. This is known in the literature as the "secret reserve price puzzle". In this paper, we propose a novel explanation to the puzzle. We consider an auction model in which a seller's choice of reserve price signals her private information about the object's quality. We show that such a signaling incentive could decrease the seller's profit and probability of sale in equilibrium, with a larger impact when the seller's private information is more precise relative to the public information announced by a third party. We estimate the reserve price signaling model using a novel dataset from a large online auto auction platform. We find that the signaling incentive could cost the seller 4% of her profit and decrease the probability of sale by 15 percentage points. Counterfactual simulations suggest that a secret reserve price can improve both the seller's profit and probability of sale, especially when the signaling incentive is strong. Our findings support the prevalent use of secret reserve prices in practice, contrary to the predictions of the linkage principle.

Other papers

"Price Reference Effects and Vertical Contracts in the Book Retail Market" with Ting Wang

In many settings, behavioral economists have documented a price reference effect: the fact that a consumer's willingness to pay for a good is affected by difference between the observed price and the reference price they rationally expect. In this paper, we show that such preferences interact with vertical contracting in a way that can overturn standard textbook intuition. In particular, we show that if this price reference effect is sufficiently large, vertical integration between an upstream producer and a downstream retailer can *decrease* joint profits, unlike in the textbook case where vertical integration improves profits. The key intuition is that the increase in quantity is dampened when consumers update their expectations. To test whether this force is large in a real-world setting, we develop a model of a downstream retailer who faces behavioral consumers and bargains with an upstream producer. We estimate this model using a novel dataset from a large online book retailer, where we observed retail prices, quantities sold and wholesale prices. Counterfactual simulations show that vertical integration would reduce joint profits by 11%. These findings highlight the importance of incorporating consumer expectations in the analysis of optimal pricing and firm profits.

"Automobile Replacement and Government Subsidy: An Analysis of the CARS Program"

Subsidy programs are widely used by governments to stimulate activities in the durable goods sectors. This paper investigates the impact of government subsidies on consumers' automobile replacement decisions in the context of the U.S. Car Allowance Rebate System program in 2009. I develop and estimate a dynamic discrete-choice model of automobile replacement, and conduct counterfactual analysis to evaluate the effects of government subsidies. Results show that 65% of the households would replace their vehicles even without the subsidy, and the reductions in gasoline consumption and carbon emission are limited. To highlight the impact of subsidy design, I show that limiting the subsidies to low-income consumers would generate 85% of the sales with half amount of total government spending. These findings emphasize the importance of balancing policy stimulus with government spending and targeting consumers more efficiently in the design of subsidy programs.

"Does Royalty Affect Production? Evidence from North Dakota Oil Leasing and Drilling"

This paper studies whether higher royalty rates captured by private mineral owners from geologically-driven advantages in well productivity disincentivize firms from adopting more effective fracking inputs technology. Using data from 12 thousand fracking wells and 325 thousand leases, I estimate that the Bakken Shale in North Dakota generated over $30 billion in private royalties from 2000 to 2018. Leveraging the variation of whether lease owners are local residents to instrument for the royalties, I find statistically significant advantage of local residents in negotiating royalty rates. However, the higher royalty rates did not disincentivize firms from adopting more effective fracking inputs technology. Thus, mineral owners benefit from improved fracking technology through a quantity effect, while negotiating better lease terms with extraction firms.

Work in Progress

"Pricing with Demand Complementarity in the Book Retail Market" with Ting Wang

"Skipping the Line: Inequality in Access to Primary Physicians" with Yangzi Jiang

Languages

English (fluent), Mandarin (native)

Programming

Matlab, Stata, R, LaTeX

References

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