

## EDUCATION

- **Kelley School of Business, Indiana University** Bloomington, IN  
*Ph.D. in Business Economics and Public Policy; Minor in Statistics* May 2025 (Expected)
  - Thesis: “When Manufacturers Become Resellers: An Examination of the Strategic Interplay Between New and Used Car Pricing” (Committee: Jeffrey T. Prince (chair), R. Andrew Butters, Michael R. Baye, Boyoung Seo, Ruli Xiao)
- **Sungkyunkwan University** Seoul, South Korea  
*M.A. in Economics* February 2019
  - Thesis: “The Incumbents’ Quality Response to Entry by Low-Cost Carriers: Evidence from Airline Industry” (Committee: Minsoo Park (chair), Hyunchul Kim, Jaesung Choi)
- **Sungkyunkwan University** Seoul, South Korea  
*B.A. with Highest Honors in Global Economics* August 2016

## RESEARCH INTERESTS

Industrial Organization, Applied Microeconomics, Antitrust Economics, Economics of Digitization

## RESEARCH PAPERS

- [“When Manufacturers Become Resellers: An Examination of the Strategic Interplay Between New and Used Car Pricing,”](#) (Job Market Paper)
  - *Abstract:* Manufacturers of durable goods have an incentive to weaken secondary markets to reduce the substitution away from their new products. The resale value offered in the secondary market, however, can benefit primary firms by lowering the net cost of new products. I document novel evidence that manufacturers can strategically engage in the secondary market as buyers to enhance the resale value of their products. I exploit a natural experiment induced by a recent policy change in South Korea that lifted the prohibition on used car sales by manufacturers, using vehicle identification number (VIN) level administrative microdata covering the universe of new and used cars registered from 2017 to 2024. I find that for products where primary and secondary markets are sufficiently segmented—goods with high depreciation—primary firms offer higher trade-in prices than sellers in the secondary market. In contrast, when used goods retain their value—goods with low depreciation—this value is already reflected in the initial prices of new goods, leaving firms with no incentive to pay premiums. I show that this strategic intervention enables manufacturers to appropriate higher prices for new cars, exclusively for vehicle models where they offered higher prices as repurchasers in the secondary market.
- [“From Cold-Start to Warm Reception: Knowledge Contribution as a Signaling Mechanism,”](#) with Rick Harbaugh and Minsoo Park, September 2024.
  - *Abstract:* Reputation systems increase sales for well-established firms with a proven track record, but they pose a “cold-start problem” for entrants who lack a pre-existing reputation. Using a unique dataset, this paper examines how attorneys in the online legal services market can strategically signal their inherent quality by publicly answering legal questions posed by potential clients on the platform. Such knowledge contribution benefits customers while reducing the time needed for the contributing attorneys to transact with an initial customer and start establishing a reputation. This benefit is exclusive to attorneys who lack public indicators of quality such as prestigious degrees and office locations, but who are high-quality as revealed by their long-run reputation scores. The observed signaling behavior is consistent with models that highlight the potential public good benefits of signaling, and with models that predict the marginal private benefit of signaling is highest when prior information on quality is weakest.
- [“Online Consumption Variety Over Time and Across Formats,”](#) with Shane Greenstein and Jeffrey Prince, October 2024.

► *Abstract:* Over the past quarter century, online engagement in the U.S. has grown to be a significant part of economic activity, with e-commerce now accounting for over 15% of total sales and Americans spending nearly seven hours online daily. We examine the impact of the shift from desktops and laptops to smartphones on the variety of online content consumption. Using data from ComScore, we compare online usage patterns across these devices from 2008 to 2019. Our analysis reveals distinct differences in consumption behavior: while desktop/laptop users increase their consumption variety with more online time, smartphone users experience a decrease in variety. The finding suggests that smartphones may lead to higher market concentration and altered user behaviors due to increased search costs and different device interfaces. Our study provides valuable insights for policymakers aiming to foster competitive digital markets and for businesses seeking to navigate and strategize within the evolving online landscape.

- **“Competitive Effects of Joint Ventures in the U.S. International Airline Industry,”** with Jaehak Lee, Jeffrey Prince, and Daniel Simon, June 2024.

► *Abstract:* This paper examines the competitive effects of joint ventures and antitrust immunity (ATI) in the U.S. international airline market. We quantify the extent to which joint ventures and ATI facilitate partial collusion among participating airlines and the consequent impact on market outcomes. Our structural model captures the changes in prices, capacities, and consumer welfare resulting from these partnerships. Our counterfactual analysis highlights that while joint ventures, while providing efficiencies similar to mergers, enable substantial coordinated behavior that can lead to higher prices and reduced competition. However, we didn’t find anti-competitive effects caused from ATI agreement. The unique dataset which covers multiple joint venture agreements and market conditions in the international transatlantic market offers robust empirical evidence on the dual nature of joint ventures as both collaborative and collusive entities.

- **“Persistence of Tacit Collusion During Cartel Periods: An Empirical Approach,”** with Jungmin Kim, March 2024. (Draft coming soon)

► *Abstract:* We examine the phenomenon of During-Cartel Tacit Collusion (DCTC) within the context of government public procurement in South Korea. Despite claims by firms involved in collusion that some procurement bids during the cartel period were conducted competitively, it is possible that firms implicitly learn about each other’s behavior during explicit conspiracy, enabling tacit collusion in allegedly competitive bids. We test this hypothesis using a difference-in-difference method to evaluate if there’s any significant drop in bids allegedly made in a competitive environment when cartel collapses. We use comprehensive administrative bidding data from 2000 to 2024 in South Korea. Our findings suggest that cartel overcharges might be underestimated if the subnormal markup created by DCTC is not accounted for in antitrust litigations.

- **“Estimating the Economic Value of the Online Marketplace for Legal Services,”** with Minsoo Park and Jungmin Kim, *KDI Journal of Economic Policy*, Vol. 45(3), 49-73, 2023.

► *Abstract:* This study examines the usage status of legal services provided by lawyers targeting domestic consumers and investigates empirically how much online platforms that facilitate lawyer search and consultation can increase consumers’ utility, and how much the lawyer legal service market will expand through this. To this end, this study applies a discrete choice demand model to the data collected through a conjoint survey to estimate the value of the lawyer search and consultation platform perceived by consumers, and estimates the effectiveness of the platform in expanding the market for lawyer legal services through a simulation method. As a result of the analysis, the relative value that consumers place on finding and consulting a lawyer using the online platform instead of being introduced to a lawyer by an acquaintance or searching for a lawyer offline is estimated to be about 70,414 won. It was found that the existence of lawyer search and consultation platforms could increase the market size of legal services by as little as 18.9% to as much as 70.2%. In particular, the platforms are expected to increase the accessibility of legal services to vulnerable groups.

## TEACHING

### *Independent lecturer :*

Business, Government, and Society (59 students, 6.21/7.00)	Summer 2023
Business, Government, and Society (51 students, 6.50/7.00)	Summer 2022
Business, Government, and Society (48 students, 6.46/7.00)	Summer 2021

### *Teaching assistant :*

Econometrics (Prof. Minsoo Park)	Spring 2018, Fall 2017
Microeconomics Theory (Prof. Chamna Yoon)	Spring 2017
Introduction to Microeconomics (Prof. Heejoon Kang)	Fall 2016

## CONFERENCE & SEMINAR PRESENTATIONS

23<sup>rd</sup> International Industrial Organization Conference (Philadelphia, 2025, scheduled), 89<sup>th</sup> Midwest Economics Association (Kansas City, 2025, scheduled), ASSA Annual Meeting (San Francisco, 2025, scheduled), 7<sup>th</sup> Asia-Pacific Industrial Organization Conference (Seoul, 2024, scheduled), 94<sup>th</sup> Southern Economic Association (Washington DC, 2024, scheduled), 51<sup>st</sup> European Association for Research in Industrial Economics\* (Amsterdam, 2024), IU Kelley (Bloomington, 2024), 93<sup>rd</sup> Southern Economic Association (New Orleans, 2023), Korean Allied Economic Association (Seoul, 2019).

(\*: presented by coauthors; †: discussant)

## HONORS & AWARDS

Harry Kelsey, Jr. Doctoral Fellowship, <i>Indiana University Bloomington</i>	2024
R. J. Waller Doctoral Bicentennial Fellowship, <i>Indiana University Bloomington</i>	2024
Kelley School of Business Research Data Funding, <i>Indiana University Bloomington</i>	2024
Doctoral Office Travel Grant, <i>Indiana University Bloomington</i>	2023
CIBER Research Grant, <i>Indiana University Bloomington</i>	2023
School of International Services (SIS) Fellowship, <i>Indiana University Bloomington</i>	2022
Dean's Fellowship, <i>Indiana University Bloomington</i>	2019 - 2020
Doctoral Fellowship, <i>Indiana University Bloomington</i>	2019 - 2024
Simsan Scholarship, <i>Sungkyunkwan University</i> , Seoul, Korea	2017 - 2018
Class Aid Scholarship, <i>Sungkyunkwan University</i> , Seoul, Korea	2016 - 2017
Graduate School Fellowship, <i>Sungkyunkwan University</i> , Seoul, Korea	2016 - 2018
Best Undergraduate Paper Award, <i>Market Economic Research Institute (MERI)</i> , Seoul, Korea	2014
Samsung Electronics Co. (SEC) Full Scholarship, <i>Samsung Foundation</i>	2010 - 2016

## PERSONAL

Software & Programming: Python, Stata, Matlab, R, L<sup>A</sup>T<sub>E</sub>X

Languages: Korean (native), English (fluent)

Citizenship: South Korea

## REFERENCES

### Jeffrey T. Prince (chair)

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