

JUNG HWAN KOH

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SUMMARY

I am an applied economist and data scientist with expertise in applied econometrics, empirical industrial organization, and machine learning. Using quantitative models coded with R and Python, I love creative problem solving and analyzing big data to extract actionable insights. I enjoy discussing my projects with experts as well as the general public.

SKILLS

Economics	Applied Microeconomics, Industrial Organization, Applied Econometrics, Structural Modeling, Discrete Choice Model, Panel Data Analysis
Machine Learning Program	Classification, Clustering, Dimensional Reduction R, Python, Stata, MATLAB, QGIS, and \LaTeX

EDUCATION

University of Massachusetts Amherst: Ph.D.in Resource Economics	<i>Expected May 2021</i>
Purdue University: M.S. in Hospitality & Tourism Management	<i>Aug 2009</i>
Kyung Hee University: B.S. in Business and Hotel Management	<i>Feb 2005</i>

RESEARCH PROJECTS

Multimarket Contact, Pricing, and Franchising: A Study of the Hotel Industry in Texas

We investigate the effect of multimarket contact (MMC) on collusive pricing in the hotel industry, a setting where most firms often face the same competitors in different markets. The paper makes two contributions. First, we allow for (partial) vertical control, a feature that is central in this industry given the widespread use of franchising and vertical restraints. Specifically, we use a structural model that estimates the degree of vertical control while, at the same time, allowing for joint profit-maximizing behavior that depends on the degree of MMC between hotels. Second, as opposed to prior literature, we do not use ad-hoc geographic market definitions; instead, we rely on data-driven approaches to delineate markets. Counterfactual results show that hotels with higher levels of multimarket contact charge higher prices and that the degree of vertical control is important in the estimation of this relationship

- Method: Density-Based Spatial Clustering of Application(DBSCAN); Nest Logit Model; GMM
- Data: Prices/Quantities from *Source Strategy*; Hotel Characteristics from TripAdvisor

Multi-unit Ownership and Market Power: A Study of the Texas Lodging Industry

This paper uses data of hotels/motels in Texas to analyze how multi-unit franchisees(local business owners who have franchising contracts with one or more franchisors) exercise market power in local markets. Using a structural model, I estimated demand and supply side parameters. Given these parameters, I conducted counterfactual analysis with a scenario in which all franchisees are single-unit owners and calculated new equilibrium prices. The equilibrium prices are 4% lower than the originally observed prices, supporting that multi-unit owners charge higher prices, verifying their market power through multi-unit ownership.

- Method: Random Coefficient Logit Model; GMM
- Data: Prices/Quantities from Source Strategy; Tax ID from Texas Controller's Office; Hotel Characteristics from TripAdvisor

Other Research Projects

COVID-19 and Economics Stimulus Package: A Study of Targeted but Comprehensive Stimulus Payments in South Korea

Definition of Market: Clustering Algorithms and Ad-Hoc Test of Economics