

# Nayul Kim

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## Education

Ph.D. Economics, The Ohio State University, 2024 (expected).

Committee: Matthew Weinberg (chair), Jason Blevins, Jose Miguel Abito

M.A. Economics, The Ohio State University, 2019.

M.A. Economics, Sungkyunkwan University, Seoul, Korea, 2018.

B.A. Economics, Sungkyunkwan University, Seoul, Korea, 2016.

## Research Interests

Industrial Organization, Applied Microeconomics, Applied Econometrics

## Working Papers

"Dynamic Evaluation of Preference Program in Public Procurement Market" (**Job Market Paper**)

This paper implements a dynamic entry and bidding model to evaluate the long-term benefits of small business (SB) preference programs in repeated auctions. I find descriptive evidence that experience in submitting bids and winning contracts lowers entry and project completion costs in federal highway procurement auctions in California. This motivates a dynamic entry and bidding model with three state variables: entry experience, work experience, and backlog. The estimation results indicate a diminishing learning effect on entry costs. This implies a virtuous cycle of enhanced competition and procurement saving can be achieved through learning dynamics when auctions favor less-experienced firms. To quantify the long-term benefit, I conduct a counterfactual analysis subsidizing the entry of less-experienced firms. Subsidy costs are larger than the instantaneous savings from increased competition. However, as learning from subsidized entry continues in the following periods, cumulative procurement savings are larger than the subsidy expenditure.

"Bid Preference Program and Competition: Evidence from Ohio Rock Salt Procurement"

*with Matthew Weinberg* (Revision Requested at *RAND Journal of Economics*)

We study the design of procurement auctions for rock salt, county level bidding data, and antitrust complaints in Ohio from 2002-2021. We compare bidding behavior before and after the removal of a policy that favored local firms and was alleged to have facilitated collusion. Specifically, the policy only awarded contracts to the two firms with exclusive access to salt mined in Ohio if both entered an auction. A difference in differences estimates that this policy raised winning bids by 14%. We provide evidence that the policy facilitated collusion and thus increased procurement costs beyond what would be expected under competition. While the policy was in place, firms that barely won contracts were 38 percentage points more likely to be an incumbent than firms that nearly won contracts. This discontinuity

disappeared after the policy was removed, suggesting that local firms were able to collude by dividing county markets. We quantify the impact on procurement costs by comparing observed bids under the policy with simulated bids under competition conditional on auction heterogeneity. Favoring local firms raised procurement costs above competitive levels conditional on market structure by 8.5%. Costs under competitive bidding would have been at least 6% lower after accounting for competition from firms without access to local inputs.

## Publications

### Return Predictability using an Endogenous Regime Switching Model

with Minsoo Jeong and Chang Sik Kim (*Journal of Economic Theory and Econometrics*, Vol. 33, No. 1, Mar. 2022, 1-27)

This paper examines whether stock excess return predictability is dependent upon the stock market volatility. The paper introduces a two-state regime switching model with endogenous feedback effect for the stock return predictability test. To model regime switching, this paper adopted a new approach proposed by Chang et al. (2017), allowing an endogenous feedback effect channel through which the underlying time series affect the next period volatility regime. This paper shows that modeling such a channel is important in the return predictability context to incorporate the leverage effect. Monte Carlo simulation results demonstrated that additional power gain and bias improvement could be achieved in the endogenous regime switching (ERS) model, compared to the conventional Markov switching model. The empirical test results using the ERS model indicate that none of the tested predictors have significant predictive power when stock returns are highly volatile. However, the dividend-price ratio and macro variables such as T-bill rate and term spread had significant predictability, at least in the low volatility regime.

## Conference Presentations

Southern Economic Association (SEA) 93rd Annual Meeting, Nov 2023.

Conference on Auctions, Firm Behavior, and Policy, Jun 2023.

Midwest Economics Association (MEA) 87th Annual Meeting, Mar 2023.

Southern Economic Association (SEA) 91st Annual Meeting, Nov 2021.

The 19th Korean Economic Association (KEA) International Conference, Jun 2018.

2018 Korea's Allied Economic Associations Annual Meeting, Jan 2018.

## Workshops

Western Economic Association International (WEAI) Graduate Student Workshop, Jul 2023.

Status of Women in the Economics Profession (CSWEP) Mentoring Workshop, Nov 2021.

## Honors and Awards

The Professor J. Graham Smith Memorial Prize in Applied Economics, The Ohio State University, 2023.

WEAI Graduate Workshop, The Ohio State University Nominee, 2023.

Shim San Graduate Fellowship, Sungkyunkwan University, 2016 - 2017.

Member of Dean's List, Sungkyunkwan University, 2014 - 2015.

Samsung Scholarship, Samsung Foundation, 2011 - 2015.

## Research Experience

Research Assistant, Professor Matthew Weinberg, The Ohio State University, Spring 2022 - Summer 2022.

Research Assistant, Professor Heejoon Han, Sungkyunkwan University, Fall 2017 - Spring 2018.

Research Assistant, Sungkyun Institute of Economic Research, Summer 2017 - Fall 2017.

## Teaching Experience

### **The Ohio State University**

Teaching Assistant, Principles of Microeconomics, Dr. Jeffrey Buser, Fall 2023.

Teaching Assistant, Principles of Microeconomics, Dr. Ida Mirzaie, Fall 2019/Spring 2020/Fall 2020/Fall 2021/Fall 2022.

### **Sungkyunkwan University**

Teaching Assistant, Econometrics II (Ph.D.), Professor Changsik Kim, Spring 2018.

Teaching Assistant, Financial Econometrics, Professor Heejoon Han, Fall 2016/Fall 2017.

## Service

Student Representative, Graduate Studies Committee, The Ohio State University, 2020 - 2021.

## Computer Skills

MATLAB, Stata, Python, Julia, R, Eviews, L<sup>A</sup>T<sub>E</sub>X

## Languages

English (fluent), Korean (native)

## References

### **Professor Matthew Weinberg**

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