

Cheolho Song

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John M. Olin School of Business
Washington University in St. Louis
One Brookings Drive, Campus Box 1156
St. Louis, MO 63130

Email: cheolho@wustl.edu

EDUCATION

Washington University in St. Louis, St. Louis, MO

Ph.D. Candidate in Quantitative Marketing, 2020 – 2026 (expected)

Seoul National University, Seoul, South Korea

M.S. in Business Administration, 2020

B.A. in Economics, 2016

RESEARCH INTERESTS

Quantitative Marketing, Retail Platforms, Retail Promotion, eWOM, Causal Inference, Structural Models, Machine Learning, Causal Machine Learning

JOB MARKET PAPER

1. “Whether, What, and How Much to Buy: A Semiparametric Framework for Estimating Promotional Effects on Retail Platforms” with Jingcun Cao, Tat Chan, Dennis Zhang

WORKING PAPERS (*EQUAL AUTHORSHIP)

1. Song, Cheolho, Jingcun Cao, and Tat Chan. “Celebrating the Shopping Festival: The Effects on Retail Sales and Its Drivers in a Shopping Mall” *R&R at Journal of Marketing Research*
2. Karaman, Hülya*, Cheolho Song*, Tat Chan, and Song Yao. “Spillover Effects of Online Reviews: Evidence from the Hotel Industry”

TEACHING EXPERIENCE

Teaching Assistant – Washington University in St. Louis

Empirical Methods in Structural Modeling (Ph.D.), Spring 2025

Text Mining (Master), Spring 2024, Spring 2025

Customer Analytics (Master), Fall 2021, Spring 2023, Fall 2024

Analytics-Driven Brand Management (Master), Spring 2022

Data Analysis For Brand Management (Master), Spring 2022

Pricing Strategies (Master), Spring 2022

Pricing Decision Making & Implementation (Master), Spring 2022

Empirical Methods in Business (Ph.D.) Fall 2022

Marketing Strategy (Master), Fall 2022

AWARDS AND HONORS

ISMS Doctoral Consortium Fellow	2024
Graduate Research Symposium, WashU, <i>3rd prized</i> in the professional field	2023
Olin Business School Graduate Fellowship, WashU Olin	2020-2025

CONFERENCE/OTHER PRESENTATIONS (*PRESENTED BY A CO-AUTHOR)

The Optimal Design of Platform-Wide Conditional Promotions: An Empirical Study

Annual AI in Management (AIM) Conference, USC, LA, CA, March 2025

Annual ISMS Marketing Science Conference, Sydney, Australia, June 2024

China India Insights Conference, The University of Hong Kong, June 2024

Celebrating the Shopping Festival: The Effects on Retail Sales and Its Drivers in a Shopping Mall

China India Insights Conference, Stanford University, September 2023

Spillover Effects of Online Reviews: Evidence from the Hotel Industry

Annual ISMS Marketing Science Conference, Miami, FL, June 2023

Graduate Research Symposium, Washington University in St. Louis, April 2023

3rd prized in the professional field

Comparison of the characteristics of organic consumers in Korea by sales channels

Association for Consumer Research (ACR) Conference, Orlando, FL, 2015*

Social Media Opinion Mining Analysis by a BI Application and New Product Sales Performance: The Case of Instant Noodle Manufacturers in Korea

Post-ICIS(International Conference on Information Systems) LG CNS/KrAIS Workshop, Milano, Italy, 2013*

WORK EXPERIENCE

Agricultural Information System Laboratory, Seoul National University, Seoul, Korea

2012-2013, 2015-2017

Military Service at the Korean Augmentation To the United States Army (KATUSA)

2010-2012

SKILLS

Programming/Script Languages: R, Python, MATLAB, SQL, LaTeX

Language: English (fluent), Korean (native)

References

Tat Y. Chan

Philip L. Siteman Professor of
Marketing
Olin School of Business
Washington University in St. Louis
E-mail: chan@wustl.edu

Dennis J. Zhang

Professor of Operations
Management
Professor of Marketing
Olin School of Business
Washington University in St. Louis
E-mail: denniszhang@wustl.edu

Song Yao

Professor of Marketing
Olin School of Business
Washington University in St. Louis
E-mail: songyao@wustl.edu

ABSTRACTS

Whether, What, and How Much to Buy: A Semiparametric Framework for Estimating Promotional Effects on Retail Platforms

This paper develops a semiparametric framework for estimating the effects of promotions on a retail platform on consumers' decisions of *whether* to visit the platform, *what* product categories to purchase, and *how much* to buy. Our framework flexibly models these multi-stage correlated decisions, allowing the use of high-dimensional individual shopping history variables to capture heterogeneous shopping patterns across consumers. We use Neyman-orthogonal scores with nested cross-fitting to debias the estimated effects and establish root- n consistency and asymptotic normality of the estimators. We apply the framework to mall-wide promotions in a luxury shopping mall in China. The promotions broadly increase consumers' mall visits, category purchases, and total spending across all store categories, with luxury stores generating a large portion of the gain, but negative effects exist in the pre- and post-window, indicating a partial intertemporal substitution. We also find that, during promotions, consumers significantly increase spending in store categories in which they spent the most before the promotion; however, intertemporal substitution effects are also the largest in these categories. By contrast, spending also increases in other store categories with little decline in the pre- and post-window, suggesting spending expansion beyond customers' usual categories.

Celebrating the Shopping Festival: The Effects on Retail Sales and Its Drivers in a Shopping Mall

This paper compares coordinated mall-wide shopping festivals with individual in-store promotions using nine years of transaction data from a large shopping mall in China. Both types of promotions increase sales and purchasing traffic, but shopping festivals generate substantially larger effects and draw responses broadly across customer segments, with the largest relative gains among customers who are new to the mall or have not shopped there recently. In-store promotions, by contrast, generate stronger responses among customers with prior shopping history at the promoted store. A theoretical model explains both patterns through differential promotion salience: store-specific promotions make the focal store especially salient to store-familiar customers, whereas mall-wide festivals make the mall salient to a broader set of consumers. The findings show how a central platform can coordinate promotions across sellers to acquire new customers, reactivate dormant customers, and generate demand beyond what individual stores can achieve.

Spillover Effects of Online Reviews: Evidence From the Hotel Industry

Do online consumer reviews have spillover effects on the sales of competitors? We study this question using a natural experiment where a major hotel group introduced its own review system to all the hotels within its portfolio. Using a modified Synthetic Control Method, we analyze the monthly financial performance data of reviewed and competing hotels before and after the review system was introduced. We find that the review system has significant economic impacts on both reviewed and competing hotels, and that the effects are highly heterogeneous. Surprisingly, the correlation between the economic impact on reviewed and competing hotels is significantly positive: If the occupancy rate of a reviewed hotel increases by 1%, its competitors' occupancy rate increases by 0.39%. The positive correlation can be explained by the information spillover. Under this mechanism, consumers update their beliefs about competing hotels based on the reviews for reviewed hotels. We explore alternative explanations, but none can fully explain the positive correlation. Our results suggest that, besides monitoring their own reviews, managers should also monitor competing products' reviews because of information spillover from the competitors' reviews.