# LIUYI WANG

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# **EDUCATION**

University of Arizona, Eller College of Management, Tucson, AZ Ph.D. in Marketing (Minor: Econometrics), *expected* May 2026

Dissertation Title: Cascades along the Supply Chain: How Vertical Integration Decisions Shape and are Shaped by Market Structure (Proposal to be defended on February 13th, 2025)

Committee: Mrinal Ghosh (chair), Zachary Nolan, George John (University of Minnesota), and Tiemen Woutersen (Economics).

University of Arizona, Eller College of Management, Tucson, AZ Master of Science in Econometrics and Quantitative Economics, December 2019

Hong Kong Baptist University, Division of Social Sciences, Hong Kong Bachelor of Social Science (First Class Hon.) in Economics, July 2018

#### RESEARCH INTERESTS

**Substantive**: Market Dynamics and Organizational Boundaries, Supply Chain Strategy and Innovation, Digital Governance, Public Policy and Consumer Decision-Making in Healthcare

Methodological: Econometrics, Causal Inference, Natural Language Processing

## WORKING PAPERS

**Wang, Liuyi** and Mrinal Ghosh (2025), "History, Strategy, and Organizational Boundaries: Vertical Integration Decision in Response to Supplier Industry Consolidation", under preparation for submission to Journal of Marketing Research; March 2025.

**Wang, Liuyi** and Mrinal Ghosh (2025), "Social Media and the Adoption of Preventative Healthy Behavior: The Case of the Human Papillomavirus (HPV) Vaccine", under preparation for submission to Management Science; February 2025.

**Wang, Liuyi**, Pete Zhou, and Mrinal Ghosh (2024), "Policy Type Matters: Diversity in Consumer Reactions to Government-Backed Healthcare Initiatives", under preparation for submission to Journal of Marketing; June 2025.

#### RESEARCH IN PROGRESS

"The Three Faces of Digital Transformation: Replacement, Optimization, and Value Creation through Governance" with Mrinal Ghosh (initial draft under construction)

"Competitor's R&D Decisions as a Reaction to a Firm's Upstream Vertical Integration Decision" with Mrinal Ghosh (conceptual framework complete; data analysis ongoing)

#### CONFERENCE PRESENTATIONS AND INVITED TALKS

"History, Strategy, and Organizational Boundaries: Vertical Integration Decision in Response to Supplier Industry Consolidation"

University of Arizona College-Wide Research Workshop, Tucson, March 2025 (forthcoming)\*

UA-ASU Symposium, Phoenix, April 2025 (forthcoming)\*

AMA Winter Academic Conference, Special Session, Phoenix, February 2025 (forthcoming)

George John Symposium, Ontario, May 2024\*

Eller Quantitative Marketing Research Group, Tucson, April 2024

George John Symposium, Austin, May 2023

"Policy Type Matters: Diversity in Consumer Reactions to Government-Backed Healthcare Initiatives"

UA-ASU Symposium, Poster Session, Phoenix, April 2025 (forthcoming) AMA Winter Academic Conference, Special Session, Phoenix, February 2025 (forthcoming)\*

Eller Quantitative Marketing Research Group, Tucson, April 2024 Arizona Marketing Proseminar, Tucson, April 2024

"Social Media and the Adoption of Preventative Healthy Behavior: The Case of the Human Papillomavirus (HPV) Vaccine"

AMA Winter Academic Conference, Competitive Paper, Nashville, February 2022

(\*denotes presenting by another author)

## **GRANTS**

Center for Management Innovations in Healthcare Research Grant, The University of Arizona, 2024 (\$5000)

For "Policy Type Matters: Diversity in Consumer Reactions to Government-Backed Healthcare Initiatives"

Eller College Small Research Grant, The University of Arizona, 2024 (\$1500) For "History, Strategy, and Organizational Boundaries: Vertical Integration

Decision in Response to Supplier Industry Consolidation"

Graduate & Professional Student Council Research and Project (ReaP) Grants, The University of Arizona, 2023 (\$1500)

For "Policy Type Matters: Diversity in Consumer Reactions to Government-Backed Healthcare Initiatives"

Center for Management Innovations in Healthcare Research Grant, The University of Arizona, 2021 (\$2800)

For "Social Media and the Adoption of Preventative Healthy Behavior: The Case of the Human Papillomavirus (HPV) Vaccine"

## HONORS AND AWARDS

Summer Research Award, The University of Arizona, 2022, 2023, 2024

Economics Tuition Scholarship, The University of Arizona, 2018-2019

Best Economic Paper Award of Summer Sojourn, Tsinghua University, 2018

Scholastic Award, Hong Kong Baptist University, 2018

Professor Tsang Shu-ki Memorial Scholarship, Hong Kong Baptist University, 2017

Award for Outstanding Services, Hong Kong Baptist University, 2016

#### **TEACHING EXPERIENCE**

*MKTG 440, Marketing Research*, Instructor, Fall 2024 (Rating: 4.2; Class Size: 64)

This lecture-based course offered both qualitative and quantitative skills to extract marketing insights. The curriculum included topics such as observation, ethnography, interview, focus group, survey design, experimental design, descriptive statistics; hypothesis testing; linear regression, natural language processing and data scraping.

MKTG 440, Marketing Research, TA to Zachary Nolan, Spring 2025

MKTG 376, Marketing Analytics, TA to Xinying Hao, Spring 2024

#### SELECTED GRADUATE-LEVEL COURSES

## **Marketing:**

Marketing Theory I, Conceptual Foundations in CB Research, Martin Reimann Marketing Theory II, Contributions in Quantitative Marketing, Yong Liu Measurement and Validity, Mrinal Ghosh

Transaction Cost Economics, Mrinal Ghosh

Casual Inference, Bikram Ghosh

Analytical Models, Yong Liu

Consumer Psychology, Caleb Warren

Experimental Research, Jennifer Savary

Consumer Culture Theory, Hope Schau

### **Economics:**

Theory of Quantitative Methods in Economics, Eric Mbakop

Econometrics I, Hidehiko Ichimura and James Powell

Econometrics II, Tiemen Woutersen

Econometric Modeling, Tiemen Woutersen

Mathematical Economics, Mark Walker

Microeconomics I, Asaf Plan

Microeconomics II, Julian Romero

Market Design, Andreas Blume

Industrial Organization and Regulation, Mo Xiao

Labor Economics, Jessamyn Schaller

Experimental Economics, Charles Noussair

# **Computer Science:**

Human Language Technology, Gus Hahn-Powell

# **RELEVANT SKILLS**

Programming: Python and Stata

Language: Mandarin (native), Cantonese and English (professional proficiency)

## **WORK EXPERIENCE**

Research Assistant, Department of Economics, The University of Arizona, 2019 Supervisors: Jessamyn Schaller

Research Assistant, Department of Economics, Hong Kong Baptist University, 2016-2018

Supervisors: Ruixin Wang

# "History, Strategy, and Organizational Boundaries: Vertical Integration Decision in Response to Supplier Industry Consolidation"

This study examines how downstream firms heterogeneously adjust their vertical boundaries in response to supplier industry horizontal consolidation. Using firm-level dataset of 21,583 firms and 342,570 firm-supplier industry pairs over a span of 10 years, it provides novel and robust empirical evidence on how broader market-level dynamics influence a firm's boundary decisions. We find evidence that the downstream firm's decision to vertically integrate in response to upstream supplier consolidation is driven more by value-creating efficiency considerations rather than countervailing supplier market power. We also find heterogeneity in firm reactions. Specifically, we find that the likelihood to vertically integrating with a supplier increases with consolidation in that supplier's industry, firms with long-standing current supplier relationships are less likely to vertically integrate. Furthermore, we find that such relationship effects are more pronounced for firms with significant levels of firm-specific intangible assets but are suppressed for firms with a broader product-market portfolio.

# "Policy Type Matters: Diversity in Consumer Reactions to Government-Backed Healthcare Initiatives"

Governments frequently implement policies to promote products and improve market adoption with the goal of enhancing social welfare. Understanding the effectiveness of such policies is critical for governments, businesses, and society. In this research, through two studies, we investigate the impact of three distinct state-level policies - school mandates, pharmacist administration authorization (expanding access), and educational programs – to improve the adoption of the human papillomavirus (HPV) vaccine. Using a multi-method approach, we show that these policies differ in their effectiveness because each policy generates distinct emotions influencing an individual's decisions to vaccinate. First, we apply Dynamic Difference-in-Differences, Natural Language Processing, and Instrumental Variable methods to analyze a nationwide dataset that includes policy interventions, regional demographics, Twitter data, and individual vaccination decisions. Second, we validate these findings through experimental data. We find that educational programs and access expansion improves consumer emotion and increases their subsequent vaccine adoption, while mandates evoke negative emotions hindering adoption. Our research provides actionable recommendations for designing effective healthcare-related public policy instruments.

# "Social Media and the Adoption of Preventative Healthy Behavior: The Case of the Human Papillomavirus (HPV) Vaccine"

Individuals are increasingly using social media content to make health related decisions; yet our understanding on whether and how social media influences such decisions is quite sparse. In this research, in the context of the human papillomavirus (HPV) vaccine, we study the impact of two key features of social media content – namely, the concreteness of the message and the emotions expressed in the message – on individual level adoption of the vaccine. We utilize an instrumental variable approach to analyze a unique nationwide dataset in the US comprised of individual-level vaccination behavior, demographic and geographic characteristics, Twitter message posts on the vaccination, and state-level vaccination mandates and programs. We find that when the social media content is very concrete, more exposure to content on vaccination always boosts the adoption of the vaccine regardless of the content's emotions. In contrast, when the content is moderately concrete or not concrete (abstract), more exposure to social media content on vaccination raises or lowers the likelihood of adoption based on the emotion expressed – joy, surprise,

or fear - in the contents. We draw implications for practice and recommend healthcare managers and online platforms to value the power of 'more but simpler' health information exposure.