Application for NBER Digital Economics and AI Tutorial

Contact Information

Fengtao Wan

PhD Student, UCL School of Management

Email: fengtao.wan@ucl.ac.uk

Graduate Study

I am a thrid-year PhD student in Marketing & Analytics Group at the UCL School of Management (enrolled 2023–present).

Selected Graduate Coursework

Marketing / Business

Marketing Seminar (Jonne Guyt, Francesca Sotgiu)

Marketing Pro-seminar (Anja Lambrecht)

Empirical Marketing Models (Xu Zhang, Nicolas Padilla)

Probability Models in Marketing (Bruce Hardie, Nicolas Padilla)

Economics / Econometrics

Advanced Econometrics Series (Nick Koning, Frank Kleibergen, Siem Jan Koopman)

Bayesian Econometrics (Richard Paap)

Microeconomics II Part I (Emre Ozdenoren, David Myatt)

Microeconomics II Part II (Emre Ozdenoren, David Myatt, JP Benoît)

Empirical Industrial Organisation (Jonas Lieber)

Machine Learning

Supervised & Unsupervised Machine Learning (Patrick Groenen, Pieter Schoonees)

Reinforcement Learning (Gui Liberali)

Natural Language Processing (Bas Donkers, Meike Morren)

Machine Learning and Text Analysis (Stephan Seiler, Michael Yeomans)

Research Interests

Substantive: Digital Platform, Public Policy

Methodological: Causal Inference, Machine Learning

Research Project in Progress

The Effect of PvP Battle Outcomes and Win Rates on Player Engagement and Purchases in Free-to-Play Mobile Games

with Yiting Deng, Wei Miao, and Zheshuai Yang

This project studies how competitive outcomes shape player behavior in a free-to-play PvP mobile game. Using session-level data from more than 10,000 players over 4 months, we examine how battle outcomes and cumulative win rates influence both in-game purchases and engagement. Fixed-effect regression show that losing a battle significantly increases both spending and play duration, consistent with players investing more after setbacks. The effect is amplified for players with higher cumulative win rates, suggesting status-maintenance motives. The results provide insight into behavioral responses to competition and inform monetization and retention strategies in free-to-play ecosystems.

Holiday or Hangover? Housing Market Responses to a Temporary Transaction Tax Cut

with Yiting Deng, Yongdong Liu, and Anja Lambrecht

This project analyzes the 2020–2021 UK Stamp Duty Holiday and its impact on short-run market behavior and long-run investment performance. Using data from the UK's largest online housing platform matched to Land Registry transactions, we combine propensity score matching with a difference-in-differences design to compare properties exposed to the tax reduction with those already exempt. The holiday generated a sharp short-run tightening of market conditions: prices rose, transactions accelerated, and the probability of sale increased, with especially strong effects in more deprived areas. However, these short-run gains did not persist. Properties purchased during the holiday exhibit lower resale returns relative to similar exempt properties, indicating that buyers capitalized little of the tax benefit. Overall, the results highlight how temporary transaction-tax incentives can stimulate activity and intensify short-run pressures while providing limited long-term advantages to buyers.

Dissertation Information

Tentative Title: *Essays on Digital Platforms*

Description. My dissertation studies how digital platforms influence user behavior and market outcomes. Using large-scale data from housing platform, mobile games, and online marketplaces, I examine how platform design and algorithmic interventions shape decision-making. The essays employ causal inference abd machine learning to provide evidence on user behavior and the strategic role of platforms in digital markets.

Committee Member

Yiting Deng
Associate Professor of Marketing & Analytics
School of Management
University College London
yiting.deng@ucl.ac.uk

Wei Miao
Assistant Professor of Marketing & Analytics
School of Management
University College London
wei.miao@ucl.ac.uk

Yongdong Liu
Assistant Professor of Marketing & Analytics
School of Management
University College London
yongdong.liu@ucl.ac.uk

Anja Lambrecht
Professor, Marketing Faculty Chair
London Business School
alambrecht@london.edu