

Nan Wang

王楠

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Education

University of British Columbia

2021 – 2027 (expected)

PhD in Strategy and Business Economics

Committee: Guillermo Marshall (co-chair), Michael Sullivan (co-chair), Ekaterina Khmelnitskaya, Chunhua Wu

University of Wisconsin–Madison

2019 – 2021

MSc in Economics

Beijing Institute of Technology

2015 – 2019

BComm in Accounting

BA in Economics (dual)

Research Interests

Industrial Organization, Platform Economy, Digital Economy, Machine Learning

Working Papers

Who Benefits from Platform Competition? Evidence from Ride-Hailing (Job Market Paper)

Abstract Competition among digital platforms may enhance efficiency by curtailing platforms' market power or reduce efficiency by diminishing network externalities. Furthermore, because platforms set fees on both sides jointly, the different effects of competition on market power and on network externalities can translate into opposite welfare effects across sides. I study the welfare effects of platform competition with an equilibrium model estimated on data covering the universe of ride-hailing transactions in a major Chinese city. The model incorporates platforms' matching and pricing, drivers' platform adoption and labor supply, and riders' trip requests. I find that concentration can raise efficiency, by up to 3.8% relative to the status quo. However, the impact of concentration differs substantially across the sides of the market. Platforms earn more profit in a more concentrated market, while drivers lose surplus, because concentration not only increases platforms' monopsony power but also raises drivers' productivity, which lowers platforms' demand for labor. Whether riders gain or lose depends crucially on the level of concentration. They gain from mild concentration but lose from severe concentration. Holding market structure fixed, promoting multi-homing improves welfare and benefits all sides of the market.

Identifying Algorithmic Price Discrimination (with Yang Yu)

Abstract Modern pricing algorithms draw on high-dimensional consumer information, which makes price discrimination subtle and hard for consumers and regulators to detect. This paper proposes a disparity metric to test for algorithmic price discrimination. Our method uses double machine learning (DML) and data on both accepted and unaccepted price quotes to address the false positives caused by model misspecification and consumers' selection bias. We apply the method to a major Chinese

ride-hailing platform to test whether riders are charged differently based on their ordering history. Our results highlight the need for this method, as naive regression-based methods produce false positives.

Who Benefits from Platform Exclusivity?

Abstract A vertically integrated platform plays a dual role. It runs a marketplace for third-party products and sells its own product on that marketplace. This paper asks whether such a platform should keep its product exclusive or also sell it on a rival platform, and how the choice affects consumers. I build a duopoly model in which each platform has a differentiated first-party product. A platform can allow its rival to sell its first-party product at a commission rate determined by bargaining. Both platforms give up exclusivity in equilibrium to increase profit, whether consumers are singlehoming or multihoming. Intuitively, the commission softens competition between the platforms because each platform benefits from the sales of both products, which gives both an incentive to raise prices. Consumer surplus is lower without exclusivity when consumers can switch between platforms.

Teaching Experience

Instructor

COMM 295 Managerial Economics	2026 Summer
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Teaching Assistant

COMM 491 Strategic Management in Business	2023 Fall
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Research and Professional Experience

DiDi	Beijing, China
Pricing Researcher	Oct 2024 – Dec 2025
Use machine learning to detect price discrimination and improve pricing fairness in pricing algorithms	

Research Assistant

Prof. James Brander	2022 – 2023
Prof. Ekaterina Khmelnitskaya	2023 – 2024

UBC IO Workshop

Organizer	2022 – 2024
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Conferences and Summer Schools

2025: Luohan Academy Annual Digital Economy Conference
 2024: Econometric Society Summer School in Dynamic Structural Econometrics (DSE)
 2023: Competition & Regulation European Summer School and Conference (CRESSE)

Awards and Fellowships

President's Academic Excellence Initiative PhD Award	2021 – 2026
Dean Earle D. MacPhee Memorial Fellowship in Commerce and Business Administration	2021 – 2026
Sauder School of Business Graduate Award	2021 – 2022
C.K. Choi Fellowship in Business Administration	2021

Other Information

Programming: Python, Julia, SQL, R
Languages: English (Fluent), Mandarin (Native)

References

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Economics
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