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Xuan Teng

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EDUCATION

2022 (Expected)	Ph.D. in Economics	University of Michigan
2017	M.A. in Economics	University of Michigan
2015	B.A. in Economics	Fudan University

FIELDS

Industrial Organization, Applied Microeconomics

WORKING PAPERS

1. "Preferential Search Ranking, Quality Provision, and Welfare in Mobile Application Markets" **(Job Market Paper)**

Abstract: Platforms may give preferential treatment in search rankings to their own products. How such behavior affects the incentive of competing independent suppliers to invest in quality is ambiguous. This paper identifies such preferential search ranking and quantifies its equilibrium welfare effects in the Apple App Store. I start by examining the effect of a change in the search algorithm that dropped several Apple's apps from top search results. Results imply that reducing the preferential treatment given to Apple's apps in the search algorithm significantly increases the installations and update frequencies of independent apps. Then I develop an empirical model of consumer search and update competition in the presence of potential platform preferential search ranking. The model is estimated with rich aggregate data in the mobile application industry. Estimation results point to preferential search ranking: Apple's apps are ranked higher in the search results than independent apps after accounting for differences in app quality, price, ratings, and text relevance. Based on counterfactual simulations, I find that eliminating the identified preferential search ranking modestly increases the quality of independent apps on average. Furthermore, the elimination improves consumer surplus by $2.2 million and profits of independent developers by $1.6 million per month.

2. "Patent Licensing and Bias in Estimation and Prediction", with Travis Triggs.

Abstract: Patent licensing between competing manufacturers is typically hard to observe by researchers and not considered in classical pricing competition models for empirical merger analysis. Nevertheless, the welfare effects of a merger depend on the pre-existing patent licensing agreements. Patent licensing introduces alignment incentives in firms' pricing decisions since licensors collect royalty revenues proportional to competing licensees' sales. Omitting these incentives leads to over-estimated marginal costs and potentially introduces bias in the prediction of merger effects. How large are the estimation and prediction biases? We conduct simulations using a Bertrand competition model that incorporates patent licensing relationships between competitors to assess the biases in estimated marginal costs and predicted merger effects in various scenarios. We consider both licensor-licensee mergers and licensee-licensee mergers. We find that omitting patent licensing relationships leads to predicted merger effects that are

i) sometimes opposite to the true merger effects and ii) typically over-predicted. Furthermore, we find a non-monotonic relationship between the prediction bias and product substitutability.

WORK IN PROGRESS

1. "Welfare Effects of Vertical Integration between an Information Platform and a Trade Intermediary: The Case of Alibaba.com and OneTouch", with George Cui and Helen Wang.

2. "Full-cost Pricing from Financial Constraints and Dynamic Incentives".

TEACHING

Teaching Assistant, University of Michigan
- Microeconomic Theory (First-year Ph.D. Sequence), 2017, 2018.
- Intermediate Microeconomics (Undergraduate), 2018, 2019.
- Introductory Microeconomics (Undergraduate), 2017, 2019, 2020.
- Introductory Macroeconomics (Undergraduate), 2016.

HONORS AND AWARDS

University of Michigan
- Haber Fellowship, 2022.
- Rackham One-Term Dissertation Fellowship, 2021.
- Economics Department Fellowships, 2015, 2021.
- Summer Research Apprenticeship, 2017, 2016.

Fudan University
- Best Bachelor Thesis in Economics, 2015.
- Outstanding Undergraduate Graduates, 2015.
- Undergraduate Scholarship, 2014, 2013.

PRESENTATIONS

IO Seminar, University of Michigan, 2021.

IO Lunch, University of Michigan, 2018-2021.

SKILLS

Language: Mandarin Chinese (native), English (fluent).

Software: Matlab, Stata, python, ArcGIS.

CITIZENSHIP: CHINA (U.S. F-1 VISA)

REFERENCES

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