

WILL PEICHUN WANG

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Undergraduate Studies:

BS, Economics (with High Distinction) and Mathematics, Duke University, 2012
Magna Cum Laude

Graduate Studies:

Ph. D. in Applied Economics, The Wharton School, University of Pennsylvania, 2012 to present
Thesis Title: "Essays in Industrial Organization and Applied Microeconomics"
Expected Completion Date: May 2017

Thesis Committee and References:

Professor Ulrich Doraszelski (Co-Chair)
The Wharton School, University of Pennsylvania
1405 Steinberg Hall-Dietrich Hall
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Professor Michael Sinkinson
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The Wharton School, University of Pennsylvania
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Research and Teaching Fields:

Primary fields: Industrial Organization, Applied Microeconomics

Secondary fields: Quantitative Marketing, Competitive Strategy, Chinese Economy

Teaching Experience:

Summer 2016 Managerial Economics (EMBA), *T.A.* for Professor Kent Smetters

Summer 2015	Managerial Economics (EMBA), <i>T.A.</i> for Professor Kent Smetters
Fall 2014	Managerial Economics (MBA), <i>T.A.</i> for Professor Michael Sinkinson
Spring 2012	Financial Markets and Investments (UG), <i>T.A.</i> for Professor Jia Li
Fall 2011	Scientific Computing (G), <i>T.A.</i> for Professor Mauro Maggioni
Spring 2011	Partial Differential Equations (UG), <i>T.A.</i> for Professor J. Thomas Beale
Fall 2009 - Fall 2011	Single Variable Calculus (UG), <i>Lab Instructor</i>
Spring 2010	Multivariable Calculus (UG), <i>Tutor</i>

Research Experience and Other Employment:

2014 - present	<i>Fellow</i> , Leonard Davis Institute of Health Economics
2015 - 2016	<i>Research Assistant</i> to Professor Ann Harrison
2013 - 2015	<i>Research Assistant</i> to Professor Ulrich Doraszelski
2011 - 2012	<i>Research Assistant</i> to Professors Andrew Sweeting and James W. Roberts
2011 - 2012	<i>Research Assistant</i> to Professor Marjorie B. McElroy
2010	<i>Intern</i> , China Development Bank

Research Papers:

“Innovation Is the New Competition: Product Portfolio Choices with Product Life Cycles”
(Job Market Paper)

“Ownership Concentration and Strategic Supply Reduction,”
with Ulrich Doraszelski, Katja Seim, and Michael Sinkinson (Wharton, UPenn)

“Do Concealed Gun Permits Deter Crime? New Results from a Dynamic Model,”
with Marjorie B. McElroy (Duke)

Research in Progress:

“Can a Tiger Change Its Stripes? Reform of Chinese State-Owned Enterprises,”
with Ann Harrison, Marshall Meyer, Linda Zhao and Minyuan Zhao (Wharton, UPenn)

“A Typology of R&D Processes Based on Market Excludability and Information Appropriability,”
with Andy Wu (Harvard Business School) and Xingtian Zhang (Wharton, UPenn)

“Hospital Differentiation and Network Exclusivity”

Honors, Scholarships, and Fellowships:

2013, 2014, 2015, 2016	Mack Institute for Innovation Management Research Grant
2015	Penn Center for the Study of Contemporary China Research Grant
2015	Wharton Doctoral Travel Grant
2013, 2014	Penn GAPSA Research Travel Grant
2013	Amy Morse Prize
2013	Population Association of America Poster Session Winner
2010 - 2012	Wharton Doctoral Fellowship, Best Thesis in Economics, Harold G. Lundberg Scholarship (2), Faculty Scholar Award Nominee, Allen Starling Johnson, Jr. RA Award, Student Marshal, Davies Fellowship, Order of Omega, Phi Beta Kappa (junior year), Sargent H. Wellman

Scholarship, PRUV Fellowship, Online Discourse Project Fellowship

Conference and Seminar Presentations:

- 2016 SEA Meetings, MIDAs Workshop, Wharton BEPP Seminar, Wharton AEW, PWCC Workshop on Chinese Firm-Level Data, Wharton IO Workshop
- 2015 London Business School TADC, CES North America Conference, Wharton IO Workshop, Wharton BEPP Seminar
- 2014 SEA Meetings, Wharton BEPP Seminar (2)
- 2013 PAA Meetings
- 2010 - 2012 ACC Meeting of the Minds Conference, Online Civic Discourse Conference, Regional Mathematics and Statistics Conference, PRUV Mathematics Talks

Workshops:

- 2015 Price Theory Summer Camp (Becker Friedman Institute, Chicago)
- 2014 CIBER International Business Strategy Workshop (Fuqua, Duke)
- 2014 Zurich Institute on Computational Economics (University of Zurich)

Institutional Services:

- Summer 2015 *Mentor* for Lynn Hua, Summer Undergraduate Minority Research (SUMR) program, Leonard Davis Institute of Health Economics
- 2013 - 2015 *Board Member*, Penn International Student Advisory Board
- 2012 - 2013 *Graduate Representative*, Committee on Academic and Related Affairs of the Penn University Council
- 2012 - 2013 *Graduate Mentor*, Penn Mentoring Program
- 2010 - 2012 *Co-President*, Delta Sigma Pi Business Fraternity
- 2009 - 2012 *Social Chair*, Chi Psi Fraternity

Miscellaneous:

Personal Information: Citizenship: China. DOB: February 21, 1990.
 Languages: English (fluent), Mandarin Chinese (native).
 Interests: Basketball, Golf, Reading, Running.

Research Abstracts:

“Innovation Is the New Competition: Product Portfolio Choices with Product Life Cycles” *(Job Market Paper)*

Abstract: The *product life cycle*, or time path of sales, of many high-tech goods and services is bell-shaped. I show that product life cycles endogenously arise in markets with rapid technological innovations, are heterogeneous across products, and are affected by the level of market competition. Using product life cycles as an empirically tractable way to capture firms’ dynamic incentives in product introductions, I study the effect of competition on firms’ product portfolio choices and product entry and exit decisions in the context of the Chinese smartphone market. I develop a structural model of equilibrium product portfolio choices, and estimate smartphone demand and manufacturers’ variable, maintenance, and sunk introduction costs on a detailed monthly market-level dataset of Chinese

smartphones between 2009 and 2014. Finally, I use a 2012 large-scale pro-competitive policy introduced by the Chinese government as an experiment to decompose the handset manufacturers' incentives to introduce new products and show that the increased competition reduces the average product's short-run profits by 5% but its lifetime profits by 41% by shrinking its product life cycle. These dynamic incentives have large implications for both consumer welfare gains from product variety and the speed of product innovation in this market.

Link: <https://sites.google.com/site/willpeichunwang/JMP.pdf>

“Ownership Concentration and Strategic Supply Reduction”

with Ulrich Doraszelski, Katja Seim, and Michael Sinkinson (Wharton, UPenn)

Abstract: We explore ownership concentration as a means to seek rents in the context of the U.S. government's planned acquisition of broadcast TV licenses in the ongoing incentive auction. We document the significant purchases of licenses by private equity firms in the run-up to this auction and perform a prospective analysis of the effect of firms controlling multiple licenses on the outcome of the auction. Our results show that multi-license holders are able to earn large rents from a supply reduction strategy where they strategically withhold some of their licenses from the auction to drive up the closing price for the remaining licenses they own. Relative to the case where each license is bid into the auction independently, total spectrum acquisition costs increase by 22%, although the increases are concentrated in a small set of markets. Strategic behavior by multi-license holders reduces economic efficiency as the set of licenses surrendered into the auction is not the socially optimal set. A case study illustrates the mechanism in a specific local media market. We propose a partial remedy that mitigates the effect of ownership concentration and reduces the distortion in payouts to broadcast TV license holders by up to 80%. We further show that the impact of lower participation of license holders could greatly increase the base level of payouts and exacerbate strategic effects.

Link: <http://assets.wharton.upenn.edu/~msink/supplyreduction.pdf>

“Do Concealed Gun Permits Deter Crime? New Results from a Dynamic Model”

with Marjorie B. McElroy (Duke)

Abstract: Setting off an ongoing controversy, Lott and Mustard (1997) famously contended that so-called shall-issue laws (SILs) deterred violent crime. In this controversy the weapon of choice has been the differences-in-differences (DD) estimator applied to state and county panel data spanning various intervals of time. By treating violent crime as a career choice, this paper brings to bear a more general method, a cohort panel data model (CPDM) that incorporates the fundamental dynamic insights regarding entering and exiting a career. Our model distinguishes among three key parameters that jointly determine the effect of SILs on violent crime, (i) a direct effect on entry decisions, (ii) a surprise effect on exit decisions by individuals who entered criminal careers prior to the passage of SILs, and (iii) a selection effect on exit decisions by those who entered in the presence of SILs. We find significant and time-invariant results that reject the deterrence hypothesis as well as the DD model specification. Our results suggest that passages of SILs contribute to about one third of total violent crimes in 2011, particularly through higher turnovers of violent criminals.

Link: <https://sites.google.com/site/willpeichunwang/CPDM.pdf>

“Can a Tiger Change Its Stripes? Reform of Chinese State-Owned Enterprises”

with Ann Harrison, Marshall W. Meyer, Linda Zhao and Minyuan Zhao (Wharton, UPenn)

Abstract: The majority of state-owned enterprises (SOEs) in China were privatized through ownership reforms over the last two decades. Using a comprehensive dataset of all medium and large enterprises in

China between 1998 and 2013, we show that privatized SOEs appear to be unchanged from their state-owned counterparts: compared to private firms that were never state-owned, privatized SOEs are favored by industrial policies such as low interest loans and government subsidies. These differences are more salient with the Chinese government's trillion-dollar stimulus package introduced after the 2008 global financial crisis. Moreover, both SOEs and privatized SOEs significantly under-perform in profitability compared to private firms, suggesting a misallocation of resources. In this paper, we trace out state control, rather than direct ownership, through firms' ultimate ownership structures to explain the observed policy favoritism and explore its welfare implications.

“A Typology of R&D Processes Based on Market Excludability and Information Appropriability”
with Andy Wu (Harvard Business School) and Xingtan Zhang (Wharton, UPenn)

Abstract: We study the effect of product market competition and inter-competitor information spillovers on firms' innovation efforts. We propose a typology of R&D processes in different industries ranging from films to high-tech based on the excludability of the product market and the appropriability of competitors' information. We then develop a demonstrative model with two firms each engaging in a risky R&D project with correlated but unknown success probabilities. Firms learn about the nature of their projects through both their own research outcomes over time as well as their competitor's; if successful, their products will compete in the market. We characterize two symmetric equilibria in this game: an impatient and a patient equilibrium. The patient equilibrium demonstrates the importance of learning complementarity in R&D processes. We show that while intense product market competition reduces firms' innovation incentives, information spillovers mitigate this negative effect under moderate competition but exacerbate the negative effect under monopoly conditions (e.g. when the first-to-market invention is perfectly appropriated with monopoly status).

“Hospital Differentiation and Network Exclusivity”

Abstract: Hospitals in the US differ significantly in their quality. These differences are also increasing over time due to hospitals quality competition. This paper develops a model of network formation where contracts between hospitals and insurers are determined by Nash bargaining. Model simulations show that hospital differentiation leads to more exclusive networks, high insurance premiums and low enrollment rates, although the magnitudes depend on the relative quality and cost of the hospitals as well as the degree of insurer differentiation. Unlike previous studies of insurer-provider networks, this paper also shows that the ability to renegotiate contracts in the model strengthens the exclusivity of networks. I estimate hospital and insurance demand and insurer-hospital contracting decisions on Massachusetts' State Inpatient Database over 2002-2011. Structural estimates suggest that the exclusive networks observed in the data can be partially attributed to hospital quality differentiation. Further descriptive evidence from New Hampshire's commercial claims data over 2005-2014 also lends support.