
✉ yuhsliu@indiana.edu · 🌐 sites.google.com/umail.iu.edu/yuhsinliu · ☎ (219) 218-9992

Education	Indiana University Bloomington (Exp.) June 2018 Ph.D. in Business Economics and Public Policy, Kelley School of Business Minor in Network Science, Network Institute M.S. in Applied Statistics, Department of Statistics
	London School of Economics June 2012 M.S. in Management and Economics
	National Taiwan University June 2010 B.B.A. in Business Administration
Employment	Analyst, Chunghua Institution for Economic Research 2012-2013 Logistic Officer, Taiwan Army 2010-2011 Intern Production Line Analyst, Jiehong Electronics Co. 2008
Ph.D. Dissertation	“Essays on the Economics of Digitization” Committee: J. Prince (Chair), M. Baye, M. Wildenbeest, S. Weiergraeber
Fields	Industrial Organization, Applied Econometrics, Economics of Digitization, Social Networks
Publication	“keyplayer: An R package for Locating Key Players in Social Networks,” <i>The R Journal</i> , 8(1), 2016 (with Weihua An) Identifying and targeting the “influencers” in social networks has been proven extremely useful for business strategy (for reaching critical mass), health policy (for preventing contagious diseases), anti-terrorism tactic (for disconnecting members), etc. The idea is intuitive, but in practice, who constitute the influential group and should be selected for intervention? We develop a handful tool piggy-backed on the R environment for practitioners to implement such idea. We start from including comprehensive quantitative measures for the influences (i.e. the centrality scores) from the Social Networks literature. We then develop a greedy search algorithm for searching the individuals who constitute the most central group, as players who are individually the most central are not necessarily the most central as a group due to redundancy in their connections. [Paper] [CRAN]
Research Papers	“The Impact of Consumer Multi-homing on Ad Prices: Evidence from an Online Marketplace” (Job Market Paper) This study examines whether consumer multi-homing behavior affects ad prices in the digital display advertising market via unwanted duplications. Theoretical analyses based on such channel draw important implications on media content and market structure. The technological advancement on frequency cap-

ping however may eliminate the over impression concern at the expenses of consumer privacy. The presenting paper provides the first empirical evidence on the mechanism. I scrape the publisher data from BuySellAds and match it with comScore 2016 for consumer multi-homing behavior. I employ a novel difference-in-difference strategy to identify the multi-homing effect on ad prices. The idea is that more viewable ad locations in a webpage are also more vulnerable to consumer multi-homing. By finding that the marginal effect of multi-homing (treatment) on ad prices is indeed more negative for the more viewable ads (treated), I conclude that consumer multi-homing behavior can increase the tendency of over impressions, and such tendency can decrease advertisers' valuation of ad slots in the digital display ad market. [[Working Paper](#)]

“Distinguishing Bandwidth and Latency in Households’ Willingness-to-Pay for Broadband Internet Speed” (with Jeffrey Prince and Scott Wallsten), *submitted to Information Economics and Policy*

The study measures households’ willingness-to-pay for changes in key home broadband Internet connection features using data from two nationally administered, discrete choice surveys. Both surveys include price, data caps, and download and upload bandwidth, but only one includes latency. Together, these surveys allow us to measure trade-offs between bandwidth and other connectivity features such as price and data caps, and perhaps most notably, provide the only empirical evidence to date of trade-offs between bandwidth and latency. An implication is that in its CAF Phase II Auction, the FCC is imposing a bidding penalty for latency that is about five times higher than what our WTP estimates suggest it should be relative to bandwidth offered. [[Available at SSRN](#)]

Research in Progress

“From Critical Mass to Key Players: A Network Approach to Platform Design”

In this paper, I generalize the structure of network effect from a “two-sided market” to a pair-wised system. By adapting the adjacency matrix from the graph theory and the micro-foundation contributed from Ballester et al. (2006), I discuss the monetization strategy for the platform that confronts the demand with pair-wised network effects, such as Facebook. I compare the business and welfare implications by pricing users directly and the third party (e.g. advertisers). I also aim to provide the first tractable competition model when consumers choose how much (time) to consume in each platform, instead of which “one” to consume, as this “multi-homing” behavior is common in the digitized world.

Teaching

Undergraduate Level

Instructor, G350 Business Econometrics ([Spring 2016](#))

Instructor, G202 Business, Government, and Society ([Summer 2017](#))

Instructor, G100 Business in the Information Age ([Fall 2015](#))

Ph.D. Level

Lecturer, Stata Boot Camp for Kelley Ph.D. Students (Summer 2017)

Teaching Assistant, Stat681 Causal Inference to Prof. Weihua An (Spring 2017)

Honors & Awards	Kelley School of Business Doctoral Student Research Productivity Award	2017
	Kelley School of Business Doctoral Student Travel Award	2017
	IU SSRC Travel Grant by the Workshop in Network Science and Big Data	2016
	NSF Grant for NBER Digitization Tutorial	2016
	Kelley School of Business Dean's Fellowship	2013-2014
	Ministry of Education Studying Abroad Scholarship, Taiwan	2013-2015
	National Taiwan University Jing-Ming Wong Memorial Fellowship	2008
National Taiwan University Presidential Award	2007-2009	
Professional Activities	Reviewer for AOM Conference on Big Data and Digital Economy	2017
	Proofreader for <i>Managerial Economics and Business Strategy 9th edition</i>	2016
	Case study grader for G202 Business, Government, and Society	2014-2017
Paper Presentations	“Distinguishing Bandwidth and Latency in Households’ Willingness-to-Pay for Broadband Internet Speed”	
	Research Conference on Communications, Information, and Internet Policy (TPRC), September 2017	
Programming & Language	“keyplayer: An R package for Locating Key Players in Social Networks”	
	Annual NSF Conference on Network Science in Economics, April 2016	
	Primary: Stata, R, LaTeX Supplementary: Python, SAS, Matlab Chinese (native), English (fluent), Swedish (basic)	
References	Professor Jeffrey Prince (advisor) Department of Business Economics and Public Policy, Kelley School of Business Indiana University Bloomington · (812) 856-2692 · jeffprin@indiana.edu	
	Professor Michael Baye Department of Business Economics and Public Policy, Kelley School of Business Indiana University Bloomington · (812) 855-2779 · mbaye@indiana.edu	
	Professor Matthijs Wildenbeest Department of Business Economics and Public Policy, Kelley School of Business Indiana University Bloomington · (812) 856-5067 · mwildenb@indiana.edu	
	Professor Stefan Weiergraeber Department of Economics Indiana University Bloomington · (812) 855-2146 · sweiergr@iu.edu	
	Professor Weihua An Department of Sociology and Institute for Quantitative Theory and Methods Emory University · (404) 727-7510 · weihua.an@gmail.com	