Tax and Equity Investment in Early Stage Businesses: Evidence from Online Equity Crowdfunding

Wei Chen weichen@email.arizona.edu
Mingfeng Lin mingfeng@email.arizona.edu
Eller College of Management, University of Arizona

INTRODUCTION

We empirically study whether and how investments in early stage businesses respond to tax incentives, using a natural experiment due to a policy change, and a comprehensive transaction-level dataset from leading online equity crowdfunding platforms in the United Kingdom.

Given the positive externality that entrepreneurial activities bring to the economy, governments around the world have routinely resorted to various incentives to spur entrepreneurship. One of the scarcest resources for successful entrepreneurship is funding, which can often be challenging due to the riskiness of startups. Therefore it is generally believed that, if there are tax incentives for investing in startups, investors may be more willing to undertake the risks and invest in entrepreneurial activities. The effect of such tax incentive programs, however, has been difficult to assess due to the private nature of investment in startups. In addition, tax incentives do not necessarily lead to intended reactions from *all* investors, and may also lead to unintended displacement effects on competing startups that do not qualify for such benefits.

Online equity crowdfunding, where startups can exchange shares of their business for much needed funds, provides opportunities for researchers to assess the impact of such tax incentives. Online equity crowdfunding has the potential to significantly expand the sources of capital for startups, and also increase the return for investors. Therefore not surprisingly, it has received significant interest around the world in recent years. With the Jumpstart our Business Startups (JOBS) Act, crowdfunding platforms such as AngelList have emerged in the US (Nanda and Kind 2013). In the UK, several equity-based crowdfunding platforms have appeared since 2011 (Glover 2015). On these platforms, even retail investors can buy small equity shares of startups. In an effort to spur such investments, the UK government has created tax incentives in the form of the Seed Enterprise Investment Scheme (SEIS). SEIS provides income tax relief and capital gain tax exemption to offset the high risk associated with new ventures, and we exploit the implementation of this policy, and a highly detailed transactions dataset from UK to determine the effect of tax incentives on equity investment. More specifically, our research questions are:

1. *How does the implementation of such tax incentives affect investor behavior?* We will examine the impact on the investor population growth, investor portfolio size, investor risk-taking behavior, and investor choices. In addition, we study how such impacts may differ by the investor's wealth and sophistication level.
2. *How does the implementation of such tax incentives affect startups?* We will examine startups' interest in raising funds through online equity crowdfunding, their likelihood of funding success, and whether there are "displacement effects" on some startups, such as those not eligible for SEIS.
3. *What is the "net" impact of SEIS in online equity crowdfunding*, not only in terms of fundraising but also ex post impact on employment and revenue of startups that are able to raise funds online? How do these impact compare to businesses that raised funds offline?

Answers to these questions will provide practical insights to online equity investment platforms, investors, startups, and regulators.

RESEARCH METHODS

We use data from crowdfunding platforms in UK in our study. Crowdfunding started around 2011 in UK. By the first half of 2014, crowdfunded seed deals have accounted for 32% of all visible UK seed-stage deals (Glover 2015). SEIS was established in April, 2012, and became permanent in 2013 (SEIS 2015). This allows us to identify the effect of tax incentives on investor behaviors. Our dataset includes fine-grained information on investor age, gender, location, sophistication and wealth level (measured through website questionnaires), as well as their investments; startups and their founders; as well as fundraising campaign details and outcomes.

We use difference-in-differences (DD) for identification purposes. Our DD specification utilizes heterogeneity of startups on crowdfunding platforms. The design is demonstrated in the figure below. The treatment effect is the event that SEIS was established. Only investments in SEIS eligible startups receive this treatment (After SEIS).

	Before SEIS	After SEIS
SEIS-eligible investments	O	X
Non-SEIS-eligible investments	O	O

FUNDING SUPPORT

The funding we request will help enhance the scope and impact of the paper. While we have data on equity crowdfunding, we need additional data to evaluate the impact of tax incentives beyond crowdfunding. Specifically, we need data on other startups that are funded through traditional financing outside the crowdfunding platform. Without such data, it is difficult to measure the overall impact of tax incentives. We will collect such data from the UK government information site *Companies House*. This will require that we manually extract and clean the data. The requested funds will be used to hire assistants for data collection, software for data cleaning, and also for presenting the research output at conferences.

TIMELINE

The timeline for this project is outlined in the table below. We plan to clean the data and begin to analyze it in the second quarter of 2016. We expect to finish the draft of the paper by Spring 2017. Thank you for your consideration.

Time	**Main Objective**	**Deliverables**
Q2 2016	Initial data analysis	Preliminary results ready
Summer 2016	Data collection and cleaning	Cleaned data about startups in UK
Spring 2017	Working paper ready	Submit to conferences

REFERENCES

Glover, J. 2015. "Equity Crowdfunding in the UK: Evidence from the Equity Tracker," British Business Bank (available at http://british-business-bank.co.uk/wp-content/uploads/2015/03/230315-Equity-crowdfunding-report-final.pdf).

Nanda, R., and Kind, L. 2013. "AngelList," *Harvard Business School Case 814-036* (available at http://www.hbs.edu/faculty/Pages/item.aspx?num=45657).

SEIS. 2015. "SEIS FAQ's," *SEIS.co.uk* (available at http://www.seis.co.uk/about-seis/faq; retrieved October 12, 2015).

Mingfeng Lin, PhD

Department of Management Information Systems
Eller College of Management, University of Arizona
430V McClelland Hall, 1130 E. Helen St, Tucson, AZ 85721
mingfeng@eller.arizona.edu; +1(520) 621-2684

EDUCATION

- PhD (Business & Management), Robert H. Smith School of Business, University of Maryland, (2010)
  Dissertation: "Decisions under Uncertainty in Decentralized Online Markets: Empirical Studies of Peer-to-Peer Lending and Software Outsourcing." (Chairs: Hank Lucas and Siva Viswanathan)
- MA (Economics), University of Maryland, College Park (2004)
- MA (Economics), Peking University, Beijing, China (2002)
- BA (Economics), Peking University, Beijing, China (2000)

APPOINTMENTS AND PROFESSIONAL AFFILIATIONS

- Assistant Professor, Department of Management Information Systems, Eller College of Management, University of Arizona (2010- present)
- Fellow, Judge School of Business, University of Cambridge (since 2015)
- Fellow, Cambridge Centre for Alternative Finance, University of Cambridge (since 2015)
- Research Affiliate, Center for Analytical Finance, Department of Economics, University of California Santa Cruz (since 2015)

PEER-REVIEWED JOURNAL PUBLICATIONS

- Wei, Z. and **Lin, M.** Market Mechanisms in Online Peer-to-Peer Lending. ***Management Science***, forthcoming.
- Goes, P., Guo, C., and **Lin, M**. Do Incentive Hierarchies Induce User Effort? Evidence from an Online Knowledge Exchange. ***Information Systems Research,*** forthcoming.
- **Lin, M.** and Viswanathan, S. Home Bias in Online Investments: An Empirical Study of an Online Crowdfunding Market. ***Management Science***, forthcoming.
- Goes, P, **Lin, M.**, and C-M Au Yeung (2014). "Popularity effect" in user-generated content: Evidence from online product reviews. ***Information Systems Research***. 25(2) pp. 222-238.
- **Lin, M.**, Prabhala, N.R., Viswanathan, S. (2013). Judging borrowers by the company they keep: Friendship networks and information asymmetry in online peer-to-peer lending. ***Management Science***. 59(1) pp.17-35.
  - Winner of *Management Science* Best Paper Award in Information Systems 2015
- **Lin, M.**, Lucas, H., Shmueli, G. (2013). Too Big to Fail: Large Samples and the p-Value Problem. ***Information Systems Research***. 24(4), pp. 906-917.

PAPERS INVITED FOR REVISIONS

- Effectiveness of Reputation in the Presence of Contracts (with Siva Viswanathan and Yong Liu). Minor revision at ***Management Science***.
- When More is Less: Field Evidence on Unintended Consequences of Multitasking (with Paulo Goes, Noyan Ilk, and J. Leon Zhao). Revising for third round review at ***Management Science***.
- Does Meaningful Use of Electronic Health Records Improve Quality of Care? (with Yu-Kai Lin and Hsinchun Chen). "Major revision" at ***Information Systems Research***.
- Does Information Really "Unravel"? Understanding Factors That Motivate Sellers to Seek Third-Party Certifications in an Online Labor Market (with Paulo Goes). "Reject but invite new submission" at ***Management Science***.

WORKING PAPERS

- Information Value of Texts in Debt Crowdfunding (with Qiang Gao). Preparing for submission to *Management Science*.
- Spatial Distribution of Online Alternative Finance: Field Evidence from the UK Crowdfunding Industry (with Bryan Zhang). Preparing for submission to *Management Science*.
- Gender Difference in Equity Crowdfunding (with Bryan Zhang and Raghu Rau). Preparing for submission to *Journal of Finance*.
- Institutional Investors in Online Debt Crowdfunding (with Richard Sias and Zaiyan Wei). Preparing for submission (to be determined).
- Banking on the Internet: Does Internet Banking Really Improve Bank Performance? (with Henry Lucas and Joseph Bailey). Revision in progress.

WORK IN PROGRESS

- Word-of-Mouth vs. Word of Health Inspectors: Evidence from Yelp.com (with Paulo Goes and Chenhui Guo). Status: preliminary draft available.
- The Naysayers: Contrarian Reviews and Consumer Search. Status: Data analyses (data provided by Wharton Customer Analytics Initiative through a proposal competition).
- The Effect of Seller Guarantee in Online Labor Markets (with Yong Liu and Jurui Zhang). Status: preliminary results available, robustness tests in progress.
- Dyadic Predictions on Startup Mergers and Acquisitions (with Yu-Kai Lin). Status: preliminary results available.
- Auctions in Online Labor Markets: A Structural Analysis (with Paulo Goes, Chenhui Guo, and Zaiyan Wei). Status: data analysis in progress.
- Videos in Crowdfunding (with Qiang Gao and Paulo Goes). Status: data analysis in progress.
- Impact of Educational Crowdfunding on Education Outcomes (with Qiang Gao). Status: data analysis in progress.

EDITORIAL SERVICE

- Associate Editor, *Information Systems Research*, Special Issue on Digital Infrastructure and Platforms

HONORS, AWARDS AND COMPETITIONS

- Kalt Prize for Doctoral Student Placement, Eller College of Management, University of Arizona (2016), for Chenhui Guo's placement at Michigan State University (co-recipient with Paulo Goes)
- *Management Science* Best Paper Award in Information Systems (2015)
- *Management Science* Distinguished Service Award (2014, 2015)
- Kauffman Foundation, research grant on gender issues in equity crowdfunding (2015)
- Eller College Dean's small research grant (2015)
- University of California Santa Cruz, Center for Analytical Finance, small research grant (2015)
- Wharton Customer Analytics Initiative, research proposal competition winners (2015)
- Junior Faculty Consortium, International Conference on Information Systems (2015)
- McGuire Center for Entrepreneurship, Interdisciplinary Research Award (2013) (with Yong Liu, Department of Marketing, University of Arizona).
- NET Institute Summer Research Grant (2010, 2012)
- Nomination for Best Conference Paper award, Conference on Information Systems and Technology (CIST), (2012, 2013, 2014).
- Co-investigator, Natural National Science Foundation of China Grant Key International Project: Growth Patterns and Key Factors for SMEs (Online Merchants) on Emerging e-Business Platforms (2012-2016)
- McGuire Center for Entrepreneurship, Small Research Grant (2011).

- Ewing Marion Kauffman Foundation, Entrepreneurship Dissertation Fellowship (2009)
- Economic Club of Washington Doctoral Fellowship (2009)
- Best Doctoral Student Paper, Conference on Information Systems and Technology (CIST) (2009).
- Oxford Summer Doctoral Program, Oxford University, UK (2008).
- Paine Award for Academic Excellence, Smith School of Business, University of Maryland (2010).
- Research Grant on Social Value Creation, Smith School of Business (2009).
- Best Entrepreneurship Paper Award, Dingman Center for Entrepreneurship (2008, 2009).
- Doctoral Consortium, Communities & Technologies Conference (2009).
- Doctoral Consortium, America's Conference on Information Systems (AMCIS) (2009).
- Goldhaber Travel Grant, Graduate School, University of Maryland College Park (2008)
- Graduate Research Assistantship, Smith School of Business, University of Maryland (2005-2010)
- Dean's Research Fellowship, Smith School of Business, University of Maryland (2005-2010)
- Honored Graduate of Beijing; Beijing, China (2000).
- Honored Graduate of Peking University (2000).
- Academic Excellence Awards, Peking University, Beijing, China (1996-2000).

PEER-REVIEWED CONFERENCE PROCEEDINGS

- "Can Social Networks Mitigate Information Asymmetry in Online Markets?" with Siva Viswanathan and N. Prabhala, in the *Proceedings of the 30th International Conference on Information Systems*. Nominated for Best Conference Paper.
- "Peer-to-peer Lending: An Empirical Investigation", in the *Proceedings of the 2009 America's Conference on Information Systems.*
- "Bidder Migration", with Wolfgang Jank, in the *Proceedings of the 2008 America's Conference on Information Systems*.

INVITED TALKS AND CONFERENCE PRESENTATIONS (SINCE 2010)

- Tsinghua University, PBC School of Finance (Scheduled)
- Carnegie Mellon University, Tepper School of Business, April 2016
- Kauffman Emerging Scholars Conference, February 2016
- University of Arizona, Department of Marketing, Weiland Speaker Series, November 2015
- University of Rochester, Simon School of Business, October 2015
- University of Arizona, MIS Speaker Series, October 2015
- Third Annual Academic Symposium on Crowdfunding, University of California, Berkeley, CA, September 2015
- Industry Studies Conference, Kansas City, Kansas, May 2015
- Invited speaker, workshop on "Financial Access, New Platforms for Finance," organized by the Center for Analytical Finance at the University of California, Santa Cruz, April 2015
- University of California San Diego, Rady School of Business, February 2015
- Georgia Institute of Technology, Scheller College of Business, January 2014
- Pennsylvania State University, Department of Supply Chain and Information Systems, October 2013
- "Home bias in online investments"; Academic symposium on crowdfunding, University of California at Berkeley, October 2013
- "Auctions vs. posted-prices", INFORMS Conference on Information Systems and Technology, October 2013.
- "Information unraveling." Workshop on Information Systems and Economics, Orlando, FL., December 2012. Also presented in INFORMS 2012 and INFORMS CIST Conference 2012 in Phoenix, AZ, and in Department of Economics, University of Arizona.
- "From clickstream to search-stream: Evidence from a B2B market." 14th International Conference on Electronic Commerce, Singapore; August 2012

- "Certification Effects: Evidence from Natural Experiments." International Industrial Organization Conference (IIOC 2012), Fairfax, VA; March 2012
- "All that glitters: certification in online micro contracting." INFORMS Annual Meeting, Charlotte, NC; November 2011
- "Word-of-mouth in online micro contracting." INFORMS Annual Meeting, Charlotte, NC; November 2011
- Invited Speaker at the Marketing Colloquium, Department of Marketing, Eller College of Management, University of Arizona; October 2011
- "Social influence and product reviews." School of Information Resources and Library Science, University of Arizona; September 2011
- "Is home bias always preferential? Evidence from a natural experiment." International Industrial Organization Conference (IIOC). Boston, MA; April 2011.
- "Home bias in online investment decisions." INFORMS Annual Meeting, Austin, TX; November 2010

SERVICES AND OUTREACH

- **Mentor**, Kauffman Entrepreneurship Mentoring Workshop 2016
- **Cluster co-chair,** INFORMS Annual Meeting 2015, eBusiness cluster
- **Associate Editor,** International Conference on Information Systems (ICIS) 2013, 2014, 2016; European Conference on Information Systems (ECIS) 2016
- **Track Co-Chair**, PACIS 2012 (Pacific-Asia Conference on Information Systems), Economics of Information Systems Track; ICEC 2014 (International Conference on Electronic Commerce)
- **Program Committee**, INFORMS Conference on Information Systems and Technologies (CIST) (since 2010)
- **Program Committee**, China Summer Workshop on Information Management (CSWIM) (2014-2016)
- **Conference Co-Chair,** Statistical Challenges in Electronic Commerce Research; June 2011, Rio de Janeiro, Brazil
- **Program Committee,** Hawaii International Conference on System Sciences (2016), Big Data Engineering Mini Track
- **External Examiner for IS PhD Thesis**, Nanyang Business School, Nanyang Technological University,
- **Reviewer for Journals**: Management Science; MIS Quarterly; Information Systems Research; Production and Operations Management Journal; European Journal of Information Systems; Journal of Management Information Systems; Decision and Support Systems
- **External Grant Review for:** Kauffman Foundation; Research Grant Council of Hong Kong
- **Reviewer for Conferences**: International Conference on Information Systems (ICIS); Pacific Asia Conference on Information Systems (PACIS); Hawaii International Conference on System Sciences (HICSS); America's Conference on Information Systems (AMCIS)
- **PhD student advising:** Qiang Gao (co-advising with Paulo Goes; 2016), Chenhui Guo (co-advising with Paulo Goes; 2016)
- **Dissertation Committee Member** for David Zimbra (2012), Chang Heon Lee (2012), Noyan Ilk (2012), Jie Si Chen (2013), Zaiyan Wei (2014, Department of Economics, University of Arizona), Yu-Kai Lin (2015), Shan Jiang (2015).
- **Coordinator**, MIS Department Seminars, University of Arizona (2011-2013)

TEACHING (SINCE 2010)

- Instructor, MIS 513 (MS in MIS), **Business Foundations for IT**, University of Arizona
- Instructor, MIS 611C (PhD), **Economics of Information Systems**, University of Arizona
- Instructor, MIS 478 (undergraduate), **Project Management**, University of Arizona
- Instructor, MIS 578E (online MBA), **Project Management**, University of Arizona
- Instructor, MIS 578 (MIS Online), **Project Management**, University of Arizona
- Instructor, MIS 478 (undergraduate online), **Project Management,** University of Arizona

PHD STUDENT COAUTHORS

- Chenhui Guo, Michigan State University (dissertation committee co-chair) (to graduate in 2016)
- Qiang Gao, City University of New York (dissertation committee co-chair) (to graduate in 2016)
- Zaiyan Wei, Purdue University (dissertation committee member, graduated in 2015)
- Yu-Kai Lin, Florida State University (dissertation committee member, graduated in 2015)
- Noyan Ilk, Florida State University (dissertation committee member, graduated in 2012)

PROFESSOR ORGANIZATION MEMBERSHIPS

- INFORMS (The Institute for Operations Research and the Management Sciences)
- AEA (American Economic Association)
- AIS (Association for Information Systems)

WEI CHEN

Eller College of Management
University of Arizona
1130 East Helen Street
Tucson, AZ 85721

☎ +1 (520) 626-8523
✉ weichen@eller.arizona.edu
www.u.arizona.edu/~weichen/

ACADEMIC APPOINTMENT

2015- Eller College of Management, University of Arizona
Assistant Professor, Management Information Systems

EDUCATION

2009-2015 RADY SCHOOL OF MANAGEMENT, UNIVERSITY OF CALIFORNIA, SAN DIEGO
Ph.D. Innovation, Technology and Operations

2002-2008 HARBIN INSTITUTE OF TECHNOLOGY, HARBIN, CHINA
M.S. Management Science and Engineering, 2008
B.S. Management Information Systems, 2006

RESEARCH INTEREST

Topics: Crowdsourcing, Crowdfunding, Digital Marketing, SaaS Model

Methods: Business Analytics, Predictive Modeling, Analytical Modeling, Field Experiment

AWARDS AND HONORS

2014 Nominated for Best Paper Awards at Conference on Information Systems and Technology
2014 ICIS Doctoral Consortium Fellow, Auckland
2013 Graduate Summer Teaching Scholar, UCSD
2009-2015 Rady Academic Year Fellowship, UCSD
2008 Outstanding Graduates Award, Harbin Institute of Technology
2006 Silver Award, 2^{nd} Open Source Software Contest, Chinese Academy of Sciences, Team Leader
2005 2^{nd} Prize, Campus Innovation Application Challenge, IBM China
2004 1^{st} Prize, Mathematical Contest in Modeling of China

PUBLICATIONS

- Wang, W., Chen, W., Zhu, K., and Wang, H. 2016. The Impact of Linguistic Persuasiveness on Successful Crowdfunding Campaigns: Evidence from Kickstarter. ***Management World***, forthcoming.
- Ye, Q., Law, R., Gu, B., and Chen, W. 2011. The Influence of User-Generated Content on Traveler Behavior: An Empirical Investigation on the Effects of E-Word-of-Mouth to Hotel Online Bookings. ***Computers in Human Behavior*** 27(2) 634–639.

- Law, R., Ye, Q., Chen, W., and Leung, R. 2009. An Analysis of the Most Influential Articles Published in Tourism Journals from 2000 to 2007: A Google Scholar Approach. ***Journal of Travel & Tourism Marketing*** 26(7) 735–746.

WORKING PAPERS

- Competition among Proprietary and Open-Source Software Firms: The Role of Licensing on Strategic Contribution (with Terrence August and Kevin Zhu), *under revision*.
  - Nominee for Best Conference Paper, Conference on Information Systems and Technology (CIST), 2014
- Engaging the Wisdom of Crowds: Structural Analysis of Dynamic User Contributions in Online Communities (with Xiahua Anny Wei and Kevin Zhu), *under review*.
- "Release Early, Release Often"? The Impact of Release Frequency in Open Source Software Co-Creation (with Vish Krishnan and Kevin Zhu), *under revision*.
- Measuring the Influence of Managerial Responses on Subsequent Online Customer Reviews – A Quasi-natural Experiment of Two Online Travel Agencies (with Bin Gu, Qiang Ye, and Kevin Zhu), *under review*.

INVITED TALKS

- "Engaging the Wisdom of Crowds: Structural Analysis of Dynamic User Contributions in Online Communities"
  - Eller College of Management, University of Arizona, Feb 3, 2015.
  - College of Business, University of Illinois at Urbana-Champaign, Jan 30, 2015.
  - Naveen Jindal School of Management, University of Texas at Dallas, Jan 28, 2015.
  - College of Business and Economics, Lehigh University, Jan 26, 2015.
  - Carl H. Lindner College of Business, University of Cincinnati, Jan 23, 2015.
  - Kelly School of Business, Indiana University, Jan 20, 2015.
  - Eli Broad College of Business, Michigan State University, Jan 16, 2015.
  - Freeman School of Business, Tulane University, Dec 8, 2014.
  - Rady School of Management, University of California, San Diego, ITO seminar, Dec 2014.
- "Competition among Proprietary and Open-Source Software Firms: The Role of Licensing on Strategic Contribution"
  - University of Washington, Seattle, Nov 2014. (Kevin Zhu)

CONFERENCE AND WORKSHOP

- "Engaging the Wisdom of Crowds: Structural Analysis of Dynamic User Contributions in Online Communities"
  - *Workshop on Information Systems and Economics (WISE)*, Auckland, New Zealand, Dec 17-19, 2014.

- *INFORMS Annual Meeting*, San Francisco, CA, Nov 9-12, 2014.
- *The 8th China Summer Workshop on Information Management (CSWIM)*, Chengdu, China, Jun 21-22, 2014.
- *POMS 25th Annual Conference*, Atlanta, GA, May 9-12, 2014.
- *INFORMS Annual Meeting*, Minneapolis, MN, Oct 6-9, 2013.
- *Economics of IT and Digitization Workshop*, *NBER Summer Institute*, Boston, MA, Jul 18-19, 2013.

- "Competition among Proprietary and Open-Source Software Firms: The Role of Licensing on Strategic Contribution"
  - *INFORMS Annual Meeting*, Philadelphia, PA, Nov 1-4, 2015.
  - *Conference of Information Systems and Technology (CIST)*, San Francisco, CA, Nov 8-9, 2014. (**Best Paper Nominee**)
  - *INFORMS Annual Meeting*, Minneapolis, MN, Oct 6-9, 2013.

- "'Release Early, Release Often'? The Impact of Release Frequency in Open Source Software Co-Creation"
  - *Proceedings of Pacific Asia Conference on Information Systems (PACIS)*, Jeju Island, Korea, Jun 18-22, 2013. (Kevin Zhu)
  - *INFORMS Annual Meeting*, Phoenix, AZ, Oct 14-17, 2012.
  - *The 5th China Summer Workshop on Information Management (CSWIM)*, Harbin, China, Jun 25-26, 2011.

- "Measuring the Influence of Managerial Responses on Subsequent Online Customer Reviews"
  - *Proceedings of the International Conference on Information Systems (ICIS)*, Paris, France, Dec 14-17, 2008. (Bin Gu)

Teaching Experience

- **Business Data Communications**, University of Arizona, 2015 - Present
  - Recent Evaluation: 4.8/5

- **Product Marketing and Management**, UC San Diego, 2013
  - Evaluation: 4.2/5

- Teaching Assistant, UC San Diego, 2009 - 2015
  - Research for Marketing Decisions, MBA
  - Disruptive Technologies in Healthcare, MBA
  - Technology and Innovation Strategy, MBA
  - Innovation to Market, Undergraduate
  - Product Marketing and Management, Undergraduate

Academic Service and Affiliations

- Reviewer: *Management Science*, *Information Systems Research*, *MIS Quarterly*, *Production and Operations Management*, among others.
- Committee member: CIST 2015
- Association for Information Systems (AIS), since 2012
- The Institute for Operations Research and the Management Sciences (INFORMS), since 2012
- The American Economic Association (AEA), since 2014
- The Association for Computing Machinery (ACM), since 2014

WORK EXPERIENCE

2007-2009 Research Assistant, School of Hotel and Tourism Management, Hong Kong Polytechnic University