Shuyi Yu

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EDUCATION

2015-2021 (Expected) Massachusetts Institute of Technology
MIT Sloan School of Management
Ph.D. Candidate in Marketing (Advisor: Catherine Tucker)
M.S. in Management Research

2013-2015 Harvard University
A.M. in Statistics

2009-2013 Peking University
B.A. in Economics
B.S. in Statistics

RESEARCH INTERESTS

- Substantive: Digital Marketing, Information Technology & Innovation
- Methodology: Econometric Modeling, Field Experiments

WORKING PAPERS

- "Does IT Lead to More Equal Treatment? An Empirical Study of the Effect of Smartphone Use on Customer Complaint Resolution", with Catherine Tucker.

- "On the Internalization of Advertising and Marketing Services: An Adaptation Cost Analyses", with Birger Wernerfelt and Alvin Silk.

- "Testimonial Advertising on Social Networks to Existing Customers and New Customers", with Catherine Tucker.

WORK IN PROGRESS

- "The Role of Machine Learning in Housing Discrimination".

- "Mobile Fintech: How Instantaneous Analytics Changes Consumer Decision Making".

- "Resurrecting Consumers: A Structural Model of Challenges Facing Marketing Automation", with Yuting Zhu.

TEACHING EXPERIENCE

MIT Sloan School of Management Teaching Assistant
Pricing (MBA, Catherine Tucker), Fall 2019

Pricing (EMBA, Catherine Tucker), Winter 2017, Winter 2018
Marketing Strategy (EMBA, Birger Wernerfelt), Winter 2018

Harvard University Teaching Assistant
Introduction to Quantitative Methods for Economics (Undergraduate, Michael Parzen), Fall 2014

GRANTS, HONORS AND AWARDS

MIT
AMA-Sheth Foundation Doctoral Consortium Fellow, 2019
ISMS Doctoral Consortium Fellow, 2018
MIT Sloan School of Management Fellowship, 2016-2020
Walter A. Rosenblith Presidential Fellowship, 2015-2016
Peking University
National Scholarship, 2011, 2012

CONFERENCE AND SEMINAR PRESENTATIONS

Marketing Science Conference, Philadelphia, PA, 2018
MIT, Sloan School of Management, Marketing Seminar, 2017
Marketing Science Conference, Los Angeles, CA, 2017

ABSTRACTS OF DISSERTATION

My dissertation considers how innovation and technology affect consumer experience and their behaviors. The first chapter investigates how predictive algorithms change customer experiences. By focusing on the effect of Zestimate home valuation on housing markets, I investigate to what extent customers rely on Zillow's estimated market value when making purchase decisions and how it interacts with other information sources. Using a dataset with 109,744 properties sold in the greater Philadelphia area, I find that the sale price tends to be higher for those properties that have a higher estimated home value on Zillow. This effect leads to a narrower racial wealth gap driven by home equity. Moreover, I find that this effect will be intensified if the housing market in the neighborhood is more active. It suggests that people rely more on the summary statistic when it is harder to process the information from other sources.

The second chapter investigates how communication automation changes equality in customer service. Customers with more education may get better service after complaining, because they are better placed to advocate for themselves. It is unclear how digitization of the consumer complaint process will change this situation. To investigate this, we analyze 364,189 customer complaints to the city of Boston. Empirically, complaints that originate from areas with high levels of education are more likely to be solved quickly. However, dedicated mobile app technologies that automate the complaint process can help mitigate the advantage conferred by education. Since the adoption of digital devices is endogenous to wealth and education, we instrument their usage using granular geographic data on a proxy for cellular signal strength. This analysis again suggests that mobile applications can partially eliminate the disparity between educated and uneducated people. We present suggestive evidence that this is because mobile devices and the standardization of communication they require, eliminate potential differences in treatment of cases that arise due to differences in communication skills. This result suggests that using newer forms of automated digital communication tools enhances equality in customer service.

The third chapter investigates how instantaneous analytics changes consumer decision making process. The financial services industry has been transformed by the advent of Fintech, and especially the use of mobile applications to deliver instantaneous analytics to consumers. It is not clear, though how this increase in analytics availability affects decision making. To analyze this, I use unique detailed data that tracks financial trades made on desktops and mobile phones by the same group of small investors. Empirical evidence shows that people make worse predictions when making purchase decisions on the mobile platform. To identify whether this is causal, I exploit variation in mobile usage related to people reaching mobile data caps at the end of the month. I also find evidence showing that the complicated design of a multi-purpose app contributes to this inefficiency by increasing the cognitive cost during the purchase decision making process. This result suggests that simplifying the digital tools and separating purchase decisions from each other increases customer welfare.