2017 NBER Economics of Digitization March Tutorial Application Material

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Coursework Summary

I am in my third year as a doctoral student in the Technology and Operations Management Unit at Harvard Business School. My focus of study is digitization and innovation, especially empirical studies of digitization in online platforms.

Over the course of study, I obtain comprehensive understanding of the digitization and innovation literature from survey courses including Empirical Studies of Innovation and Digitization (Shane Greenstein, Karim Lakhani), Macro Topics in Organizational Behavior (Michael Tushman), Foundations of Strategy (Juan Alcacer), etc. In terms of methodology, my training largely focuses on empirical research methods, such as causal inference and advanced statistical analysis. The empirical techniques are covered in courses including Methods for Causal Inference in Management Research (Timothy Simcoe), Advanced Statistics and Econometrics (Gary King), Industrial Organization (Glenn Ellison), Advanced Quantitative Methodology (Matthew Blackwell), etc.

Research Interests Description

My research interests lie at the intersection of digitization and innovation, particularly empirical research in high-technology industries such as the IT industry and online platforms. I seek to understand the role of digitization in

technological innovation from two perspectives: the user's perspective and the firm's perspective.

From the user's perspective, I study user participation in digital platforms and how the platforms in turn shape users' behavior. For example, in a recent working paper[1] my coauthors and I investigate how user participation on Wikipedia changes the users' political biases and slant over time. We use text analysis on large scale user-generated content to measure the slant of users' contributions, and found that users have a tendency to edit articles with the opposite slant, during which the slant of their own contributions also becomes more neutral.

From the firm's perspective, I study the role of digitization in improving firms' ability of technological innovation. To be specific, in a project that investigates the role of data in digital companies, we process large scale transaction data to understand how digital platforms can outperform its competitors due to its online service quality improvement. I am also working on another project that involves randomized experiment as the main research design, during which I will work with an online platform company to conduct field experiments.

I am excited about the opportunity to participate in the 2017 NBER Digitization Tutorial. My coursework and research experiences equip me with the basic preparation for the tutorial, and I believe this precious opportunity will boost my empirical analysis skills to a higher level.

Thank you for your time and kind consideration. I look forward to hearing from you.

Sincerely,

Yuan Gu

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[1] Greenstein, S., Gu, Y., & Zhu, F. (2016). *Ideological Segregation among Online Collaborators: Evidence from Wikipedians (No. w22744).* National Bureau of Economic Research.