2018 NBER Economics of Digitization Tutorial Application

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Coursework Summary

I am a second year doctoral student in the Technology and Operations Management Unit at Harvard Business School. Over the course of study, I have been obtaining a comprehensive understanding of the digitization and innovation literature from seminar courses including Empirical Studies of Innovation and Digitization (Shane Greenstein), Economics of Information Technology (Erik Brynjolfsson, Sinan Aral), Foundations of Strategy (Juan Alcacer), etc. In terms of methodology, my training is largely focusing on empirical research methods, such as causal inference and advanced statistical analysis. The empirical techniques are covered in courses including Advanced Statistics and Econometrics (Daniel Hidalgo), Applied Econometrics (Josh Angrist), Advanced Quantitative Methodology (Matthew Blackwell), etc. Other courses that have helped to complement my research include Experimental Economics (Benjamin Enke), Market Design (Scott Kominers), etc.

Research Interests Description

My research interests firmly lie in the economics of digitization agenda, with a focus on empirical research in high-technology industries such as the IT industry and online platforms. On the microeconomic side of digitization, I study how platforms can develop their ecosystem of complements. For example, in an ongoing project my coauthors and I investigate how developers choose which technologies to build their applications with over time. We use textual analysis of source code from GitHub to examine developer adoption of APIs and SDKs after attending hackathons where they receive resources from a platform. We also examine how platforms can lower barriers to

complement entry by partnering with companies with complementary technology and adjusting technical similarity to competitor platforms. On the macroeconomics side of digitization, I am interested in the implications of the digital divide. For example, one project that I am currently working on is to examine how the unequal geography of IT, especially with the diffusion of newer technologies such as mobile internet, has widened the gap between rural and urban communities.

I am excited about the opportunity to participate in the 2018 NBER Digitization Tutorial. My coursework and research experiences equip me with the basic preparation for the tutorial, and I believe this opportunity would improve my empirical analysis skills and to engage with a community whose research interests coincides exactly with my own.

Sincerely,
Tommy Pan Fang