Northwestern | Kellogg

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I am a second-year Ph.D. student in quantitative marketing at Kellogg School of Management, Northwestern University. I am writing to apply for the NBER Digitization Tutorial 2018. I believe that the NBER meeting would greatly help me to develop and formulate my research ideas, as the key questions in the literature of economics of digitization are strongly aligned with my research interests. My research interests lie at the intersection of quantitative marketing and empirical industrial organization. Substantively, I am interested in understanding (1) the impact on consumer deception of the widespread adoption of online platforms/channels by firms and consumers, and (2) how market incumbents adjust to the digitized environment.

One of my current research projects studies how firms manipulate product rankings with the intention of sending to consumers false signal of the quality of their products, which has been greatly facilitated by the introduction of the online distribution channel. For empirical analysis, I focus on the book market in which publishers utilize bestseller lists as marketing tool; it has been an open secret that publishers buy their own books in bulk to artificially inflate the sales and push them onto bestseller lists. In fact, these fraudulent activities were greatly facilitated by book retailers' adoption of online channel, as firms are now able to disguise as consumers with lower costs. By understanding incentive structure of fraudulent firms and how they address trade-off between gains and costs of cheating, this paper aims to provide implications for designing policy that can discourage consumer deception by firms.

Another research project will explore how digitization induces market incumbents to adjust and adapt to changing consumer behavior, and how their adjustment affects consumer welfare. In particular, I look at the news industry that has experienced a significant decline in print readership due to the entry of online-based media platforms and readers' substitution towards them. For empirical analysis, I focus on one of the traditional and most influential daily newspapers of South Korea, which

switched from print-only to print-and-digital circulation, and examine how the firm has adjusted to secure its position in the online media ecosystem. In addition, I am planning to run a field experiment at the firm's website to understand consumers' viewing behavior in the digital environment. This will allow the firm to better adjust to the digitized news industry by, for instance, diversifying revenue streams and shifting coverage.

At Northwestern, I have had an opportunity to build a rigorous theoretical and empirical foundation in economics and marketing for my research. I took three-quarter Ph.D.-level microeconomics and econometric sequences from Northwestern's economics department. In microeconomics sequence, I learned (1) choice theory, theories of consumer/producer, and choice under uncertainty, (2) general equilibrium, and (3) game theory and mechanism design. In econometrics sequences, I learned (1) partial identification, (2) asymptotic theory, and (3) nonparametric estimation and causal inference. In addition to building foundation in economics, I took four quantitative marketing seminars that discussed structural, analytical, and Bayesian and statistical models, and quasi-experiment methods. I am currently taking the first-quarter industrial organization, and will take the rest of the sequence. I am also taking the economics of innovation, and a course from Kellogg's operations department to learn structural estimation of dynamic discrete choice models.

I strongly believe that the NBER Digitization Tutorial 2018 would provide me a great opportunity not only to widen my understanding of the literature on the economics of digitization, but also to better develop and formulate my own ideas by interacting with fellow researchers with common research interests.

Sincerely,

Jungyoun Lee