NORTHWESTERN UNIVERSITY

Kellogg
School of Management

October 19, 2017

Denis Healy
Development Director
National Bureau of Economics Research
1050 Massachusetts Ave
Cambridge, MA 02138

Dear Denis Healy,

I'm a returning student from 2016 and 2017 tutorial, and it's my pleasure to learn about the 4th NBER Digitization Tutorial in March 2018. I'm a doctoral student focusing on empirical industrial organization and economics of digitization in the Marketing Department at the Kellogg School of Management, Northwestern University. Digitization and its economic consequences has been one of the key themes of my research interests and previous works. Hence, I strongly believe that the event will provide me an opportunity to learn more about the field and researchers, and to contribute to the society in the near future. The application is structured as the following: (i) a brief bio, (ii) course of study, and (iii) research interests. Contact information is attached at the end of this document.

A brief bio

I'm a fourth-year doctoral student in the Marketing Department at the Kellogg School of Management, Northwestern University. I defended my dissertation proposal in September 2017. The title of my dissertation is "Digitization, Distribution, and Returns to Innovation," and my committee members are Eric Anderson, Brett Gordon, Florian Zettelmeyer, and Gaston Illanes. Before joining Kellogg, I received a B.Sc. in Industrial and Management Engineering from POSTECH and a Ph.D. in Engineering from KAIST.

Course of study

I have completed all the core requirements of my department and admitted to candidacy. It includes taking core courses and passing preliminary exams from both Economics and Marketing department: e.g., microeconomics sequence (at Northwestern econ.), econometrics sequence (at Northwestern econ.), and quantitative marketing courses (at Kellogg and Booth). Other than the core courses, I focused on industrial organization and economics of information (Northwestern econ) and some advanced quantitative marketing courses (at Kellogg and Booth).

Before joining Kellogg, I studied Engineering at KAIST. The program I attended at KAIST was designed to provide an interdisciplinary education and research environment in the purpose of investigating the impact of digital technologies on the cultural aspects of our society. There, I took multiple courses on the issue of digitization, such as Digital Technology (taught by a computer scientist), Digital Economics and Digital Marketing (an economist), Digital Content Industry (a sociologist), Online Social Network Analysis (a physicist), to name a few.

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Research interests

My general research interest lies on the intersection of digitization, industrial organization, and quantitative marketing. Specifically, I'm interested in investigating how market players (i.e., producers, intermediaries, and consumers) react to the digitization-driven structural changes, and how the adjustments made by market players affect market equilibriums. For instance, my dissertation focuses on intermediary adjustments to digitization-driven cost shocks in the context of movies.

Dissertation title: "Digitization, Distribution, and Returns to Innovation"
Dissertation committee: Eric Anderson, Brett Gordon, Gaston Illanes, Florian Zettelmeyer
Expected date of completion: May 2019
Abstract
It is commonly accepted by entrepreneurs and researchers that the distribution of returns to innovation is highly skewed – the winner takes it all. The skewness of returns to innovation is closely related to a strategic gatekeeping behavior of market intermediaries: they have strong incentives to pick a list of few products, scale up its presence and availability, promote them, and flexibly adjust the list. Throughout the last few decades, digitization has empowered market intermediaries to scale up the offering of few selection of innovations and flexibly adjust the offering reacting to the realized demand at lower costs. How does the increased scalability and flexibility reshape the distribution of returns to innovation? This dissertation investigates, as a case study, the movie market to understand the impacts of digitization on market intermediaries' strategic gatekeeping behavior and, in turn, the skewness of returns to innovation. To answer the question, we plan to develop a structural model of both supply and demand that relates digitization and the scalability and flexibility of retailers in product offering. Furthermore, we evaluate the effectiveness of potential government interventions on either promoting or regulating the market intermediaries' increased role as a gatekeeper.

Again, it is my pleasure to apply for joining NBER Digitization Tutorial, which I think is the very center for researchers whom I share the most similar research interests with. I look forward to returning to the tutorial and grab the valuable opportunity of learning and engaging with other colleagues.

Thank you for your valuable time on considering my application.

Sincerely,

Joonhyuk Yang
Doctoral student, Marketing Department
Kellogg School of Management
Northwestern University
2211 Campus Drive, Evanston, IL 60208
Mobile: (312) 785-0735
E-mail: j-yang@kellogg.northwestern.edu