Namho Kwon (nkwon@andrew.cmu.edu, 412-337-92005), PhD Candidate
H. John Heinz III College, Carnegie Mellon University

Application for the NBER Project on the Economics of Digitization

RESEARCH AND AREAS OF INTERESTS

A. Areas of Interests

My research focuses on economics of technological innovation, entrepreneurship and growth, and international economics. In particular, I am interested in (1) how firms develop strategies for promoting innovation, (2) how software affect firms' performance, innovation and market value, (3) how firms react to various regulations, and (4) how diffusion of technology and (international) technology transfer have impact on innovation.

I also have interests in a wide range of policies relating to entrepreneurship, innovation and economic growth.

B. Ongoing Research

My current research interests include South Korean firms' innovation, software-driven innovation in traditional industries, and innovation in medical device industry.

a) South Korea's Transition from Imitator to Innovator: The Role of External Demand Shocks (With Lee Branstetter, Working Paper) - This paper argues that the increase in external market demand resulting from exchange rate changes had significant impacts on R&D expenditure of manufacturing firms in South Korea. The empirical analyses using South Korean firm-level panel data from 1981 to 1995 show that the exchange rate change were a significant driver of increased R&D expenditure.

b) Get with the Program: Software-Driven Innovation in Traditional Industries (With Lee Branstetter and Matej Drev, Working Paper) - This paper documents the increasing importance of software for successful innovation in manufacturing sectors well beyond the traditional definition of electronics and information technology. We find that firms with a higher level of software intensity generate more patents per R&D dollar, and their investment in R&D is more highly valued by equity markets.

c) Medical Device Industry and Role of FDA: Focused on innovation and market structure – This paper discusses how FDA's regulations (performance) affect medical device firms' (especially the U.S. firms) strategic behaviors on innovation, such as conducting R&D and applying for patents. I also provide evidence on firms' market value and structures (especially concentration) of medical device industry.

FOCUS OF STUDY AND COURSES

My research is basically based on empirical studies. At the same time, I mainly focus on using interdisciplinary approaches for solving the problems. Therefore, I think that I need to study both theory-oriented and empirical methods (more focus on empirical methods).

I took the courses below to equip myself with quantitative analysis ability.
"Introduction to Econometric Theory", "Statistical Theory for Social and Policy Sciences", "Econometrics I & II", "Regression Analysis", "Intermediate Statistics", and "Observational Casual Inference"

The curses about economic analysis and theory development that I took are
"Microeconomics I & II" and "Dynamic Models for Firm Decision Making and Industrial Competition".

The courses mainly related to my concentration are below:
"Economics of Technological Change", "Advanced Topics in International Trade and Investment", "Growth, Technological Progress, and Development", and "Organizational Behavior (Macro)"

In addition, I worked as a teaching assistant for the courses below that are related to my research.
"Economics of Development", "Policy in Global Economy", "Migration Policy", and "Immigration Policy Analysis"