Hyo Kang
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725 Kula Gulf Way, APT 300
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Mar 28, 2016

To the members of the NBER Entrepreneurship Working Group:

I am a third year PhD student at the Business and Public Policy (BPP) group at the Haas School of Business, UC Berkeley. I would like to apply to participate at the 9th NBER Entrepreneurship Research Boot Camp (ERBC). Please find the following documents enclosed in this packet:

- Curriculum Vitae
- A list of all completed PhD courses
- Personal statement with description of current and future research

My recommendation letter has been submitted directly by professor Reed W. Walker (Assistant professor at Haas School of Business, UC Berkeley; Faculty Research Fellow at NBER) on Mar 26, 2016.

If you have any questions about my application, I can be reached by phone at +1 (510) 239-1097 or by e-mail at hyo_kang@haas.berkeley.edu. Thank you for your time and consideration.

Sincerely,

Hyo Kang

03/2016

HYO KANG

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2220 Piedmont Avenue, Berkeley, CA 94720-1900, USA

EDUCATION

Haas School of Business, University of California at Berkeley Berkeley, CA
Ph.D. student in Business and Public Policy (2013-*present*)

Seoul National University Seoul, Korea
M.S. in Business Administration (2013)
B.A. in Economics (with *Top Honors*, 2011)

RESEARCH

Innovation and Recurring Shifts in Industrial Leadership: Three Phases of Change and Persistence in the Camera Industry, *Research Policy*, forthcoming (with Jaeyong Song).

Employee Mobility, Firm Self-sorting, and Job Creation: Heterogeneous Effects by Firm Size, *BPP second-year paper*.

Innovation Strategies Against Employee Mobility To Competitors: Evidence from a Loophole in Non-Competes Enforcement, *work-in-progress*.

ACADEMIC ACTIVITIES

Referee | Research Policy (2013, 2014, 2015)

Teaching
- Reader, "Strategy" (Berkeley-Haas EWMBA299, Fall 2015)
- Lecturer, "Game Theory and Entrepreneurship" (Berkeley Business Academy for Youth, 2015)

Research & Teaching Assistant | Graduate School of Business, Seoul National University (2011-2013)

AWARDS

Fellowships

Berkeley-Haas Summer Research Fellowship (2015)
Korea Foundation for Advanced Studies (KFAS) Fellowship for Ph.D. Studies (2013-*2018*)
Gwanjeong Educational Foundation Fellowship for M.S. Studies (2011-2012)
Advanced Strategy Program Fellowship for B.A. studies (2009-2010)
Dean's Scholarship (2005-2009)

Awards

Top Academic Honors, Department of Economics, Seoul National University (2011)

Alumni Association Award, Seoul National University (2011)

Best Paper Award, Korea Institute of Public Finance (2011)

Second Prize, National Mock Trial and Thesis Competition, Korea Fair Trade Commission (2009)

PERSONAL

Married

Love photography and short-track skating

Served 9th Infantry Division of Korean Army (2006-2008):

- Assistant to Chief of Staff
- Ammunition Specialist
- Honorably discharged as a sergeant

List of Current and Completed PhD Courses*

Hyo Kang (UC Berkeley)

Spring 2016

ECON 220A	Industrial Organization (3)
ECON 220C	Special Topics in Industrial Organization (3)
ECON 221	Seminar in Industrial Organization: Regulation and Public Enterprise (3)
PHDBA C270	Workshop in Institutional Analysis (2)
PHDBA 279S	Research Seminar in Business and Public Policy (4)
PHDBA C279I	Economics of Innovation (3)
PHDBA 297T	Doctoral Topics in Business Administration (3)

Fall 2015

ECON 221	Seminar in Industrial Organization: Regulation and Public Enterprises (3)
IND ENG 270	Current Readings in Innovation (3)
PHDBA C270	Workshop in Institutional Analysis (3)
PHDBA 279S	Research Seminar in Business and Public Policy (4)
PHDBA C279I	Economics of Innovation (3)

Summer 2015

PHDBA 299A	Individual Research in Business Problems (3)

Spring 2015

ECON 224	Economics of Institutions (3)
PHDBA C270	Workshop in Institutional Analysis (2)
PHDBA 279C	Corporate Strategy and Technology (3)
PHDBA 279S	Research Seminar in Business and Public Policy (4)
STAT239B	Quantitative Methodology in the Social Sciences Seminar (4)

Fall 2014

ARESEC 213	Applied Econometrics (4)
ECON 221	Seminar in Industrial Organization: Regulation and Public Enterprises (3)
PHDBA C270	Workshop in Institutional Analysis (2)
PHDBA 279S	Research Seminar in Business and Public Policy (4)
STAT239A	The Statistics of Causal Inference in the Social Sciences (4)

Spring 2014

ARESEC 212	Econometrics: Multiple Equation Estimation (4)
ECON 201B	Economic Theory (4)

PHDBA 279B	The Political Economy of Capitalism (3)
PHDBA 375	Teaching Business (2)

Fall 2013

ECON 201A	Economic Theory (4)
ECON 240A	Econometrics (5)
PHDBA 279A	Institutions, Interest Groups and Public Policy (3)
PHDBA 297B	Research and Theory in Business: Behavioral Science (3)

Summer 2013

ECON 204	Mathematical Tools for Economics (3)

* Number of units in parentheses

Personal Statement

I would like to participate in the 2016 NBER Entrepreneurship Research Boot Camp to advance my entrepreneurship-focused research agenda and deepen my understanding of entrepreneurship scholarship by interaction with leading scholars in the field.

My Past and Current Research: I have been studying on covenants not to compete ("non-competes") and its impact on the economy. Non-competes, in which an employee agrees not to work for the current employer's direct competitor for a certain amount of time, solves the market failure of under-investment in employee training and research and development (R&D). However, non-competes create a distortion and an inefficiency in the market, as they imply that separated employees cannot utilize their expertise and experience in the same field for a certain amount of time.

I hypothesized that the enforceability of non-competes have differential effects on firms by their size (maturity) and examined how non-competes affect firm behaviors through two channels: extensive margin (entrepreneurship and firm sorting) and intensive margin (job creation). I exploited Florida's legislative change in 1996 that significantly increased the enforceability of non-competes as a quasi-experimental setting. My preliminary empirical results demonstrate that large firms entered Florida and created more jobs following the change. Small firms, in contrast, exited Florida and created fewer jobs. Entrepreneurship (birth of new firms) was hampered as well. These results imply a dominance of large firms and a higher market concentration in the local economy.

Another on-going study of mine examines how firms strategically respond to an *external* shock that changes their enforceability of non-competes. Here I exploit an influential court decision in 1998 regarding California's refusal to enforce *out-of-state* non-competes. After this

decision, California unexpectedly emerged as a "loophole" in non-competes enforcement. I am studying the impacts (externalities) of this Californian loophole on firm decisions, comparing firms in states that enforce non-competes with firms in states that do not enforce non-competes (DiD). My outcomes of interest are firm decisions on both internal management (R&D, patenting, and innovation specificity) and external relationship (alliance and acquisition). Entrepreneurship (firm births and their survival) will also be examined.

Future Research (Dissertation): I am currently developing a research idea on economic effects of collusion enforcement. Collusions such as price fixing and bid-rigging have been one of the most important topics in the fields of microeconomics and industrial organization in the past decades. However, most studies focus on cartel formation, detection, and deterrence; there has been little academic study on collusion break-up and its economic consequences. I aim to understand the consequences of collusion and its break-up on the industry competitiveness and firm decisions. Furthermore, after establishing the causal relationship between cartel breakup and market competitiveness, I would ultimately like to tackle a "competition-innovation debate," by examining how competition affects incentives to innovate and directions of innovation. In doing so, I will explicitly distinguish between disruptive (competence-destroying) versus incremental (competence-enhancing) innovation.

As a third year PhD student in the Business and Public Policy (BPP) program at Haas School of Business, I have been rigorously trained in formal economics theory and econometric analyses as well as exposed to ideas and insights of management scholars. I believe that my solid background in economics and cross-disciplinary perspectives will allow me to contribute a unique perspective to the boot camp discussions. I sincerely hope to have the opportunity to participate in the ERBC, take advantage of the wealth of knowledge there, and contribute to enriching other participants' experience.

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REED WALKER
ASSISTANT PROFESSOR
BUSINESS AND PUBLIC POLICY
EMAIL: *rwalker@berkeley.edu*
TELEPHONE:(510) 965-3298

March 25, 2016

Dear Colleague:

I am writing a letter in support of **Hyo Kang's** application to the NBER Entrepreneurship Research Boot Camp (ERBC). Hyo is currently in his third year of the Business and Public Policy PhD program at UC Berkeley's Haas School of Business of which I am a faculty member. This program is equivalent to a PhD in applied economics and consistently produces top graduates that place in leading research universities. Hyo has taken the first year sequence in the economics department along with 2nd year field courses within economics and the business school. Hyo has been an exceptional student both in the classroom and has shown tremendous acuity in the often difficult transition from coursework to research. Hyo is currently on the trajectory to be one of the leading students in his cohort. He is constantly coming to me with new ideas that are not only interesting, but he has also clearly identified the research frontier and the requisite datasets and research designs to execute. This is a rare combination of skills!

Hyo's main research interests lie at the intersection of entrepreneurship, innovation, and industrial organization. Some of the recent ideas we have discussed include looking at how regulatory induced changes in competition (i.e. using DOJ whistleblower cartel breakups) affect incumbent firms in the industry in terms of prices, quantities, and ability to innovate. Hyo currently has an application in with the U.S. Census Bureau to gain access to their firm level production data in order to make progress on such topics. Hyo can then use methods from the productivity literature (e.g., De Loecker and Warzynski 2012; Ackerberg, Caves, and Frazer 2015) to estimate how competition affects productivity, unit prices, markups, and marginal costs. In many ways, this agenda reminds me of the seminal papers by Bresnahan and Reiss but with actual price and quantity data. He has also applied for the linked patent data with which to explore how changes in competition within a market affects innovative capacity of existing and/or new firms.

This is just one of many projects that Hyo and I have talked about that seem to have lots of promise. Hyo also regularly talks to other members of economics community on campus including Steven Tadelis, Ben Handel, Kei Kawai, and Carl Shapiro. They all speak highly of him and his potential.

In short, I believe Hyo is working on important and fundamental issues in empirical industrial organization. He has a strong applied toolkit, fluent in tools of causal inference but also cutting edge methods in structural estimation. He also has the ability to ask interesting questions that have a clear shot at being answered and will contribute to the field in a meaningful way. Thus, I think that Hyo

should be an exceptional candidate for the Entrepreneurship Research Boot Camp (ERBC). Please don't hesitate to reach out should there be any remaining questions.

Best regards,



Reed Walker
Assistant Professor of Business and Public Policy
Haas School of Business
University of California at Berkeley and NBER