Keongtae Kim **University of Maryland at College Park**

NBER Entrepreneurship Research Boot Camp 2013

Mar 28, 2013

Brett Maranjian
National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138, US

Dear Brett Maranjian,

This letter is to formally express my interest in applying for the 2013 NBER Entrepreneurship Research Boot Camp in the summer of 2013. Enclosed in this email is 1) a copy of my curriculum vita that includes a list of my graduate courses, 2) a two-page essay that explains why I want to attend the boot camp. My letter of recommendation will be sent by Professor Gerard Hoberg at the University of Maryland under separate cover.

Feel free to contact me if you have any further questions regarding my interest in the boot camp, my background, or if there is anything else you need. I can be contacted via email kkim2@rhsmith.umd.edu or by phone at (319) 631-9289. Thank you for your consideration and I look forward to hearing from you in the near future.

Respectfully,

Keongtae Kim

UNIVERSITY OF
MARYLAND
ROBERT H. SMITH SCHOOL OF BUSINESS
Gerard Hoberg

4423 Van Munching Hall
College Park, Maryland 20742-1815
301-405-9685
ghoberg@rhsmith.umd.edu

March 22, 2013

Dear Sir or Madam:

I am writing this letter in strong support of Keongtae Kim for his application to the NBER Entrepreneurship Research Boot Camp. I have known Keongtae for three years, and through more than one channel. In 2010, I had the pleasure of having Keongtae take my PhD-level course on Finance Theory at the Smith School of Business at the University of Maryland. This is the same course that our entering PhD students take. Keongtae did very well, was very engaged, and took it upon himself to visit my office with thoughtful questions. Overall, he was a pleasure to have in the class. Despite his being a PhD student in the Smith School's DIT department, he performed at the level of our Finance PhD students and showed a higher level of curiosity than most in the class. Keongtae clearly has cross disciplinary interests, and the study of entrepreneurship and innovation is central to where his interests overlap with various management disciplines very heavily. This is central to why I think he would be a solid contributor to the boot camp, and he is also a student who will surely apply the knowledge directly throughout his career, which I expect will remain anchored on these topics for years to come.

Since my earlier interactions with him, Keongtae has matured, and I am also working with him on a new paper with Anand Gopal. Keongtae is full contributor, both in the ideas and in the analysis. It is fair to say that this paper exists more due to his hard work and insights than due to my own, but I have also enjoyed contributing to the project immensely. This paper integrates ideas relevant to Finance, Information Technology, and also management. We focus on why some high technology firms engage more in CVC investment than others, and examine such investment through the lens of product market competition and product differentiation. The paper focuses on the high technology sector, as this setting has special relevance regarding the nature of competition, as competition in this setting is often more about product change and future evolution than it is about competition for any set of consumers at any point in time. We thus further hypothesize that CVC and R&D are potential substitutes as means to create

innovation, and patenting variables are relevant in examining outcomes to this innovation race. We find that CVC investment and competition are strongly positively related as expected. This result is robust to instrumentation or lag structures, suggesting that CVC investment is likely part of a strategic reaction to produce innovation where there is high competition. This study draws upon the "TNIC" industry classification data from my recent work with Gordon Phillips, and provides novel findings regarding how firms, and also technology leaders and laggards, differentially use CVC investment in these markets.

Interest in cross disciplinary research, evidenced by his paper with Anand and myself, is not a one-time phenomenon for Keongtae. He has another paper coauthored with Michael Kimbrough (Accounting) and Sunil Mithas (DIT), and he has additional work in or entering the submission process.

In all, Keongtae is hard working and determined to succeed in a research carreer. He has already shown the required enthusiasm to pursue cross disciplinary interests here at the Smith School of Business. He has taken my PhD level Finance course despite its not being required for his own Department, and he is the lead author on a paper with two faculty members from different areas. However, despite having this experience under his belt, Keongtae still feels that he can learn extensively from the NBER Rearch Boot Camp. I agree, as the Smith School does not offer enough courses as directly relevant to his interests as those available at the Boot Camp.

I fully support Keongtae's application without reservations. Please contact me if I can provide more information.

Sincerely,

Gerard Hoberg



Associate Professor of Finance

University of Maryland Smith School of Business

<Application Letter>

The NBER entrepreneurship boot camp is a unique opportunity to engage in the research areas that I have been so thrilled about since I have started my PhD– entrepreneurship and innovation. Taking part in this camp is more than just a chance to encounter new research ideas and methodologies. It is also a wonderful opportunity to explore possible avenues for collaboration with researchers from a variety of different disciplines, who share my research interests.

My desire to attend the boot camp is driven by two primary reasons. First, entrepreneurship research requires an interdisciplinary approach that explores possible avenues for collaboration between researchers from multiple disciplines. My dissertation topic has arisen naturally through the process of working with faculty from diverse areas at the University of Maryland. My innate interest in technology and my experiences working in the finance industry have given me strong interest in the intersection of technology, innovation, and entrepreneurship. As such, I took a finance course from Professor Gerard Hoberg (*Finance*), which eventually led me to work with him on a project examining the impact of production market competition on corporate venture capital investments. I was introduced by this topic in a strategy course focusing on the economic foundation of entrepreneurship and strategy taught by Rajshree Agarwal (*Strategy*), who is currently on my dissertation committee. In addition, by talking with advisers in *Information Systems* I became interested in crowdfunding, an emerging alternative to traditional sources of financing, which became my dissertation topic. These experiences led me to believe that interdisciplinary collaboration is essential in entrepreneurship research. While I have appreciated working with faculty from diverse areas at the University of Maryland, I believe the boot camp will expose me to a greater diversity of ideas and help me form important research collaborations.

Second, my training and interests align extremely well with those required by the boot camp, i.e. finance and economics with a focus on entrepreneurship. I have taken courses in economics, finance, and strategy at Maryland, including several empirical methodology courses used in applied microeconomics, such as empirical industry organization by Ginger Jin (*Economics*), who is also on my dissertation committee. Hence, I believe I am well-prepared to benefit from the boot camp. Furthermore, my research on crowdfunding and my combination of interests in technology, innovation, and entrepreneurship will contribute to the diversity of the entrepreneurship research community.

My dissertation examines how the Internet and web-enabled platforms can transform the entrepreneurship world. Specifically, I am interested in online crowdfunding markets, which have emerged as a viable alternative to traditional sources of financing such as financial institutions, venture capitalists, and angel investors. Crowdfunding, as a phenomenon, has grown rapidly in recent years, attracting an estimated $2.8 billion worldwide in 2012 alone, and has been widely used to support a variety of projects including entrepreneurial ventures, creative projects, and scientific research. With the Jumpstart Our Business Startups (JOBS) Act, crowdfunding has also begun to attract significant attention from policy makers and regulators. Despite the rapid growth and popularity of online crowdfunding marketplaces, there have been very few systematic studies of these markets. I believe that understanding the market dynamics in these platforms and the role of mechanisms that help investors manage risk in these nascent markets is crucial to the design of successful crowdfunding models. Therefore, my dissertation examines two areas: (i) investor behaviors in online crowdfunding markets; and (ii), how a variety of geographic-specific variables, such as internet penetration, affect regional entrepreneurial activities, including crowdfunding projects.

My current dissertation research focuses on the role of reputable investors in crowdfunding markets. Specifically, it examines whether early investments serve as signals of quality for later investors, and if

the value of these signals differ depending on the identity of early investors. I also examine if these signals are indeed credible as measured by the ex-post performance of these projects and investments. I find that reputable investors – *app developer investors (i.e., product expert)* and *experienced investors (i.e., market expert)* – are likely to be influential for later investors, although each for a different category of apps that matches their expertise. Additionally, I find evidence of rational herding in these markets.

In a separate essay I examine a more macro-level question- *does crowdfunding democratize financing?* Traditional funding sources, such as venture capitalists, tend to be geographically concentrated and concerned with the distance to firms in which they invest. However, web-enabled crowdfunding platforms may help reduce market frictions associated with geographical distance. Thus, my current research investigates how geographic-specific variables affect the adoption of crowdfunding, focusing particularly on three geographical factors: *total population, internet penetration rate, and financial constraints*. Initial findings suggest that bigger cities with larger, better pools of potential crowdfunders are likely to have higher crowdfunding rates, though I also find encouraging evidence that, relative to traditional sources of financing, crowdfunding might, indeed, democratize financing. As such, my future research will examine the effect of the Internet and emerging technologies on regional entrepreneurship in greater depth, a subject about which there has been a comparative dearth of empirical entrepreneurship research

All in all, I would be thrilled to participate in the 2013 NBER entrepreneurship boot camp, and am certain it would be of tremendous benefit to me and my research.

Thank you in advance for considering my candidacy. I appreciate your attention.

Sincerely,

Keongtae Kim

Keongtae Kim

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EDUCATION	2009-2014(Exp.)	Ph.D., Information Systems (Minor: Economics), University of Maryland
	2004-2006	M.S., Management Engineering, KAIST Business School, Korea
	1996-2000	B.S., Mechanical & Aerospace Engineering, Seoul National University, Korea
Professional Experience	2007-2009	Junior Research Fellow, Samsung Research Institute of Finance
	2005-2007	Actuarial Specialist, Korean Reinsurance Company

Research Interests & Methods

Crowdfunding, Entrepreneurship, Open Innovation, Strategic Role of IT in Entrepreneurship
Empirical IO, Bayesian Statistical Analysis, and Structural Modeling

Referred Proceedings

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Product Market Competition and Corporate Venture Capital Investments: Evidence from the US IT Industry" (2012). *Academy of Management (TIM) Best Paper Proceedings*

Kim, Keongtae and Sunil Mithas, "How Does Bond Market View IT Investments of Firms? An Empirical Analysis of Bond Ratings and Yield Spread " (2011), *Proceedings of the 32th International Conference on Information Systems (ICIS)*

Papers under Review

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Does Product Market Competition Drive Open Innovation? Evidence from CVC Investments in the IT Industry", *Under 1st round review at Management Science*

Kim, Keongtae, Sunil Mithas and Michael Kimbrough, "Assessing Risks Associated with IT Investments across Industries: Evidence from Bond Markets", *Revision requested for 2nd round review at Management Science*

Working Papers

Kim, Keongtae and Siva Viswanathan, "The Signals in the Noise: Role of Reputable Investors in Crowdfunding Markets"

Kim, Keongtae and Il-Horn Hann, "Democratization of Financing: How Does Geographic Location Affect the Adoption of Crowdfunding"

Conference Presentations

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Does Product Market Competition Drive Open Innovation? Evidence from CVC Investments in the IT Industry", *Darden & Judge Entrepreneurship and Innovation Research Conference*, 2013, Charlottesville, Virginia

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Product Market Competition and Corporate Venture Capital Investments: Evidence from the US IT Industry", *Conference on Information Systems and Technology (CIST)*, 2012, Phoenix, Arizona

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Product Market Competition and Corporate Venture Capital Investments: Evidence from the US IT Industry", *Academy of Management Meetings*, 2012, Boston, Massachusetts

Kim, Keongtae, Anand Gopal and Gerard Hoberg, "Product Market Competition and Corporate Venture Capital Investments: Evidence from the US IT Industry", *Statistical Challenges in eCommerce Research*, 2012, Montreal, QC

Kim, Keongtae, Sunil Mithas, "How Does Bond Market View IT Investments of Firms? An Empirical Analysis of Bond Ratings and Yield Spread", *International Conference on Information Systems (ICIS)*, 2011, Shanghai, China

Kim, Keongtae, Sunil Mithas, "How Does Bond Market View IT Investments of Firms? An Empirical Analysis of Bond Ratings and Yield Spread " (with Sunil Mithas), *Conference on Information Systems and Technology (CIST)*, 2011, Charlotte, North Carolina

Fellowships and Awards

Smith School of Business, Dean's Research Fellowship (2009-)

Post-ICIS 2012 LG CNS/KrAIS Workshop Best Paper Runner Up (2012)

University of Maryland, Jacob K. Goldharber Travel Grant (2012)

KAIST Business School, Research Fellowship (2004-2005)

Referee Services

Served as referee for journals including the *Information Systems Research, MIS Quarterly, Electronic Commerce Research and Applications, and IT Professionals*

Served as referee for conferences including the *ICIS* (2010, 2011, 2012), *AMCIS* (2012), and AOM (2012)

Membership

American Economic Association (AEA)

Association for Information Systems (AIS)

Institute for Operations Research and the Management Science (INFORMS)

Technical Skills

Statistics/software: Stata, R, Mathematica, Matlab, WinBUGS, MS Access, MySQL, LyX

Database: Compustat, CRSP, SDC Platinum, VentureXpert, NBER US Patent Data, Mergent Fixed Income Security Database (FISD), InformationWeek 500

Coursework

Economics and Finance	**Instructor**	**Grade**
Microeconomic Analysis I	L. Ausubel/E. Filiz	A+
Microeconomic Analysis II	D. Vincent/E. Ozbay	Audit
Econometrics I	J. Chao/J. Rust	A0
Econometrics II	J.Chao/I. Prucha	A0
Seminar in Financial Theory	Gerard Hoberg	A-
Empirical Analysis in IO	Ginger Jin	A0
Empirical Microeconomics	Guiteras Raymond	B+
Advanced Microeconomics I	Peter Crampton	B
Computational Economics	John Rust	B+
Industrial Organization		(KAIST)
Advanced Financial Management		(KAIST)
Marketing and Statistics		
Marketing Models with MCMC	Michel Wedel	A-
Applied Regression Methods	Wolfgang Jank	A0
Probability and Statistics		(KAIST)
Statistical Decision Analysis and Forecasting		(KAIST)
Mathematical Programming		(KAIST)
Information Systems		
Social & Behavioral Research in IS	Kate Stewart	A0
Current Research in IS I	R. Agarwal, S. Mithas. I. Hann	A0
Current Research in IS II	A. Gopal, G. Gao, J. Bailey	A0
IS Strategy	Anand Gopal	A-
Research Methods in IS	Hank Lucas	B+
IS Economics	Siva Viswanathan	A+