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

NBER Entrepreneurship Research Boot Camp 2012

Mar 21, 2012

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 2012 NBER Entrepreneurship Research Boot Camp in the summer of 2012. 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 20, 2012

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 about two 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 attended regularly, completed all of the assignments and 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.

Going beyond, Keongtae has since taken the initiative to write a paper with cross-discipinary interest with a DIT professor (Anand Gopal) and a Finance professor (myself). Keongtae is highly motivated and engaged, and this paper is more his doing than my own. We decided to follow DIT convention, and not Finance convention, and so Keongtae is thus listed as the "first author" on this paper, reflecting his intellectual and practical contributions to the paper. This paper integrates ideas relevant to Finance, DIT, and also management. We focus on high technology firms engaged in CVC investment, and examine how this form of investment relates to product market competition and product differentiation. The paper focuses on the high technology sector as competition is quite intense in this sector, and the speed of product innovation is particularly fast. These features make this an especially interesting laboratory because of the high incentives and high rewards available to firms who can take actions that reduce firm-level competition. We find that CVC investment and competition are strongly related with the expected positive sign. This study uses "TNIC" industry classification data from my recent work with Gordon Phillips, and provides novel findings regarding how even changes in the level of competition

surrounding a firm can impact the level of CVC investment it undertakes, and also the amount of R&D it undertakes, as well as the levels of innovative patenting activity.

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). Finally, he is quite prolific and has at least two papers currently under submission. This is quite impressive for a doctoral candidate in any field.

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 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

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

NBER Entrepreneurship Research Boot Camp 2012

<Research Statement>

My research investigates how knowledge-intensive firms and entrepreneurs spur innovation in rapidly changing technological environments, especially with the help of new channels and emerging platforms. My research goal is to shed light on (i) the implications of corporate venture capital (CVC) investments as a window into new external knowledge in the fast-moving technology space, and (ii) how emerging platforms facilitate the effective transfer of knowledge and technological resources in the entrepreneurial ecosystem that includes entrepreneurs and investors. On the basis of these two broad themes, my current and future research projects can be divided into three specific streams of work. The first stream of research studies how product market competition, based on a novel text-based methodology, influences a firm's CVC investments. The second stream examines the matching of CVC investors and entrepreneurial companies by extending the use of text-based analysis on both the entrepreneur and investor sides. The third stream studies the role of online marketplaces that may help match disperse owners of intellectual property or knowledge (entrepreneurs or inventors) and seekers (investors or licenses).

My current research area examines the relationship between product market competition and CVC investments. The primary emphasis of this research is on the use of new measures of product differentiation based on product descriptions of firm 10-K statements (Hoberg & Phillips, 2010a, b). It has long been viewed that product market competition is a key driver of firms' innovation. Prior studies have generally used existing industry classifications such as SIC or NAICs to measure industry competitiveness. However, these measures have inherent limitations in that they are static. Based on novel dynamic data extracted from firms' 10K statements, we examine how industry structure evolves over time, and how firms react to market dynamism within and across their product markets through CVC investments. This work is being conducted jointly with Prof. Gerard Hoberg (*Finance*) and Prof. Anand Gopal (*Information Systems*).

In my second project, I aim to extend the use of text-based analysis and product market competition by studying the matching of established firms and new ventures. The matching will be conducted based on investor 10K filings and entrepreneur product descriptions provided in entrepreneur business plans. This research is an extension of the first paper where I use text-based analysis to construct a measure of product market competition faced by a focal CVC investor. In this work I aim to estimate the extent to which the product market similarity between the investor and the entrepreneur who may receive funding is instrumental in determining the form and amount of funding. Furthermore, the use of text-based methods will allow me to measure other characteristics of new ventures that may be influential as quality signals, such as founders' characteristics and the entrepreneur's target market. This analysis will also enable me to identify how different CVC firms and VCs respond to different quality signals. Previous research has paid little attention to how different investors react to quality disclosure, based on the content and presentation of disclosed information, especially in the VC context (Dranove & Jin,

2010). My research investigates the matching of investors and entrepreneurs in terms of these differential responses to quality signals.

In my third project, I examine the role of online intermediaries that help match disperse owners and investors. Technological advances make it possible for new knowledge and technologies to be traded online. The shift toward online marketplaces can create many new opportunities. Prior studies suggest that the ability to achieve efficient trade in knowledge often depends on several factors such as the presence of information asymmetries, the threat of knowledge expropriation, and search costs. I believe that online marketplaces are a particularly interesting setting to examine the effect of these factors on online markets for knowledge and technology. Clearly, online marketplaces for "ideas" entail great benefits and challenges: they may reduce search costs but increase risks of expropriation. Along with online P2P lending sites (e.g., Prospers.com) and online marketplaces for private investment (e.g., Sharespost.com), these online marketplaces are another opportunity for entrepreneurs with valuable ideas.

My desire to attend the NBER entrepreneurship boot camp is driven by two primary reasons. First, I believe that entrepreneurship research requires an interdisciplinary approach, exploring possible avenues for collaboration with researchers from multiple functional areas. While I am working with faculty from diverse areas at the University of Maryland, I believe the boot camp will provide me with exposure to a greater diversity of ideas and will help me form research collaborations that will cut across disciplines. 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 several courses in economics, finance and strategy at Maryland and am also working on entrepreneurship topics at the intersection of finance, economics and strategy. I believe I am well-prepared to benefit from the boot camp as well as provide value in the form of research collaboration and student interactions. I hope that my unique combination of interests in technology, innovation, and venture capital finance will contribute to the diversity of the entrepreneurship research community and hope to be accepted to attend the boot camp.

References

Dranove, D., & Jin, G. Z. 2010. Quality Disclosure and Certification: Theory and Practice. ***Journal of Economic Literature***, 48(4): 935-963.

Hoberg, G., & Phillips, G. 2010a. Dynamic Text-based Industry Classifications and Endogeneous Product Differentiation ***University of Maryland Working Paper***.

Hoberg, G., & Phillips, G. 2010b. Product Market Synergies and Competition in Mergers and Acquisitions: A Text-Based Analysis. ***Review of Financial Studies***, 23(10): 3773-3811.

Keongtae Kim

Ph.D. Candidate
Department of Decision, Operations & Information Technologies
Robert H. Smith School of Business, University of Maryland
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EDUCATION	2009-2014(Exp.)	Ph.D., Information Systems, 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

Entrepreneurship, Innovation, Crowdsourcing, IT and Finance Interface, Empirical IO, and Structural Modeling

Publications & Papers Under Review

"Industry-Specific Human Capital and Wages: Evidence from an Emerging Economy " (with Sunil Mithas, Jonathan Whitaker, and Prasanto K. Roy), *Under 2nd round of revision at Information Systems Research.*

"Information Technology and Baumol's "Disease" How Information Technology Influences Productivity of Service Activities" (with Sunil Mithas and Hank Lucas), *Under 1st round of revision at MIS Quarterly.*

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

Working Papers

"Product Market Competition and Corporate Venture Capital Investments: Evidence from the IT industry" (with Anand Gopal and Gerard Hoberg)

"How Does Bond Market View IT Investments of Firms: An Empirical Analysis of Bond Ratings and Yield Spreads" (with Sunil Mithas and Michael Kimbrough)

Research-In-Progress

"The Role of Information and Transparency in Innovation Contests" (with Siva Viswanathan and Il-Horn Hann)

Conference Presentations

"How Does Bond Market View IT Investments of Firms? An Empirical Analysis of Bond Ratings and Yield Spread " (with Sunil Mithas), *International Conference on Information Systems (ICIS)*, 2011, Shanghai, China
"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
"Information Technology and Baumol's "Disease" How Information Technology Influences Productivity of Service Activities" (with Sunil Mithas and Hank Lucas), *Conference on Information Systems and Technology (CIST)*, 2010, Austin, Texas

Teaching Experience

BMGT301: Introduction to Information Systems (Undergraduate), Instructor, University of Maryland, Spring 2012
Introduction to E-Business (MBA Course), Teaching Assistant for Prof. Byungtae Lee, KAIST Business School, Spring 2005

Fellowships and Awards

Smith School of Business Dean's Research Fellowship (2009-)
KAIST Business School Research Fellowship (2004-2005)

Referee Services

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

Served as referee for conferences including the *ICIS* (2010, 2011)

Membership

Association for Information Systems (AIS)

Institute for Operations Research and the Management Science (INFORMS)

Technical Skills

Programming: Stata, R, Mathematica, Matlab

Database: Compustat, CRSP, SDC Platinum, 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+
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	Currently taking
Industrial Organization		(Master)
Advanced Financial Management		(Master)

Statistics

Applied Regression Methods	Wolfgang Jank	A0
Probability and Statistics		(Master)
Statistical Decision Analysis and Forecasting		(Master)
Mathematical Programming		(Master)

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+