March 25th 2014

NBER Entrepreneurship Research Boot Camp:

From my Ph.D. advisor, Thomas Chemmanur, I learned that the NBER entrepreneurship research boot camp is calling for applicants. I am very interested in this, and believe that my educational background and research interest are appropriate for it. Currently, I am a fourth year Ph.D. student in the Finance Department of Boston College.

My primary research area is in empirical corporate and entrepreneurial finance. In particular, I am interested in how corporate human capital and management quality affect firm's investment behavior and subsequent performance. Joint with my Ph.D. advisor, I have finished one paper in this area. For my own research, I am currently working on how different characteristics of firm management team and the firm itself affect firms' innovative output. Going forward, I will still work in this area and try to understand how firm boundaries and capital structure impact firms' innovative output.

Beyond my research, I have gained considerable exposure (although not enough) in the entrepreneurship area from the courses I have taken and the experiences working with my Ph.D. advisor, who has done a lot of research in this area. I am intrigued by entrepreneurial finance and motivated to do research in this area. However, since there is no specific course in my curriculum during Ph.D. (although partially covered under corporate finance theory), I would like to have a comprehensive understanding of the literature in this area. And the NBER entrepreneurship research boot camp provides me this valuable opportunity, which aims to cover the current research topics in this area and equip participants with the required knowledge in this area for doing research.

Enclosed are my curriculum vitae, courses that I have completed during Ph.D. program, and an essay explaining why I want to attend the boot camp. Recommendation letter will be sent under separate cover by my Ph.D. advisor, Thomas Chemmanur. Please do not hesitate to contact me if further information is needed.

Sincerely,

Lei Kong

Department of Finance

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Reference for the recommendation letter writer:

Thomas J. Chemmanur

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EDUCATION

Boston College, Carroll School of Management, USA
- Ph.D. in Finance — 2015 (Expected)

Tsinghua University, School of Economics and Management, China
- Master in Applied Economics, with distinction — 2010

Tsinghua University, School of Economics and Management, China
- Bachelor of Science in Economics — 2008

RESEARCH INTERESTS

Empirical Corporate Finance, Entrepreneurial Finance, Conglomerate, Government Spending

WORKING PAPERS

Human Capital, Management Quality, and Firm Performance
With Thomas J. Chemmanur and Karthik Krishnan
- Accepted for presentation at NBER Productivity Seminar — April, 2014
- Accepted for presentation at Western Finance Association — June, 2014

TEACHING EXPERIENCE

Boston College, Carroll School of Management, USA
- TA, Corporate Finance Theory (MBA) — 2014
- TA, Ph.D. Seminar in Corporate Finance Theory — 2014
- TA, Investment Banking (Undergraduate) — 2013

Tsinghua University, School of Economics and Management, China
- TA, Security Analysis and Portfolio Management (Master) — 2010

HORNORS AND AWARDS

Student Travel Award, American Finance Association (AFA) — 2013
Doctoral Fellowship, Carroll School of Management, Boston College — 2010-Present
Scholarship For Academic Excellence, Tsinghua University — 2005-2009

SKILLS

Computer: STATA, SAS, R, MATLAB
Languages: Mandarin (native), English (fluent)

MISCELLANEOUS

Citizenship: China Gender: Male

Courses Completed During Ph.D. Program:

Courses	Instructors
Microeconomic Theory I	Marvin Kraus and Uzi Segal
Cross Sectional and Panel Econometrics	Stefan Hoderlein
Investments	Jeffery Pontiff
Corporate Finance	Edith Hotchkiss
Microeconomic Theory II	Uzi Segal and Utku Unver
Management of Financial Institutions	Philip Strahan
Derivative and Risk Management	Alan Marcus
Ph.D. Seminar: Financial Econometrics	David Chapman
Doctoral Seminar in Corporate Finance Theory	Thomas Chemmanur
Time Series Econometrics	Zhijie Xiao
Econometric Theory I	Arthur Lewbel
Ph.D. Seminar: Asset Pricing	Pierluigi Balduzzi
Ph.D. Seminar: Advanced Topics in Corporate Finance	Darren Kisgen
Hedge Funds	Alexander Petro
Fixed Income Analysis	Pierluigi Balduzzi
Ph.D. Seminar: Capital Markets	David Chapman
Directed Research in Accounting	Sugata Roychowdhury
Dissertation Topics in Corporate Finance	Thomas Chemmanur

Why I Want to Attend the Boot Camp

When I took the intermediate Macroeconomics course in college, I was inspired by the Solow's growth model, which emphasized the importance of technological progress in the long-run growth of economy. Since then, I have been trying to understand what the fundamental driver of firm productivity is, and the factors that can foster or impede a firm's productivity.

With that thought embedded in my mind, I started the Ph.D. program at Boston College. After I finished the course work in the Ph.D. program, I immediately chose firms' innovation behavior as my research area and indulged myself in working on it. Innovation itself is very intriguing, because of the high risk and high return embedded in it. As a first try, with my Ph.D. advisor, we try to understand what kind of role human capital plays in firm's operating decision and how human capital relates to firms' performance in the long run. The first difficulty we need to overcome is how to measure human capital within a firm, since it seems much harder to measure it than to elaborate on it. Making use of the BoardEx database, we focus on the educational background and prior working experiences of the top managers within a firm. With common factor analysis, we successfully create a measure for firm's human capital quality, and relate it to firms' subsequent performance, such as operating performance, market valuations, and future long-run stock returns. The second difficulty we need to deal with is the endogeneity residing in the relationship between firms' human capital and their performance. The way we try to address this is by using Vietnam War draft deferment rules as an instrument for firms' human capital accumulation. With instrumental variable analysis, we establish causality between a firm's future performance and its human capital quality.

I also want to study the relationship between firms' innovation outputs and how firms finance themselves. Firms that have access to financial markets, although have better financing channels, are subject to various restrictions, which makes the risk less tolerable for investors and in turn makes innovative output less productive. Beyond that, I also want to investigate how firms' organization structure (or boundaries) shapes their innovative outputs. More specifically, I want to study how the hierarchy layout within a

firm (how to alleviate the information asymmetry problems embedded in innovative investment across different divisions) impacts its innovative output.

Although I have gained considerable exposure to the human capital and innovation areas through conducting research in those areas, my knowledge is still very sporadic and not comprehensive. I always wanted to have a systematic understanding of the entrepreneurship area, for example, how small businesses are financed, what the relationship between entrepreneurship and productivity is, and how organization structure affects firm innovation. However, there is no specific course addressing these in our Ph.D. program. When my advisor introduced me to this boot camp, after looking at the topics covered by the boot camp in previous years, I was thrilled, since it meets my requirements perfectly. With the reputable researchers in these areas as instructors, I will be able to obtain a sense about what the whole landscape looks like in these areas, how the research evolved over time, what the current research frontier is, and eventually how to conduct meaningful and valuable research in these areas. I can also learn how to overcome various econometrics and other issues that may arise when conducting research through interacting with various professors and other participants.

In summary, in my opinion the NBER Entrepreneurship Research Boot Camp will benefit me a lot and fulfill my research objective. My educational background and research experience in entrepreneurship also provides me a good foundation to digest and absorb the valuable knowledge that the boot camp attempts to deliver to participants.



BOSTON COLLEGE

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Brett Maranjian
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March 28, 2014

Dear Brett:

I am writing to recommend one of our doctoral students, Lei Kong, for the NBER Entrepreneurship Boot Camp this summer. I am the chairman of Lei's dissertation committee (i.e., his main Ph.D. dissertation advisor or supervisor). Lei is currently in his fourth year in the Boston College Ph.D. program in Finance, and is working on his main dissertation (solo-authored) paper. His dissertation paper focuses on corporate innovation and how a firm's capital structure and firm boundaries affect a firm's innovative output.

I have co-authored one paper with Lei (joint with Karthik Krishnan of Northeastern University) titled, **"Human Capital, Management Quality, and Firm Performance."** In this paper, we make use of a panel data set from the BoardEx database on the quality of the management teams of 4635 firms during 1999 to 2010 to analyze the relationship between the management quality of firms and their long-run operating performance, current market valuations, and future long-run stock returns. We create a management team quality index using common factor analysis from various individual proxies for the quality of a firm's management team, such as management team size, number of managers with MBAs, the number of employment- and education-based connections of the management team, prior experience of the members of the top

management team, and whether these team members have a core specialty. We find that this index is positively related to firms' long-run operating performance, current market valuations, and future long-run stock returns. We overcome hurdles related to endogeneity by using Vietnam War draft deferment rules for graduate education. Individuals graduating from college during this period enrolled into graduate degree programs for reasons unrelated to their intrinsic quality, i.e., to avoid getting drafted. Using this as an instrument, we find a causal relationship between our management quality index and firms' long-run future operating performance, current market valuations, and long-run future stock returns. We also find that firms with higher management quality are characterized by larger levels of investment and investment growth. The relationship of management quality with firm value and performance is stronger for firms in R&D intensive, more competitive, and financially constrained industries, and during periods of recession. This paper has been accepted for presentation at the coming *Western Finance Association* annual meetings in June 2014.

Having worked closely with him, I can say that Lei is an extremely bright scholar, who shows every sign of becoming a top quality researcher in entrepreneurial finance and innovation. I have absolutely no doubt about his ability to bring his various research projects to a successful fruition. He took two of my Ph.D. classes in Corporate Finance, and did exceptionally well in both classes. In the finance Ph. D. comprehensive exam, he did very well, and was awarded a "High Pass." He has made excellent progress as an academic scholar in our Ph.D. program. He also has done several presentations of some of his other academic research in various classes and seminars at Boston College and at conferences outside, and I have found them also to be of very high quality. Lei is expected to be in the job market this coming Fall.

In summary, I would say that Lei Kong is an ideal candidate to benefit from the NBER Entrepreneurship Boot Camp Program, since he is a very smart researcher working in an area which is of tremendous interest to entrepreneurs, venture capitalists, and angels. I therefore feel comfortable in recommending him strongly for NBER Entrepreneurship Boot Camp. If you have any questions about Lei, please feel free to call (Phone: 617 552 3980) or e-mail me (chemmanu@bc.edu).



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