NORTHWESTERN UNIVERSITY
Kellogg
School of Management

Strategy Department

28 March 2015

Recommendation Letter for Linyi Zhang

Dear ERBC Committee:

Linyi Zhang is a second year Ph.D. student at Kellogg and has my highest recommendation for the Boot Camp.

Linyi has been my research assistant over the last several months. I have been universally impressed by her work. She has helped me on three different tasks: (1) performing a literature review about university spinoffs; (2) developing a theoretical model along the lines of Aghion and Tirole (1994); (3) analyzing a series of randomized-controlled trials I have been running in schools. In all cases the quality of her work has been well beyond my ordinary expectations. She is a clear thinker, with nicely developed theoretical and empirical skills. She is also well organized, a clear communicator, and personable. While I'm still getting to know Linyi, at this point I would rate her in at least the top quintile of Kellogg graduate students I have seen.

Linyi has a rich set of ideas for her own research. Several ideas concern entrepreneurship in China, including the role of relational contracts and family networks in financing new ventures. Given the dominant role of relational contracts in emerging markets (and the growing emphasis of development economists on entrepreneurship), her agenda strikes me as quite promising. Other interests include the role of government-sponsored VC, the role of human capital (esp. of managers) in new ventures, and how new business models like Uber and Airbnb translate to relationship-based systems like China.

Linyi would benefit substantially from the Boot Camp, learning the extant entrepreneurship literature with a depth and range of perspectives that will be difficult for her to do at

Northwestern. I think she will also contribute substantially to the discussions and will be a good person for other participants to get to know.

Overall, I have high expectations for Linyi and think she is an excellent candidate.

Please don't hesitate to contact me if I can provide any further assistance.

Sincerely,



Benjamin F. Jones
Gund Family Professor of Entrepreneurship
Kellogg School of Management
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Linyi Zhang
2001 Sheridan Road
Evanston, IL 60201
(224) 307-9687

March 20, 2015

National Bureau of Economics Research
1050 Massachusetts Ave
Cambridge, MA 02138

Dear Members of the Admission Committee,

It is with great enthusiasm that I submit my application for the NBER Entrepreneurship Research Boot Camp, an opportunity I learned about from Professor Ben Jones. As a second year PhD student at Kellogg School of Management, Northwestern University, I am extremely interested in participating in the boot camp. My keen interest in entrepreneurship, my solid economic training and extensive research experience, as well as my local knowledge of on-the-ground Chinese entrepreneurship all make me a competitive candidate.

I obtained both my bachelor and master degrees in economics at Peking University, where I received rigorous economics and mathematical training and gained extensive research experience. Specifically, in my undergraduate years, I conducted research on the efficient allocation of education resources in China and the main causes of the global subprime crisis. These projects earned me a second prize in the Peking University Challenge Cup for Scientific Research and an Award for Excellence in Undergraduate Thesis. During my graduate study, I conducted an empirical analysis on the relationship between land-leasing and income inequality within rural China, funded by the China Development Research Foundation. I presented this work at the Ronald Coase Institute Workshop on institutional analysis and was rated top 3 in terms of interesting ideas, clarity of structure, voice and use of language and role as discussant. These fulfilling research experiences greatly strengthened my ability to spot interesting ideas, formulate testable hypothesis, analyze data and interpret the findings.

More importantly, inspired by the entrepreneurial endeavor of my aunt, I became particularly interested in entrepreneurship; and wrote my master thesis on the impact of kinship networks' on entrepreneurship in rural China, where kinship-based social networks play a dominant role in affecting people's socioeconomic status. Employing two China-specific proxies that measure the closure and density of kinship networks respectively, my coauthors and I find that kinship networks do promote entrepreneurship by easing villagers' financing constraints via private loans. And this effect mainly comes from the more dense kinship networks and is most effective in facilitating small businesses. This paper eventually got published in Journal of Financial Research, a top-tier Chinese economic journal.

Now as a current PhD student at Kellogg, I continue to refine my knowledge and bolster my ability in economic research through doctoral level advanced core courses and field courses, as well as by being a research assistant for Professor Ben Jones. Meanwhile, my interest for entrepreneurship intensified, propelling me to devote my future research to related topics, such as entrepreneurial financing, managerial capital, university-based entrepreneurship, and social interactions and the sharing economy.

Moreover, my connections with Chinese entrepreneurs provide me with a local knowledge of on-the-ground Chinese entrepreneurship; this not only gives me a better understanding of the entrepreneurial reality, but also unveils to me new research perspectives that potentially complement the literature. For instance, in China, local governments assume an active role in entrepreneurial financing and their efficacy needs rigorous evaluation; many Chinese entrepreneurs find it extremely hard to attract and retain talents due to a series of labor market distortions, implying proper institutions are crucial to promoting entrepreneurship.

I am very excited about the opportunity of attending the boot camp, and I am enclosing my curriculum vitae, application essay and letter of recommendation for your consideration. I will gladly provide any other supporting materials upon request, and you can reach me via e-mail: linyi-zhang@kellogg.northwestern.edu. Thank you for your consideration, and I look forward to hearing from you soon.

Sincerely yours,

Linyi Zhang

Reference: Professor Ben Jones

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EDUCATION

Ph.D. in Managerial Economics and Strategy, Kellogg School of Management, Northwestern University, Expected Completion: June 2018

M.A. in Economics, National School of Development, Peking University, 2010-2013
B.A. in Economics, Yuanpei College, Peking University, 2006-2010

RESEARCH FIELDS

Primary field: Entrepreneurship and Innovation
Secondary fields: Industrial Organization, Applied Microeconomics, Development Economics

ACADEMIC EXPERIENCE

2015-current Research Assistant for Prof. Ben Jones, Northwestern University
2014/09-2014/12 Teaching Assistant for Prof. Michael Moore, Northwestern University, Business Strategy (MBA)
2013/06 Teaching Assistant, Beijing Summer School on Socioeconomic Inequality, Peking University
2011/08-2011/12 Research Assistant for Prof. Yang Yao, Peking University
2011/07 Assistant, The Fourth Economic Dialogue Between the National Committee of U.S. and China Relations and the National School of Development, Peking University
2011/04 Research Assistant for the National Fixed-point Survey in Rural China, Anhui
2008/09-2009/06 Participant, Undergraduate Research Project Funded by the President's Fellowship, Peking University

SCHOLARSHIPS, HONORS AND AWARDS

2011-2012 Academic Scholarship, National School of Development, Peking University
2010/07 Outstanding Graduate, Peking University
2009/01 Distinguished Student Award, Zurich Life Insurance Company Limited (HK) Legend Region
2009/02 Global Leadership Scholarship, Suisse International Group and HCIA
2008/05 Second Prize, Challenge Cup for Scientific Research, Peking University
2006-2010 Academic Scholarship, Yuanpei College, Peking University

PROFESSIONAL ACTIVITIES

2012/05 Seminar presenter, Ronald Coase Institute Workshop on Institutional Analysis, Tsinghua University

PUBLICATIONS

YUNNAN GUO, YANG YAO, AND LINYI ZHANG [2013], "Kinship Networks, Financing and Entrepreneurship—Evidence from Rural China", *Journal of Financial Research*, **9**, 136-149.

RESEARCH PAPERS

Does Land-leasing Reduce Income Inequality in Rural China? (**with Yang Yao**)

COURSE LIST:

Game Theory
Microeconomics I-III
Economics of Innovation
Static Decision Models
Dynamic Decision Models
Industrial Organization I-II
Introduction to Econometrics I-II
Economics of the Labor Market
Topics in Formal Political Theory
Theory of Economic Development
Empirical Issues in Business Strategy

Application Essay

Linyi Zhang

It is my strong desire to participate in the NBER Entrepreneurship Research Boot Camp. My keen interest in entrepreneurship, my past endeavor on related research topics, and the amazing potential of the boot camp to better direct my future research all motivate me to apply.

I became interested in entrepreneurship research when I was in my MA program at the National School of Development in Peking University. While refining my knowledge and bolstering my ability in economic research, I also witnessed my aunt building her successful private lending business from scratch. I was fascinated by her vivid descriptions of the business world. And it is through her initial tough time in raising enough capital for her nascent business that I came to realize the severity of entrepreneurs' financing constraints in China, a major obstacle to firm creation. I then turned to relevant literature, finding that entrepreneurship in developing countries is an under-studied significant economic and social phenomenon, one that can be very different from its counterpart in developed countries. For instance, informal and relation-based contracting is much more common in these countries than in developed markets where arms-length transactions are well established; and early-stage entrepreneurial activity lies in more consumer-oriented sectors in emerging markets than in Western economies where there's a high level of business services. Therefore, entrepreneurship in developing countries is a highly open research field that I was thrilled to explore.

As a first attempt of this exploration, I worked jointly with my master's degree advisor and a classmate to examine the impact of kinship networks' on entrepreneurship in rural China, where kinship-based social networks play a dominant role in affecting people's socioeconomic status. My coauthors and I were interested in how such traditional and informal institutions affect entrepreneurship in less developed rural areas, where formal finance is largely absent and financing constraints are a pressing concern for potential entrepreneurs. Employing two China-specific proxies that measure the closure and density of kinship networks respectively, and capitalizing on the National Fixed-point Survey panel data from 2003 to 2008, our estimation indicates that, by easing villagers' financing constraints via private loans, kinship networks increase entrepreneurship in rural China by approximately 5 percentage-points. This effect mainly comes from the more dense kinship networks and is most effective in facilitating small businesses. Such results imply that kinship networks are instrumental in promoting subsistence-driven entrepreneurship and alleviating poverty, but play a rather limited role in generating opportunity-driven entrepreneurship that is more directly related to job creation and sustainable economic growth. Hence, necessary policy interventions are called upon to facilitate opportunity-driven entrepreneurship.

When I joined Kellogg as a PhD student, my passion for research in entrepreneurship intensified and also broadened. Specifically, I plan to pursue my future research along (but not limited to) four lines: 1) **Entrepreneurial financing**. On the one hand, I'm interested in the internal workings of venture capital firms, how they make decisions and how they compete; on the other hand, I'm also intrigued by the role government plays in providing entrepreneurial finance, especially in developing countries. For instance, many Chinese local governments hold start-up competitions and award win-

ners with significant cash prizes. However, no rigorous evaluations of such policy interventions exist and we have no idea whether they're effective in promoting entrepreneurship; even if they do, are they more efficient than private parties such as venture capital? 2)**Managerial capital**. Compared to physical capital, it is equally important in making a business successful. However, our understanding of this particular type of capital is rather limited and I'm curious about a number of interesting questions: What is the impact of managerial capital? What is the underlying mechanism through which it interacts with other inputs in the production function? What is the most productive management practice? Can managerial capital be taught, and how? 3) **University-based entrepreneurship**. While a significant portion of innovation and patenting comes from universities, it is much less the case for innovation-backed entrepreneurship. Such a stark contrast makes one naturally wonder: When do patenting faculty members choose entrepreneurship over other forms of technology transfer? How do academic-led firms perform compared to their professional-led counterparts? How can policy effectively motivate university-based innovation and entrepreneurship? 4) **Social interactions and the sharing economy**. As Uber and Airbnb gained increasing popularity, a new business model based on pooling and sharing resources is thriving. And there's anecdotal evidence suggesting that social interactions are the key. Therefore, I'm particularly interested in the role social interactions play in the sharing economy: What is the precise channel by which they affect business success? How do their impact differ from that on traditional economy? Will a relation-based society, such as China, have an advantage in joining the sharing economy?

Given my past work and future research interests, I'm really excited to participate in the NBER Entrepreneurship Research Boot Camp, which I consider an extraordinary opportunity. To begin with, by attending the boot camp, I'll have the opportunity to learn from professors with whom I share great affinity in research interests, such as Professor John van Reenen, Professor Josh Lerner, Professor Antoinette Schoar, Professor Nick Bloom and Professor Thomas Hellmann. Their work inspired my plan for future research. And as a second year PhD student just embarking on an academic career, their guidance on my potential research topics will be invaluable. Second, from the boot camp, I will be able to develop a thorough understanding of the theoretical underpinnings as well as the empirical evidence in entrepreneurship research, laying the foundation for my future work on related topics. I'll also learn the state of the art techniques and possible data sources to carry out my empirical analysis. And last but not the least, I'll have the great pleasure to meet and learn from many aspiring young scholars with similar interests. Therefore, I sincerely hope that I will have the opportunity to participate in the NBER Entrepreneurship Research Boot Camp and initiate my life-long career in entrepreneurship research.