Takuya Hiraiwa

3300 16th Street, NW, #112, Washington, DC, 20010

January 15, 2022

Dear National Bureau of Economic Research,

I am a Ph.D. student in Strategic Management and Entrepreneurship department at the Robert H. Smith School of Business at the University of Maryland. My research interests include management practices, entrepreneurship, and social network analysis.

I am hereby applying the 2022 NBER Summer Entrepreneurship Research Boot Camp. My contact information and the name of the recommendation letter writer are as follows:

Contact Information:
Takuya Hiraiwa
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Recommender:
Serguey Braguinsky

Sincerely,
Takuya Hiraiwa

Takuya Hiraiwa

Affiliation

Ph.D. student

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Contact Information

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Education

Ph.D. student in Strategic Management & Entrepreneurship, University of Maryland	2021-current
Ph.D. student in Business Administration, Hitotsubashi University	2020-2021
M.A. in Commerce and Management, Hitotsubashi University	2018-2020
B.A. in Commerce and Management, Hitotsubashi University	2014-2018

Research Interests

Industrial Organization (Production Networks, Management Practices, Entrepreneurship), Social Networks, Engineering Human Capital, Innovation

Awards

Hitotsubashi University Award for Student Excellence,	
(GPA ranked 1st in the same grade)	2015
Hitotsubashi University Award for Student Excellence,	
(GPA ranked 1st in the same grade)	2016
Hitotsubashi University Award for Student Excellence,	
(GPA ranked 1st in the same grade)	2017
Hitotsubashi University Award for Student Excellence,	
(Valedictorian of the Department of Commerce)	2018

Naito Akira Memorial Prize (First Prize for Bachelor Thesis)	2018
Naito Akira Memorial Prize (First Prize for Master Thesis)	2020

Current and Completed Ph.D. Courses

Advanced Econometrics I	Hitotsubashi University
Advanced Business Economics	Hitotsubashi University
Advanced Innovation Economics	Hitotsubashi University
Advanced Corporate Finance	Hitotsubashi University
Advanced Macroeconomics	Hitotsubashi University
Advanced Computer Simulation	Hitotsubashi University
Econometrics I	University of Maryland
Econometrics II	University of Maryland
Special Topics in Strategic Management and Entrepreneurship:	
Organizational Theory	University of Maryland
Strategy and Entrepreneurship Research Methods Foundation	University of Maryland
Social Foundations	University of Maryland
Best Methods	University of Maryland
Entrepreneurial Ecosystems	University of Maryland
Organizational Economics	University of Maryland
Historical Methods in Strategy Research	University of Maryland

Essay for the NBER Entrepreneurship Research Boot Camp

My current research focuses on two issues. In the first project I started while attending the doctoral program in Japan, I am investigating how management practices and uncertainty are related to firm growth, performance, and productivity. The project focuses specifically on customer-supplier networks in relation to business uncertainty and management practices. Taking advantage of a unique combined data on inter-firm transaction relationship from Japanese firms and micro-level business expectations, forecasting errors, and management practices from the Japanese Management and Organizational Practices Survey (JP MOPS), I (jointly with my former advisor, Atsushi Ohyama) am analyzing how business expectations are formed in production networks and how they affect firms' performances, both theoretically and empirically.

Second, I have begun a new strand of research after joining the University of Maryland PhD program which focuses on examining the origins of inventors in relation to interpersonal networks during Japan's early industrialization period, using a unique data set on the universe of *all* degreed (formally educated) engineers, matched with patent data to identify inventors among them. Using the detailed data on potential inventors and their interpersonal linkages, including but not limited to birthplace, university alumni and workplace networks, I am trying to elucidate how exposure to established inventors influences the propensity to become inventors and whether such inter-cohort influences promote innovative activities and industrial growth in early developing economy like that in Japan at the time.

Related to my second research strand above and relevant to my application for this boot camp, I would like to examine in depth how interpersonal networks led by talented individuals can drive or dampen entrepreneurship. Interpersonal networks can be beneficial in entrepreneurial activities, since they can facilitate information and knowledge transfer as well as expose potential entrepreneurs to role models, and they can also enable entrepreneurs to have access to reliable human resources. However, I also conjecture that this may not always be the case because of some disadvantages in entrepreneurs relying too much on existing interpersonal connections.

To elaborate a little bit on the last point in the previous paragraph, think about entrepreneurs in a developing country, such as Indian entrepreneurs described in Bloom et al. (2013) and Akcigit et al. (2021). In these countries, it is likely that entrepreneurs at the beginning of industrialization rely heavily on kinship or birthplace networks to expand their firms. As Bloom et al. (2013) suggest, this often leads them to shun outsiders and recruit managers exclusively among family members, as they cannot trust outsiders. As a result, there seems to be limits to growth if entrepreneurs just rely on the existing interpersonal networks. Bloom et al. (2013) argue that for Indian textile firms, "managerial time was constrained by the number of male family members. Non-family members were not trusted

by firm owners with any decision-making power, and as a result, firms did not expand beyond the size that could be managed by close (almost always male) family members."

In contrast, Japan's early industrialization followed a different path. Just like any less developed country, entrepreneurial firms at the start of industrialization also started from kinship or birthplace networks. In particular, in many cases entrepreneurs employed degreed engineers and inventors that emanated from the original family network, and these companies were connected by the shared ownership and top management which came from the same family network. What was different in Japan, however, was that such networks around entrepreneurs expanded over time, moving beyond family and local ties toward including more and more talented individuals. That is, while all those companies may have initially been connected by the shared ownership and top management which came from a family network, they kept adding layers of new people who were not originally connected to the family, and then those people, promoted to key positions, brought even more talented people into the network. This allowed the network to expand to a lot of different industries and grow seemingly without bound. Indeed, many of the Japanese "zaibatsu" represent the outcomes of such networks scaling and growing far beyond those who were included in them originally.

As suggested by my example, it seems that the important source of entrepreneurial firms' growth is not only pre-determined entrepreneurial networks, but also the dynamic expansion of such networks beyond well-established interpersonal linkages. The questions are how and why such new network linkages are formed or not in different contexts, and how such dynamic formation of networks leads to the growth of entrepreneurial firms. Our detailed data allow us to trace the process of network formations and to link it to the emergence of great firms and industrial evolution. I would like to examine these issues in detail in the future.

A big reason why I want to attend the entrepreneurship research boot camp is that I can learn the research topics in the economics of entrepreneurship from the prominent leading professors who have significant contributions in these research areas. I expect that this will give me opportunities to gain significant insights to promote my future research. Second, I also expect that the interactions among attendees who have the same research interests in entrepreneurship will provide us with further opportunities to share ideas and insights and to improve and support each other throughout this boot camp and beyond it.

References

Akcigit, U., Alp, H., & Peters, M. (2021). Lack of selection and limits to delegation: firm dynamics in developing countries. *American Economic Review*, *111*(1), 231-75.

Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., & Roberts, J. (2013). Does management matter? Evidence from India. *Quarterly Journal of Economics*, *128*(1), 1-51.

UNIVERSITY OF MARYLAND
ROBERT H. SMITH SCHOOL OF BUSINESS

To: NBER Entrepreneurship Research Boot Camp 2022 Review Panel

January 18, 2022

Letter of Recommendation for Takuya Hiraiwa

Dear Nick, Josh, David, Antoinette, and Scott

I am writing this letter in support of Takuya Hiraiwa's application to the NBER Entrepreneurship Research Boot Camp 2022. I am his advisor at the Strategy, Management, and Entrepreneurship PhD program at Smith School at the University of Maryland which he joined last fall, after doing a few years of doctoral studies at Hitotsubashi University, with my former student, Atsushi Ohyama as his advisor there.

To put it simply, Takuya is an amazing student. As you can see from his vita, he was the top student at Hitotsubashi for all four years of his undergraduate studies, and he also won the first prizes for both his bachelor and master theses. I first met him in the summer of 2019 during my visit to Hitotsubashi while working with Atsushi Ohyama on what became our most recent joint AER paper. Atsushi introduced Takuya to me at that time and asked me if I could help him advise Takuya about continuing his graduate education in the United States. So even though I have been his formal adviser since Fall 2021, I have actually known Takuya for two and a half years by now.

I initially took it upon myself to help him improve his English. He would regularly send me one-two page Word documents in English on various subjects, from economics to world events to his thoughts about the books he had just read. I would respond to those and also correct his English in the track-change mode, requesting him to work on whatever English mistakes he had made. Right away, he started showing very rapid improvement and in a matter of less than a couple of months, there was no longer almost any need to correct his English, so we could both fully concentrate on the subject matters of our exchange. Through this email exchange, I had my first opportunity to evaluate his intellectual curiosity as well as overall ability, and I was very impressed. My first-hand in-person experience with him since he joined the Maryland PhD program has confirmed that he really has extraordinary ability and is also very coachable (these two things don't always come together but they do in his case).

Today, I would put him on par with Atsushi Ohyama (who has always been my benchmark in measuring my other students) in terms of raw ability, work ethic, and ability to generate original ideas, but he is technically stronger than Atsushi was at the same stage of his career. I could go on, but you will probably see all I need to tell you once you read the essay accompanying his application (and no, I did NOT help him write it, either in terms of substance or in terms of English, although he did ask me to take a quick look at it before he submitted it). I should also mention that not just me but all the faculty here at the Smith School are really impressed by him, so that despite having just joined the program last fall, he has already been recruited as a potential coauthor on two papers worked upon by Brent Goldfarb and Evan Starr (these are separate from the projects he describes in his essay), and Brent also has recently nominated him to be a reviewer for the SMS 42nd Annual Conference in London, a very unusual role for someone who technically, is still a first-year PhD student. In other words, he is much more advanced that his current status in the program might suggest. Given his already attained level and absorption capacity, I have no doubt that he would be able to take full advantage of the Boot Camp this coming summer. I am also confident that he would be able to contribute to the Boot Camp by his intellect, maturity and add to the diversity of backgrounds and ideas generation.

To sum up, I recommend him VERY STRONGLY for the Entrepreneurship Research Boot Camp this year. Please do not hesitate to contact me if you need any further information.

Yours truly,
Serguey



Serguey Braguinsky
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University of Maryland Robert H. Smith School of Business
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