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April 2, 2012

NBER Conference Department
National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138-5398

Dear Sir/Madam:

I am a third year Ph.D. candidate in Finance at the Kellogg School of Management, and I am applying to attend the NBER Entrepreneurship Research Boot Camp (ERBC). The ERBC has been promoted by my faculty and colleagues at Kellogg who have attended past sessions. I would be grateful for the opportunity to participate in this year's session.

My current research is in empirical corporate and public finance, and I believe that entrepreneurial finance offers an exciting laboratory for testing ideas in these fields. I have become acquainted with the institutional details of venture capital and private equity through my teaching responsibilities. These details tend to create more questions than answers, and I am eager to learn more about the current body of research on an industry rife with asymmetric information and moral hazard.

The ERBC will aid me in several ways. Obviously it will expose me to the broad body of work in the field, but it will also provide a critical evaluation of the literature through the eyes of the leaders in the field. Finally, the specialization of all the participants will facilitate an efficient sharing of ideas.

Professor Josh Rauh has sent his recommendation letter separately.

Sincerely,

Kevin Roshak

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Joshua Rauh
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NORTHWESTERN
UNIVERSITY

March 30, 2012

Recommendation for Kevin Roshak to the NBER Entrepreneurship Boot Camp

To Whom It May Concern:

I am writing this letter to given Kevin Roshak my strongest recommendation for admission to the NBER Entrepreneurship Boot Camp.

Kevin is a 3rd year PhD student. His work first came to my attention when he asked me to serve as an advisor for his 2nd year paper, which he was working on jointly with Jonathan Brogaard, a recent graduate of the program who has just started this year at the University of Washington. Kevin was working on measuring the impact of housing tax credits on the demand for housing during the Great Recession. He had obtained comprehensive data on housing transactions in a large number of metropolitan areas and was using empirical techniques to examine the effects of the various Congressional acts that created tax credits for housing during 2008-2009. This approach shares some similarities to the identification strategy used in Mian and Sufi (2010) on the cash for clunkers program for cars, and I believe that if Kevin refines this paper it could be similarly influential.

I was impressed with Kevin's ability to discuss and develop the identification strategy in this paper. He used three cuts of the data for a differences-in-differences-in-differences (DDD) strategy. The first dimension is of course the before-versus-after timing effect of the laws. Second, some cities are impacted by the legislation more than others depending on their level of price level and price stability. Third, the market for smaller and lower priced homes within cities is more affected by the subsidies.

Using this DDD approach, the paper finds that quantity of sales was not affected by the programs in a perceptible way. However, average prices rose by approximately the amount of the major tax credit when it was implemented ($6,500) and then fell by approximately that same amount when the credit expired. The paper itself is still in somewhat rough form as one might expect from a 2nd year graduate student, but I find the analysis sound and quite convincing. The programs do not appear to have done much of anything to the volume of sales. The incidence of their effects was completely in prices. It took a good deal of intellectual maturity to write this paper. I had little or nothing to do with it, and I am sure that Kevin and Jonathan contributed to it equally. There seemed to be consensus from my colleagues that Kevin's was the best of the 2nd year papers this years.

After having been impressed with Kevin's research skills, my colleague Paola Sapienza and I decided to take him on as a TA for the course we teach here on Private Equity and Venture Capital. Kevin has done a great job in this capacity. He rapidly absorbed the material, which consists largely of case studies, and gained a solid understanding of the institutions. He is also extremely diligent as a TA, writing some of the most insightful margin comments in student assignments that I have seen. I relied on him to be the grader for my executive MBA course, which of course requires a high level of knowledge and conscientiousness.

I am delighted that Kevin wants to do research in the broad areas of VC and entrepreneurial finance. He has demonstrated to me that he has all the raw empirical abilities and baseline knowledge of institutions necessary to get started in that area. I predict that he will be a strong candidate on the job market within the next two years, and I think he would get excellent returns from the boot camp.

Please do not hesitate to contact me if you have any further questions.

Best Regards,

Josh Rauh

Kevin Roshak

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EDUCATION

Ph.D., Finance *June 2014 (anticipated)*

Kellogg School of Management – Northwestern University

B.S.B.A, Finance and Economics with Honors *June 2009*
The Ohio State University
Thesis: "A Performance Evaluation of Global Equity Managers," advised by G. Andrew Karolyi
With Distinction in Finance
Minor in Mathematics

RESEARCH INTERESTS

Empirical Corporate Finance, Venture Capital and Entrepreneurial Finance, Public Finance, Executive Compensation

WORKING PAPERS

"The Effectiveness of the 2008-2010 Housing Tax Credits" (with Jonathan Brogaard)

Abstract: Fiscal stimulus has been suggested as a tool to prevent excessive price declines by creating incentives to increase current demand. In 2008 and 2009 the U.S. Congress passed several housing tax credits to encourage activity in the residential real estate market. This paper examines the impact of the different housing tax credits on the demand for housing during the Great Recession. Using city level data we implement a differences - in - differences - in - differences methodology to isolate the impact of the tax credits on the price and quantity of housing transactions. We find that quantity was not perceptibly affected and that prices rose only temporarily. The results show no statistically significant difference in quantity sold during the credits from the periods before and after the credits. However, prices in affected housing markets rose $6,116 more than unaffected markets during the program. This price differential more than reverses, falling $6,470 after the expiration of the final tax credit program (which gave $6,500-8,000 to a broad class of homebuyers). The speed of these price movements is quick. The price rises during the first major tax credit, peaks during the subsequent and broadest credit, then drops back to pre-legislation levels within two months of the credit expiration.

WORKS IN PROGRESS

"The Impact of Intraday Circuit Breakers" (with Jonathan Brogaard)

COMPLETED PHD COURSEWORK

First year: Microeconomics I-III (E. Dekel, M. Siniscalchi, M. Whinston), Macroeconomics I-II (L. Christiano, M. Eichenbaum), Introduction to Applied Econometrics I-II (Y. Qian, E. French), Theoretical Corporate Finance (M. Fishman, A. Krishnamurthy), Seminar in Finance (L. Christiano)

Second year: Industrial Organization I-II (M. Whinston, A. Nevo, R. Porter), Introduction to Financial Theory (J. Parker), Dynamic Asset Pricing Theory (C. Skiadas), Empirical Corporate Finance (P. Sapienza), Econometrics of Financial Markets (R. Jagannathan), Seminar in Finance (J. Eberly, T. Andersen), Topics in Empirical Methods in Finance (A. Bandyopadhyay)

TEACHING EXPERIENCE

Teaching Assistant for FINC 445 – Private Equity and Venture Capital *Fall 2011 - Present*

Paola Sapienza, Joshua Rauh

Learned and graded case studies on the economic relationships between LPs, GPs, and the entrepreneurs and executives of firms seeking financing.

Teaching Assistant for FINC 430 and 441–Corporate Finance *Fall 2010 – Summer 2011*

Jiro Kondo, Annette Vissing-Jorgensen, Phillip Braun

Held office hours and review sessions in addition to grading homeworks and exams on the fundamentals of corporate finance.

HONORS AND FELLOWSHIPS

Kellogg School of Management Fellowship *2009-Present*

REFERENCES

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Perhaps the most intriguing characteristic of entrepreneurial finance is its private nature. Venture capital investments are fraught with problems of moral hazard and information asymmetry—the entrepreneur has more information about the firm than the venture capitalist, who has more information than the limited partners in his/her fund. Further, maintaining the fragile incentives for effort and risk-taking among venture capitalists and entrepreneurs is a daunting task. Economic theory has long understood how these frictions can disrupt markets and prevent profitable trade, yet somehow the market for private equity exists and is credited with some of the largest successes of recent decades. From an academic perspective, I believe that there is much the PE/VC laboratory can teach us about how markets adapt to solve classic failures, and the ERBC would be an excellent way to bring me to this frontier of knowledge.

My current research can broadly be classified as public finance. I try to use careful microeconometrics to determine the effects of changes in government regulations and taxes. My most advanced project examines the homebuyer tax credits of 2008-2010. By looking across cities and separating markets according to price levels, we study the effects of the $6,500-8,000 credits on prices and quantities sold. This project spurred my interest in cities more generally, especially in the cross-section. Cities vary in important ways, and I believe this presents a wealth of variation that can be used to learn about entrepreneurship and the financing of innovation. For example, different cities were hit by the housing bubble in very different ways, potentially offering a source of variation in credit constraints for would-be entrepreneurs (Hurst and Lusardi 2004).

The importance of entrepreneurial finance is one of the few things policy makers agree on, resulting in useful variation of laws as legislators enact different ideas for spurring economic growth. Recently, the "Jumpstart Our Business Startups" (JOBS) Act passed an otherwise divided Congress. The act aims to break down certain institutional frictions that make it difficult for small businesses to raise capital, thereby promoting economic growth. While macroeconomists have had difficulty explaining economic growth, I believe that careful microeconometric studies of the PE/VC industry can offer evidence of the role of 'creative destruction' and financing frictions on growth. The JOBS act may present one such quasi-experiment. Further, the current version of the act makes 'crowdfunding' a potentially non-trivial source of funds (up to $1 million). This change could shed light on the importance of an

entrepreneur's "skin in the game"—previously start-ups would need to raise money from family and friends, providing a large incentive for entrepreneurs to work hard and invest wisely, but also potentially deterring many would-be entrepreneurs. If anonymous investors replace family, we could potentially test the importance of looser (though endogenous) incentives against looser financing constraints. It would also be interesting to see if anonymous investors require evidence of entrepreneurial "skin in the game." Finally, if crowdfunding is an alternative to angel investors, then we could perhaps glean insights about the value of an angel's contacts and credibility. I am interested in studying the legislation in more detail, and the ERBC will expose me to the important unresolved questions that could be tested by the act.

Additionally, I am fortunate to fulfill my departmental work requirement by serving as the teaching assistant for the private equity and venture capital class, taught by Professors Paola Sapienza and Joshua Rauh. This class is case-based and is modeled on Josh Lerner's and Steve Kaplan's PE/VC classes. Through the cases I have learned many of the institutional details of the industry, as well as some of the main academic results. These details are often thought-provoking and inspire questions about the economics of the industry. For example, a striking fact that surfaces is the amount of 'pooling' in the market. Almost all funds have the same fee structure and holding period. There is enough heterogeneity across fund style and focus that this pooling seems unlikely to be driven by technological constraints. Rather, it suggests that signaling is very expensive. An ambitious fund may wish to charge a lower fee and a higher carry, yet if this alienates it from the nearby VC network and disrupts its deal-flow, then performance will suffer (Hochberg, Ljungqvist, and Lu 2007). Further, a fund may wish to signal positive inside information by holding on to a portfolio company longer than usual. To the extent that this interferes with fundraising for the next fund or is prohibited by GPs (perhaps because they do not trust the LP's signal) then a pooling equilibrium could result.

The ERBC will certainly bring me close to the frontier of the field. Beyond simply reading the papers, the conference will provide a valuable distillation of the ideas from the researchers who brought the frontier to its present location. Finally, I anticipate helpful economies of agglomeration. By requiring all participants to read the extensive syllabus beforehand, we will be able to efficiently convey our own ideas and critiques in common terms. The depth of dialogue will be enhanced by our common interests and background.