Florence, Italy. March 7th 2012

Immo Schott
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RE: Call for Applicants - **NBER Entrepreneurship Research Boot Camp** 2012

Dear Selection Committee,

I hereby wish to apply for the NBER Entrepreneurship Research Boot Camp in July 2012**.** I am currently in the 3rd year of my PhD in Economics at the European University Institute in Florence, Italy. My supervisors are Russell Cooper and Jerome Adda.

My PhD thesis focuses on factor reallocation and economies with heterogeneous firms. For my job market paper I study the decline of job creation by startups and young firms during the recent crisis. The accompanying description of my research will provide you with further details on my work.

My recommendation letter will be written by my supervisor **Russel Cooper**.

I look forward to hearing from you soon,

Sincerly,

Immo Schott

ENCL:
- CV
- essay explaining my motivation

European University Institute

DEPARTMENT OF ECONOMICS

April 15, 2012

To Whom It May Concern:

This is a letter of recommendation for **Immo Schott**, a PhD student at the EUI. I am Immo's thesis advisor and know him and his work quite well.

Immo is one of the top PhD students I have met here at the EUI. He is smart, hard-working and in a very easy manner questions everything. He is skilled in theory and in quantitative economics. His skepticism and skills have come together and I expect great things from Immo's research career.

His interests lie in firm dynamics, productivity and financial markets. His first paper studies firm heterogeneity in beliefs about profitability. Some firms (managers) are more optimistic than others. These beliefs along with a distribution of wealth and financial frictions drive the dynamics of firm size and investment activity. Immo relates the implications of the model to evidence on the cyclicality of capital reallocation.

Together we are working on a project that studies the impact of non-convex adjustment costs on productivity. The idea is that these costs create a misallocation of capital across heterogeneous firms. The question is how much productivity is lost due to these adjustment costs. To study this issue, we solve for a dynamic general equilibrium allocation. One interesting result is that, unlike other studies, we find that moments of the cross sectional distribution are important for determinig equilibrium outcomes. The role of these moments is enhanced due to shocks to the cross sectional distribution of profitability and to the adjustment frictions. The paper has both a methodological contribution along with insights on the gains to factor reallocation.

Immo's latest project is to look at the impact of financial factors on labor demand. This project is focused in part on the choice of young and small firms since financial factors generally matter most for these types of firms. Immo's plan is to use a search and matching structure for dynamic labor demand and to introduce financial frictions into that environment. This emphasis on financial factors and the employment growth of young firms seems to be particularly important for understanding the recent slow recovery.

Overall, I recommend Immo without reservation.

Sincerely,



Russell W. Cooper

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This version: March 2012

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Personal Data

Born November 22, 1983 in Kassel (Germany)
German citizen

Education

Since 2009	PhD Candidate in Economics, European University Institute Supervisors: Russell Cooper, Jerome Adda
Spring 2012	Visiting PhD-student at Boston University. Supervisor: Simon Gilchrist
2007 - 2009	Master in Economics, Stockholm University, Sweden
2008 – 2009	Université de Paris I: Panthéon Sorbonne (France) Economics
2004 – 2007	Bachelor of Science in Economics, Humboldt-Universität zu Berlin, Germany
2006 – 2007	Universität Zürich (Switzerland): Economics

Fields of Interest

Macroeconomics
Heterogeneous Agent Economies
Computational Economics

Relevant Positions

2011 - 2012	Research Assistant for Russell Cooper, EUI
2010 - 2011	Teaching Assistant for Aprad Abraham, EUI
2010 - 2011	Teaching Assistant for Nicola Pavoni, EUI
2009	Software Assistant for R

Teaching Experience

March 2012	Lecture on 'Heterogeneity and the Macroeconomy' for the course 'Topics in Applied Dynamic Programming' by Russell Cooper and Jerome Adda
2010 - 2011	Teaching Assistant for Nicola Pavoni, EUI Macroeconomics II for 1st Year PhD students
2010 - 2011	Teaching Assistant for Aprad Abraham, EUI Macroeconomics III for 1st Year PhD students

Conference Participation

2011	'Financial Fragility: Sources and Consequences', EUI. *Discussant*

Languages and Computing Skills

Languages	German (Mother Tongue) English (excellent verbal and written skills) French (very good verbal and good written skills) Italian (good verbal and written skills) Swedish (basic knowledge)
Computing	Matlab, Stata, Mathematica, R, Eviews, Latex

References

Professor Russell Cooper
Department of Economics
European University Insititute
Via della Piazzuola 43, I-50133 Firenze
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Professor Jerome Adda
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NBER Entrepreneurship Research Boot Camp

Immo Schott

March 2012

I am a 3rd year PhD student at the European University Institute (EUI) in Florence, Italy. My supervisor is Russell Cooper. Currently (March to June 2012) I am a visiting scholar at Boston University under the supervision of Simon Gilchrist. This statement is meant to support my application for the NBER Entrepreneurship Research Boot Camp in July 2012. I will shortly summarize my past and ongoing research projects and explain why I would like to attend the boot camp.

My research so far For my PhD thesis I work on heterogeneous agent economies with a focus on investment and financial frictions. Participation in the boot camp would not only increase my general understanding of the driving forces of entrepreneurship, I also expect it to greatly benefit my designated job market paper on heterogeneous firms and credit frictions. I will describe this project in greater detail below. During my PhD I have so far completed my second-year paper where I study the flow of used capital across firms over the business cycle. Using a solution algorithm based on Krusell and Smith (1998) my model generates the empirical findings first established by Eisfeldt and Rampini (2006) - capital reallocation is procyclical and the productivity dispersion of firms is countercyclical.

Currently I am working on a joint paper with Russell Cooper where we study the link between capital reallocation and aggregate productivity. We study conditions when the aggregation result by Thomas (2002) and Gourio and Kashyap (2007) fails to hold and analyze the nature of frictions that can have general equilibrium consequences.

My current project I believe that in the aftermath of the recent financial crisis the implications of credit frictions on firms should have a top research priority. The project I have recently started working on looks at job creation by young firms. My interest in this area is my main motivation to attend the boot camp. For this project I am building a heterogeneous firm model with search and matching plus credit frictions. I want to explain how a decrease in credit can lead to a *jobless recovery*. The project is motivated by the fact that the recent recession resulted in an unprecedented decline in job creation, especially for young firms and startups. Recent studies by Haltiwanger *et*

al. (2010) have shifted the focus away from size, and towards the age of firms as a key characteristic. Whereas startups have been a constant engine of job creation over the last decades, it appears that the recent turndown associated with the financial crisis led to a sharp decrease in the number of startups and job creation by young firms (age 1-3). My goal is to link these facts about firm dynamics with the decrease in credit supply by banks. Data shows that young firms very much depend on external finance, and that loans have been increasingly difficult to obtain as a result of the deteriorations on the credit market. By linking traditional labor market search and matching frictions with financial frictions in a setup of heterogeneous firms I hope to be able to demonstrate that a temporary drop in job creation by young firms because of limited access to credit can have long-lasting effects on the labor market. The intuition for this result lies with the observed 'up-or-out' dynamic of young firms: passing up a chance to grow while a firm is young will decrease employment over the firm's entire life cycle.

I believe that the entrepreneurship boot camp could greatly benefit my ongoing project about young firms and credit frictions. I have started this project only several months ago and could profit a lot from the input received during the lectures as well as discussions with other researchers. The chance to attend classes and discuss with leading experts on entrepreneurship during the workshop is an excellent opportunity for me to advance with my research. I expect to learn a lot about the current challenges of this area of research and what questions are deemed most important to answer. The boot camp would also possibly give me the chance to identify new topics of research that might be interesting for me to work on after my PhD. The study of entrepreneurship and job creation is not only of strong interest for economists, but also for policy makers. I therefore hope to learn more about the possible channels that can boost entrepreneurial activity and hence job creation.

The reading and consequent discussion of a wide array of literature on entrepreneurship offers the possibility to consolidate my knowledge about entrepreneurship in all its facets. My main interest lies on the financing of new business activity, as well as the productivity implications of business entry (or the lack of it). In my research I develop the idea that a financial crisis can have different labor market implications than a demand- or technology driven recession because of different effects on startups and young firms. I believe that my active participation in the boot camp could contribute to the discussions on those topics, while I on the other hand would appreciate further input on my hypothesis, be it in the form of theory or data.

I look forward to hearing from you soon.

References

Eisfeldt, A. L. and Adriano A. Rampini (2006). 'Capital reallocation and liquidity'. *Journal of Monetary Economics* **53**(3), 369–399.

Gourio, F. and Anil K Kashyap (2007). 'Investment spikes: New facts and a general equilibrium exploration'. *Journal of Monetary Economics* **54**(Supplement 1), 1–22.

Haltiwanger, J. C., Ron S. Jarmin and Javier Miranda (2010). 'Who creates jobs? small vs. large vs. young'. *National Bureau of Economic Research Working Paper Series*.

Krusell, P. and Anthony A. Smith (1998). 'Income and wealth heterogeneity in the macroeconomy'. *Journal of Political Economy* **106**(5), 867–896.

Thomas, J. K. (2002). 'Is lumpy investment relevant for the business cycle?'. *Journal of Political Economy* **110**(3), 508–534.

ECONOMICS DEPARTMENT
Gradesheet
Academic Year 2010-11

Name: Immo SCHOTT

Compulsory courses

	Statistics & Econometrics	Macroeconomics	Microeconomics
Block I	A	B	B
Block II	A	B+	A-
Block III	B+	A-	A

Advanced Block I
Structural Vector Autoregressions B
Topics in Applied Dynamic Programming 1 A
Financial Crises A
Advanced Block II
Exogenous and Endogenous Incomplete Markets A+
Topics on Information and Markets A+
Topics in Applied Dynamic Programming 2 A
Second year
Learning in Games and in Macroeconomics A-
Wages and Prices A



Florence, 15 June 2011

Prof. Fernando Vega-Redondo
Chairman Exam Committee

Recommended for admission to the third year: yes