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14 March 2019

David Robinson
Fuqua School of Business, Duke University
100 Fuqua Drive, Durham, NC, USA

Application for NBER Entrepreneurship Research Boot Camp 2019

Dear Professor Robinson,

I would hereby like to apply for the NBER Entrepreneurship Research Boot Camp 2019. Please find enclosed a CV including all PhD courses, a two-page essay explaining why I would like to attend the boot camp, and a letter of recommendation by Thomas Hellmann.

Kind regards,

Alex

ALEXANDER MONTAG

Contact Details Saïd Business School, University of Oxford, Park End Street, Oxford, OX1 1HP, UK
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RESEARCH INTERESTS

Entrepreneurial Finance, Blockchain, Private Equity

EDUCATION

Since 2017	**University of Oxford** DPhil in Financial Economics Supervisors: Thomas Hellmann (principal supervisor), Ludovic Phalippou
2016 – 2017	**University of Cambridge** MPhil in Finance
2015 – 2016	**University of Cambridge** Master of Finance (MFin)
2012 – 2015	**Maastricht University** BSc in International Business (Double-Major in Accounting and Finance)

WORK IN PROGRESS

Foreign investors and domestic company growth: Evidence from US venture capital investments in Sweden (with Thomas Hellmann and Joacim Tag)

Evidence on initial coin offerings (with Anantha Krishna Divakaruni and Thomas Hellmann)

Corporate governance in private firms

TEACHING

2019	**Big Data in Finance: ML & AI applications** (MBA), *TA*, University of Oxford
2018	**Financial Strategy** (Diploma), *tutor*, University of Oxford
2013, 2014	**Quantitative Methods I & II** (BSc), *tutor*, Maastricht University

NON-ACADEMIC EXPERIENCE

2016	**Veritas Investment Management, London, UK** Investment Analyst
2010 – 2012	**Deutsche Bank, Hamburg, Germany** Banking Professional (Apprentice-Programme)

ADDITIONAL INFORMATION

Scholarships	Saïd Business School Foundation
IT	R, Stata, VBA
Interests	Club football, historical novels, city trips

LIST OF PHD COURSES

Name of course	Topics covered
Corporate Finance I	• Capital budgeting • Options and option pricing • Valuation of corporate liabilities and real options • Corporate capital structure and corporate restructuring
Corporate Finance II	• Investment (cash holdings, internal investment, diversification) • Raising capital (equity offerings, PE/VC, pay-out policy, repurchases) • Takeovers • Corporate governance (ownership structure and firm value, boards of directors)
Asset Pricing I	• Utility, risk aversion and basic optimization • Contingent claims and equilibrium in a single-period model • Mean-variance portfolio theory • CAPM, APT and linear factor models • GMM • Equity risk premium
Asset Pricing II	• Discrete time dynamic models • Return predictability and long horizon regressions • Event study analysis • Mutual fund performance • Behavioural models • Hedge funds
Econometrics I	• Cross-sectional data • OLS • Assumptions and tests • Model specification issues and tests
Econometrics II	• Endogeneity • Instrumental variables estimation • Generalised linear models and maximum likelihood estimation • Limited dependent variable models • Panel data models • Count data models • Survival analysis
Fundamentals of Competitive Markets	• Individual choice • Production theory • General equilibrium • Price discrimination • Information economics • Behavioural economics
How to Do Finance	• Short sales, arbitrage, and how to implement an idea • Culture, religion, genetics, and finance • Empirical research on capital structure • Financial history • Incentive contracts, executive compensation and managerial labour markets
Big Data Techniques	• Data mining from web APIs • Web scraping from websites • Text analysis techniques • Image analysis techniques • Data cleaning • Machine learning

Empirical Corporate Finance (Extracurricular)	• Endogeneity and basic identification strategies • Difference estimators • LATE and regression discontinuity design

I have completed all the above listed courses as part of the MPhil in Finance at the University of Cambridge. I was exempted from the first-year PhD coursework at the University of Oxford because it is analogous to the MPhil coursework.

Essay

My research focuses entirely on empirical entrepreneurial finance; I am currently working on two co-authored papers and exploring ideas for a job market paper. In the first project (joint work with Thomas Hellmann and Joacim Tag) we address the long-standing policy question of whether foreign VCs help or hurt the domestic economy. This is important because it informs policy makers' decision of whether to encourage foreign VC investments. Exploiting a rich, granular panel data set comprising the entire universe of private companies in Sweden between 1998 and 2012, we are able to examine the differential effects of US vs. Swedish VC investments on the growth of Swedish companies. Since endogeneity is a central concern (investments of US VCs should not be treated as exogenous), we use an instrumental variable approach by combining two well-established ones. First, we consider supply shocks to the VC industry in the US. From the perspective of Sweden these are exogenous, as investment opportunities in Sweden are unlikely to drive US VC fundraising. This approach is similar to Nanda and Rhodes-Kropf (2013, JFE). Second, we consider local market conditions following Ackerberg and Botticini (2002, JPE). This approach leverages VC supply shocks to local markets, defined by industries and local geographies. We find that US VC investment results in more employment and more sales, not less. US VC investments also increase the likelihood of subsequent funding rounds, but there are no significant effects on the likelihood of exit, nor the probability that an exit involves US acquirers or the US stock market. Overall, we find no evidence that US VC investments weaken the domestic growth of Swedish companies. Based on our results, policy makers should not discourage foreign VC investments.

In a second project (joint work with Anantha Divakaruni and Thomas Hellmann), we are gaining access to proprietary deal-level data to examine the nascent market for initial coin offerings (ICOs). Our main research question focuses on the information dissemination and certification strategies of start-up companies in a nascent investment market. ICOs are still largely unregulated and our results can potentially inform policy makers' decision on how to regulate them. We obtain data from one of the information aggregators that contains both public and some proprietary data. Importantly, our data is not conditioned on fundraising success, as we observe all start-ups that intend to do an ICO (by listing with one of the blockchain information aggregators), including those that either refrain from going ahead with the ICO or are unsuccessful when raising capital. Information aggregators have different listing requirements (e.g., listing fees) and provide different information to investors (e.g., start-up quality assessments). Our detailed data allows us to understand the matching of start-ups and

investors in an unregulated market; specifically, the characteristics of start-ups that strategically list with certain information aggregators, and how this impacts the start-up characteristics that investors pay attention to. We expect higher quality start-ups to list with more stringent information aggregators, to raise capital more successfully, and to have better aftermarket performance. We also expect 'scam' start-ups to have higher chances of raising capital than from traditional financing sources.

I am also exploring potential ideas for a job market paper and it will be extremely valuable to learn from and interact with several leading scholars, and I look forward to possibly discussing my own research ideas. Currently, I am investigating corporate governance in private firms. This topic is under-researched because of lack of data. I plan to fill this gap in the literature by extending the data set on all private firms in Sweden (from the 'foreign VC' project above) with individual-level data on board directors from the Swedish registry that I already have access to. Since directors play an important role in corporate governance by bridging between stakeholders and management, a potential research question would be to examine in how far skill or luck drive directors' long-term career paths, and in how far networks (whom you work with) matter. I could differentiate between 'lucky' and 'skilled' directors by using fixed effects, similar to Bertrand and Schoar (2003, QJE). I would expect 'lucky' directors to experience career boosts in the short-term but to be penalised in the long-term, explained by an information asymmetry story in which the market needs time to learn about a director's skill.

My overall career aspiration is to become a leading entrepreneurial finance scholar. Attending the boot camp would greatly help with achieving this goal. I will hugely benefit from the comprehensive overview of the literature on entrepreneurship. The preparatory reading list will be a helpful commitment device to build a foundational knowledge of the existing literature. Discussions of the articles during the boot camp led by experienced researchers will help to build a deeper understanding of the material, and to identify gaps or under-researched areas. Along with intensive teaching, I am excited about the prospect of meeting leading scholars in the field. I also look forward to building a network with fellow PhD students who are equally enthusiastic about entrepreneurship. Since most articles are co-authored, this is a fantastic setting to meet potential future collaborators. In addition, I highly value the unique chance to visit the NBER Entrepreneurship Working Group meeting to hear about latest trends in entrepreneurship research. Also, having spoken to previous attendees about how the boot camp has benefitted their careers has further encouraged me to apply.

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Entrepreneurship and Innovation
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Thursday, 14 March 2019

Dear David

I would like to give my highest recommendation to Alexander Montag for the NBER Entrepreneurship Research Boot Camp. Alex has the perfect profile: he is in his second year of his PhD, he is fully committed to writing a thesis in entrepreneurship (with a focus on entrepreneurial finance), he is curious and bright, and he would benefit enormously from attending the boot camp, both in terms of content (at Oxford we really don't have any courses coming even close to what the boot camp offers) and network (he is very interactive and will connect well with the group).

Alex came to me early in the first year with a keen interest in exploring ideas around the financing in new ventures. To "onboard" him I offered him an RA position to work on a paper I was working on with Joachim Tag that wasn't doing well. Alex brought some new energy to the project and frankly rescued it from being dropped. He first entirely revamped the data. Then we went through a careful literature search to look for suitable instrumentation strategies. This gave the project a new research direction that we are now pursuing. It became quickly apparent that Alex was not an RA but a co-author. We are now close to having a first draft, thanks to Alex.

With Alex and Anantha (a post-doctoral student of mine) we are writing an entirely new paper on ICOs, based on proprietary access to data from one of the information aggregators. We are currently assembling the data. The core research idea is to exploit some quasi-natural experiments where the information aggregator changed the type of information disclosed about the underlying ICO issuers. Quality of information is clearly a central issue in this nascent market, especially in the light of the obvious risk of scams. Our approach will rest on estimating the effect of introducing more stringent information rules, such as required KYC checks and other types of disclosure policies.

Alex has also begun to identify the topic of his likely job market paper, although the details are yet to be firmed up. He visited my co-author Joacim Tag earlier this year and found a way to access the Swedish census data. At present his ideas revolve around making use of the data on boards of directors in start-ups. His premise is that relatively little is known about start-up boards in general, and that the Swedish data holds promise for a much more detailed and accurate analysis. Attending the boot camp will doubtlessly help Alex to refine these ideas, especially in terms of integrating his ideas more firmly into the broader entrepreneurship literature.

Overall I strongly recommend Alex Montag for the Boot Camp. He is both strong and committed enough to become a leading scholar, and the timing is early enough for him to truly benefit from the boot camp.

Best regards

Thomas Hellmann