Paige A. Clayton

204A Abernethy Hall . CB 3435 . Chapel Hill, NC 27599
(404) 798-0455 . clayton3@live.unc.edu

March 30, 2016

Dear NBER Entrepreneurship Working Group:

I am writing to apply to the 2016 NBER Entrepreneurship Research Boot Camp, which was recommended to me by my advisor, Maryann Feldman. Currently, I am a doctoral student in the Department of Public Policy at the University of North Carolina at Chapel Hill with a focus on entrepreneurship research and training in microeconomics, research design, and econometrics. Participating in the NBER boot camp would help me define my research topic for my dissertation, expand what I have learned about entrepreneurship at UNC, and connect me more deeply to a large group of scholars in my research field.

My research is focused on how entrepreneurial activities bring economic development to local economies. I have worked on multiple research studies related to entrepreneurship, as outlined in my CV, in roles ranging from data collection and interviewing to manuscript preparation. I have also written course papers on entrepreneurial topics such as angel investor tax credits and entrepreneurial ecosystems. I plan to continue my work on entrepreneurial ecosystems for my dissertation.

The pages that follow include my application essay, curriculum vitae, and recommendation letter written by my advisor, Maryann Feldman. I appreciate your consideration and look forward to learning your decision. Attendance at the boot camp would be invaluable to my professional development.

Sincerely,



Paige A. Clayton
Doctoral Student
Department of Public Policy
University of North Carolina at Chapel Hill

Paige A. Clayton

Application Essay
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Before my introduction to the topic as an undergraduate research assistant, I never gave entrepreneurship much thought. Retrospectively, this surprises me since both of my grandfathers were entrepreneurs: one was a serial entrepreneur while the other pursued one successful business for over thirty years in Georgia. I am interested in how entrepreneurial activities bring economic growth and development to local economies. As a student of public policy I see the connection entrepreneurship has to outcomes policymakers and their constituencies care about. I am currently completing my second year at UNC where I have maintained good academic standing. The Public Policy program at UNC has a strong quantitative and applied micro economic orientation. For my dissertation I plan on examining entrepreneurial institutional supports such as policy incentives, accelerators, funding sources, law firms, and other service providers that define a region's entrepreneurial ecosystem. I plan to pursue a tenure track position after my doctoral studies are complete.

Attending the NBER boot camp would help me define a research topic for my dissertation. With the increasingly popularity of using entrepreneurship to drive economic growth, a market for entrepreneurial supports has emerged where a web of private, public, and quasi-public organizations may work to provide entrepreneurs with the tools they need to thrive. While organizations such as incubators and service providers have been studied extensively, the organizational system and the ways organizations work together remains largely unexplored. While finance plays a large role in ecosystems, new firms need other resources than capital and the ways these resources are provided has implications for their ultimate economic returns. Entrepreneurial firms benefit from institutions that provide services such as advice and mentoring, low cost space, and administrative functions.

The boot camp would augment what I have learned about entrepreneurship at UNC. I took Howard Aldrich's organization theory course, which focuses partly on entrepreneurship. There is a paucity of classes focused on the subject across UNC departments. Clearly NBER and the working group believe the challenges of studying the economics and finance of entrepreneurship will best be met by bringing together numerous experts in the field. I have read the work of Hurst, Lerner, Schoar, and Stern. The opportunity to learn from these people directly will be invaluable to my professional advancement. It would deepen my understanding of economics and finance under the auspices of an esteemed research organization. I appreciate the commitment the group takes to bringing young scholars into the fold.

Beyond the knowledge I would gain from attending the boot camp is the ability to network with preeminent scholars, other doctoral students, and potential future collaborators. The boot camp would allow me exposure to a group of people in a setting that would allow for potentially more meaningful exchanges than those I might have attending a research conference. I also seek the exposure to new research topics in new areas of entrepreneurship study that I would gain access to by meeting fellow doctoral students and learning from experienced researchers.

I understand the challenges of working on entrepreneurship empirically, because of the lack of data on new firms and the difficulty acquiring data on private investments, at least enough to provide sufficient power to an empirical analysis. My time as a research assistant under Maryann Feldman and Nichola Lowe has further shown me how difficult it is to develop such data. These difficulties are apparent as our team works to build a database of entrepreneurial firms, founders, and institutional supports in the Research Triangle region of North Carolina (more information here: http://maryannfeldman.web.unc.edu/research-on-research-triangle/). The work has also shown me the rewards of having such large, detailed amounts of data. I will use these data in my dissertation.

The economics and finance of entrepreneurship are fields I am currently interested and involved in, and fields to which I plan to contribute in my career as a researcher. As an undergraduate at the Georgia Institute of Technology, I worked on research projects related to technology commercialization and regional development. It was through these fields that I was introduced to entrepreneurship studies. I have written course papers on angel investors tax credits and the role of entrepreneurial support organizations in entrepreneurial ecosystems. My work on technology commercialization frequently addresses entrepreneurship, because of the popularity of spinning technologies into companies as a potential alternative to licensing. A project I am currently working on analyzes the impact of the 2008 recession on university research output, which includes impacts on spinout activity. This work seeks to connect national trends in finance to regional impacts. Another of my current projects analyzes how startups in a university-affiliated incubator form social network ties.

Ultimately, I care about economic development. I enjoy learning and discovering ways economic development can be enhanced through innovation and entrepreneurship. An increasingly recognized goal for economic development is sustainable and equitable growth. An organizational systems view of entrepreneurship that considers all of its inputs, outputs, and supply chains has the ability to identify and confront the challenges of sustainability and equity. This is the drive behind my research. While I want to uncover new knowledge about these fields, I also want it to be useful.

The NBER boot camp would help me achieve my research and professional goals by providing me the ability to learn new knowledge and skills, to network with premier scholars and fellow doctoral students, and to refine my current knowledge. The boot camp would also place me in a stronger position for the job market. I chose this field because I want a career that will let me be of service to society in a way that uses the talents I have and the skills I continue to expand. The boot camp would allow me to continue this pursuit.

Paige A. Clayton

Curriculum Vitae
204A Abernethy Hall . CB 3435 . Chapel Hill, NC 27599
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EDUCATION

Ph.D. Student in Public Policy, University of North Carolina at Chapel Hill
Expected Graduation: May 2019
Advisor: Maryann Feldman

2014 Bachelor of Science in Public Policy with High Honors, Georgia Institute of Technology
Major GPA: 4.0
Advisor: Shiri Breznitz

FIELDS OF INTEREST

Entrepreneurship and Innovation, Technology Commercialization, Knowledge Transfer, State and Local Economic Development Policy and Institutions, Science and Technology Policy, Research Methods

PUBLICATIONS

Clayton, P.A. 2015. Understanding the public procurement of innovation. [Review of the book *Public Procurement and Innovation: The Role of Institutions,* by Max Rolfstam]. *Science and Public Policy,* 42(5): *738-739*.

BOOK CHAPTERS

Breznitz S. M. and **Clayton, P.A**. 2015. "One City, Three Universities, Multiple Models of Economic Impact*."* In David B. Audretsch and Mary L. Walshok, editors *Oxford Handbook of Local Competitiveness. Oxford University Press.* September 2015.

Feldman, M. P. and **Clayton, P.A**. 2015. "The American Experience in University Technology Transfer." In Shiri M. Breznitz and Henry Etzkowitz, editors *University Technology Transfer: The Globalization of Academic Innovation.* Routledge.

PAPERS NEARING SUBMISSION

Breznitz, S.M., **Clayton, P.A.,** Defazio, D., and K.R. Isett. "Have you been served? The impact of university support on firms' network".

Breznitz, S.M., **Clayton, P.A.** "One city, three universities: The impact of the 2008-2013 financial crisis on research output".

PRESENTATIONS

"Have you been served? The impact of university support on firms' network". Atlanta Conference on Science and Innovation Policy, September 2015.

TEACHING EXPERIENCE

Department of Public Policy, University of North Carolina at Chapel Hill

Teaching Assistant

- PLCY 110: Global Policy Issues (Undergraduate); Fall 2014

RESEARCH EXPERIENCE

2015-2016 Research on the Research Triangle

- *PIs*: Maryann Feldman and Nichola Lowe
- *Funding:* NSF, Kauffman Foundation
- Interviewed over ten bioscience entrepreneurs about their experience founding companies in the Research Triangle region
- Met with over fifteen executives, founders, and leaders of entrepreneurial support organizations to develop contacts and acquire data for a Research Triangle entrepreneurial database
- Developed a system for researching and recording founders' work histories and education backgrounds for the entrepreneurial database
- Trained other researchers on founders research techniques
- Researched R&D anchor firm spawning activity and layoff practices in the Triangle region

2013-2016 The Impacts of University Entrepreneurial Support on Firm Network Formation

- *PI:* Shiri Breznitz
- Examined the impact of the level of service support of entrepreneurial support organizations on startup firm social network tie formation
- Collected data and created a database for over 900 startups' founders, board members, and executives using a variety of databases and Internet searches
- Conducted social network analysis using UCINET software
- Developed manuscript

2013-2016 One City, Three Universities, Multiple Models of Economic Impact

- *PI:* Shiri Breznitz
- Examined the impact of economic crisis on various forms of university research output
- Formulated and conducted online survey to provide data for analysis
- Performed qualitative research on the technology transfer history of three universities, on those universities regional context, and their local economic contributions
- Researched and created database for quantitative analysis using university archives and publicly available financial data
- Developed manuscript

2012 Arts Districts, Universities, and the Rise of Digital Media

- *PI:* Douglas Noonan and Shiri Breznitz
- Built database of universities, digital media schools, and patent assignees to be used in analysis by
- Used Google maps to create map of arts district boundaries across the U.S. to be used for analysis

HONORS, GRANTS, AND AWARDS

2014	Nancy W. Stegman Fellowship in Public Policy, University of North Carolina
2014	Liam Rattray Award, Georgia Institute of Technology
2012	Provost Undergraduate Research Award, Georgia Institute of Technology
2011, 2012	Faculty Honors, Georgia Institute of Technology

PROFESSIONAL SERVICE AND AFFILIATIONS

Member, Association for Public Policy Analysis and Management

PROFESSIONAL EXPERIENCE

2013 **Global Commerce Intern**
Georgia Department of Economic Development (Atlanta, Georgia)

TECHNICAL SKILLS

STATA, UCINET, Zotero, fsQCA, R, and Microsoft Word, Excel, and PowerPoint

PHD COURSEWORK

Current Courses:

- Health Policy & Management 883: Analysis of Categorical Data
- Public Policy 780: Normative Dimensions of Public Policy
- City and Regional Planning 770: Economic Development Policy

Past Courses:

- Health Policy & Management 882: Panel Data Methodology
- Health Policy & Management 881: Linear Regression Models
- Sociology 860: Sociology of Organizations
- Public Policy 801: Research Design
- Public Policy 717: Politics, Institutions and Public Policy I
- Public Policy 716: Politics, Institutions and Public Policy II
- Public Policy 788: Advanced Economic Analysis for Public Policy I
- Public Policy 789: Advanced Economic Analysis for Public Policy II
- Public Policy 700: Math Camp
- Public Policy 710: Public Policy Analysis
- Independent Study on Science, Technology, and Innovation policy
- Public Policy 810: Professional Research Seminar

UNC
COLLEGE OF
ARTS & SCIENCES

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DEPARTMENT OF PUBLIC POLICY

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MARYANN P. FELDMAN
S.K. Heninger Distinguished Professor

March 30, 2016

Letter of Recommendation for Paige Clayton

Dear NBER Entrepreneurship Working Group:

It is my pleasure to write this letter on behalf of Paige Clayton to attend the 2016 NBER Entrepreneurship Research Boot Camp. I would provide the strongest recommendation for Paige. She is well-qualified to attend the program and will benefit greatly from the intensive experience.

Ms. Clayton is currently finishing coursework as a second year doctoral student in the Department of Public Policy at the University of North Carolina at Chapel Hill. She was accepted to the program as my student in 2014. She has a strong academic background and good research experience in entrepreneurship and economic development. Overall, Ms. Clayton is promising researcher, with several interesting projects in the pipeline.

Ms. Clayton was a student in my Public Policy Analysis course and has worked as a research assistant on my Circling the Research Triangle Project since January 2015. As a class member Paige showed a rich understanding of course material and demonstrated creativity and insight in class discussions. So much so that I hired her to work in a number of capacities as my research assistant on projects related to the entrepreneurial development of the Research Triangle region. Paige's contribution to the project benefits from her maturity as an organized, reliable, and industrious researcher. She is proactive in generating solutions to research problems, works well in a team setting and is strong as both a quantitative researcher and in interviewing entrepreneurs. Most impressively, she has compiled data on institutions that provide support for entrepreneurs and conducted interviews with the program organizers and program participants.

Ms. Clayton is interested in pursuing an academic job and she is on track in terms of honing her analytic and writing skills. Our PhD program has a strong microeconomics focus and requires four semesters of econometrics. Paige Clayton is at the top of her cohort and is in the top 5% of graduate students I have worked with or observed over time.

The boot camp would allow her to expand studies in course areas not currently offered at UNC. She will use the boot camp to develop ideas for her dissertation.

Sincerely,



Maryann P. Feldman, Ph.D.
S.K. Heninger Distinguished Professor in Public Policy