March 27, 2020

National Bureau of Economic Research
1050 Massachusetts Avenue
Cambridge, MA 02138

RE: Application for Entrepreneurship Research Boot Camp 2020

To Whom it May Concern:

I am applying for the 2020 Entrepreneurship Research Boot Camp hosted by the National Bureau of Economic Research (NBER). In this packet you will find my complete application. This includes:

- An essay that presents my qualifications, interest in the camp, and current research trajectory.
- My current CV with a listing of all graduate courses taken to date.
- A letter of recommendation from my dissertation chair, Randall Westgren, PhD. Dr. Westgren is the chair of the McQuinn Center for Entrepreneurship.

I am currently in my second year of study in my PhD program. I intend to defend my dissertation topic in Fall of 2020. If I am selected for the NBER Entrepreneurship Research Boot Camp I intend to integrate my learnings from the reading syllabus and in-person instruction in my dissertation research proposal.

Thank you for your both the opportunity to apply and your consideration of my application. I understand the trying nature of these times and I send well wishes to you, your co-workers, your family, and your friends during this unprecedented pandemic. With the timing of the application, I want to reiterate my thankfulness for the opportunity to apply.

Sincerely,

Lucy McGowan

Lucy McGoawn
Research Fellow, McQuinn Center for Entrepreneurship
University of Missouri - Columbia
lmcgowan@mail.missouri.edu
573-819-2690

I am completing my second year of a Ph.D. program in Organizational Economics at the University of Missouri-Columbia. The program is housed in the Division of Applied Social Sciences and I am a research fellow in the McQuinn Center for Entrepreneurial Leadership. In addition to neoclassical microeconomic theory, I have also taken courses in institutional economics, neo-institutional economics, and strategy and entrepreneurship from the Ph.D. program in the Trulaske College of Business. I will defend my dissertation topic during the 2020-21 academic year. The NBER Entrepreneurship Research Boot Camp will offer me the opportunity to connect to current research on the economics of entrepreneurship and, more importantly for me, entrepreneurship finance.

Following an undergraduate degree in food science and an M.S. in applied economics, I joined an engineering start-up that was working on creating a solid renewable fuel. I took on increasing responsibility in this firm, including negotiating and managing research contracts, grants, and commercial loans. I returned to the University of Missouri to complete a PhD in entrepreneurship. My research interest is entrepreneurial firm formation and governance. Specifically, I want to explore how economic rents are appropriated. One particular question that arises from my industry experience and my research to date is how the venture team founding process and subsequent networking with venture capital affects rent appropriation at the level of the firm and among the founding team members. I believe that my research will advance with exposure and connections with experts in the fields of entrepreneurial finance and corporate governance. I look forward to the reading list for the Boot Camp to expand my understanding of these issues.

I am currently teaching a course in the Fundamentals of Entrepreneurship to undergraduates, primarily in Applied Economics and Agribusiness Management. I have full responsibility for course design, delivery, and student assessment. I use course content that gets beyond anecdotal stories, as these students all have microeconomics through the intermediate level, managerial economics, and at least a first course in corporate finance. While the level of content in the Boot Camp will be too advanced for these students, I hope that a secondary benefit from my participation will be to extract some subject matter topics to enhance the content and rigor of the course. Moreover, I hope to teach at the graduate level upon completion of my doctoral program.

Currently, my research direction has two primary foci. First, I intend to utilize agent-based modeling (ABM) to create a model of firm formation, rent generation, and rent appropriation in an uncertain environment by boundedly rational managers. This research is an extension of my master thesis that focused on entrepreneurial firm formation. In the thesis, I modeled the search process for diverse venture team members with the capacity for, and commitment to, collective intentionality. The next steps in extending the agent-based of my thesis is to model the competitive landscape by making explicit what the strategic entrepreneurship literature calls "the

opportunity" and then modeling the firms' exploitation of that competitive space as value or rent capture, that is then appropriated to members of the venture. I intend to formalize through agent-based modeling what has been limited to verbal accounts and to add Knightian uncertainty.

My second focus is on increasing my skills in surveying, collection, and analysis for primary data on entrepreneurial firms. To this end, I am working on a research project to understand how entrepreneurial groups perceive themselves and are perceived and understood by their current and potential customers. This research is funded by the National Institute of Food and Agriculture's Foundational Research Initiative for 2020-2023. I will examine how SMEs in the US wine and artisanal cheese industries create and project identities for their firms and products and how these identities are perceived and valued by buyers.

My research and industry experience are based in the agri-food sector and rural communities. My research projects have focused on entrepreneurial firms in rural settings that are members of the agri-food system. My future research interest remains in rural entrepreneurship. Currently the low supply of high-paying jobs fuels the migration of young talent from rural to urban areas as well as decreases the likelihood that those who leave the community for higher education will ever return. However, the literature shows entrepreneurship is an effective driver of rural development. My research questions include: What policy instruments and sectoral investments can reverse the outmigration? To what extent can financial intermediation -- both equity and debt -- promote rural start-ups and small and medium enterprise growth? Are there substantive differences between rural and urban "opportunities" and how they might be profitably exploited?

Lucy McGowan

CURRICULUM VITAE

University of Missouri - Columbia
College of Agriculture, Food, and Natural Resources
142 Mumford Hall

573-819-2690
lmcgowan@mail.missouri.edu
Columbia, MO 65211

Summary: I am an optimistic entrepreneurship enthusiast, researching and teaching entrepreneurship at the University of Missouri. I have extensive experience in the research and development of start-up ventures, specifically in rural communities. My research interest is entrepreneurial firm formation and governance.

Academic History:

Bachelor of Science, Food Science, with Honors — December 2012
University of Missouri - Columbia

Master of Science, Agricultural & Applied Economics — May 2016
Masters Topic: A Study of Collective Entrepreneurship Using Agent-Based Modeling
University of Missouri - Columbia

Doctorate of Philosophy, Agricultural & Applied Economics — Expected: May 2022
Dissertation Chair: Dr. Randall Westgren
University of Missouri - Columbia

Research Experience:

University of Missouri - Columbia: *McQuinn Center for Entrepreneurial Leadership*, Graduate Research Fellow: I have completed research on entrepreneurial group structure, formation, and ontology using Agent-Based Modeling. In addition, I have examined the market feasibility of cooperative tourism, with a focus on the value that existing social networks, within the respective industry, bring to the firm's successful generation of entrepreneurial rents. Currently, I am researching entrepreneurial groups: (1) how do they perceive themselves? (2) how are they perceived by current or potential customers?

University of Missouri - Columbia, *Office of Technology Management and Industry Relations*, Research Associate: I supported the licensing manager in the market validation of University of Missouri produced technology. I produced summary reports that presented a cost benefit analysis of the value of the market opportunity for all innovation produced in the University.

Professional Experience:

Mills Legacy, LLC: *January 2014 - Current, Founder / Owner:* I established a business to engage with small ventures who have a long term vision for their business, and whose founding members act entrepreneurially. I provide my clients with support during their business formation period by drafting governance, developing financial statements and chart of accounts, and engaging necessary third parties to support the founder.

Enginuity Worldwide, LLC: *August 2013 - March 2018, Founder, Business Analyst*: I was the direct report to founder and CEO. I completed and maintained multiple business plans, cases, and models that drove business development. I provided key market data for informed business decisions. I was the point of contact for all financial contracts and coordinated all member communication. I acted as business and office manager, to support the accomplishment of company strategy.

Farmland Foods, INC: *January 2012 - July 2013, Consumer Research Analyst:* I was the first hire in the newly formed consumer insights department. I reviewed and summarized all incoming research for distribution to the sales and marketing teams. I conducted and managed sensory tests, consumer focus groups, and customer surveys for consumer segmentation research and product validation.

Teaching Experience:

University of Missouri - Columbia: College of Agriculture, Food, and Natural Resources

- *Primary Lecturer:*
  Agribusiness Management (ABM) 3283: Fundamentals of Entrepreneurship
- *Guest Lecturer*:
  Finance (FINANC) 7210: Microeconomics for Business
  ABM 1042: Introduction to Macroeconomics
- *Graduate Research Assistant*:
  ABM 4240: Intermediate Microeconomics
  FINANC 7210: Microeconomics for Business
  ABM 3283: Fundamentals of Entrepreneurship

Conference Presentations:

McGowan L. M., Westgren R. E. *A Study of Group Formation using Agent-Based Modeling*, Social Simulation Conference, Mainz, Germany, September 2019.

Graduate Course History:

Agricultural & Applied Economics 8010: Research Methodology
Agricultural & Applied Economics 8610: Collective Action
Agricultural & Applied Economics 9040: Advanced Micro Theory & Applications 1
Agricultural & Applied Economics 8050: Economics of Institutions and Organizations
Agricultural & Applied Economics 8520: Economics of Transactions and Contracts

Agricultural & Applied Economics 9042: Advanced Micro Theory & Applications 2
Agricultural & Applied Economics 9510: Organizational Economics
Agricultural & Applied Economics 8085: System Dynamics
Economics 7371: Introductory Econometrics
Economics 7351: Intermediate Microeconomics
Economics 7353: Intermediate Macroeconomics
Economics 7340: Introduction to Game Theory
Management 8200: Commercialization of Life Science Innovation
Management 9080: Seminar in Entrepreneurship
Management 9087: Seminar in Managerial Cognition
Psychology 9765: Cluster and Network Analysis

UNIVERSITY *of* MISSOURI

MCQUINN CHAIR IN ENTREPRENEURIAL LEADERSHIP

DIVISION OF APPLIED SOCIAL SCIENCES

25 March 2020

Subject: Recommendation for Lucy McGowan for the
2020 NBER Entrepreneurship Research Boot Camp

Dear NBER Entrepreneurship Working Group:

It is a pleasure for me to recommend Lucy McGowan to the 2020 ERBC. I have known Ms. McGowan since midway through her Bachelor program in biochemistry and food science. She was searching for a research internship on campus and I agreed to be her mentor on a project to study the number and types of network ties that existed in the Missouri wine industry. Lucy taught herself the UCINET software, contacted and met the winery owners, collected the data, and produced the first network structure for the industry nodes. After completing her degree and working for the Office of Technology Transfer as an intern and for Farmland Foods as a new product development specialist, she returned to the University of Missouri to complete the MS in Agricultural and Applied Economics. I sought her out among the entering graduate students to work on a project in the McQuinn Center for Entrepreneurial Leadership to study collective entrepreneurship. Armed with some conceptual work in organizational sociology and some sophisticated models of group action from social ontology, Ms. McGowan built an agent-based model of founding team formation. I sent her to Leipzig for an intensive course in ABM using NetLogo, taught by ecologists.

After completing the MS, Lucy McGowan went to work for an engineering startup that was building processes for enrobing coal with biomass to enhance energy efficiency in different applications. She returned to my office two years ago to discuss the possibility of pursuing a PhD program in entrepreneurship. I jumped at the opportunity for her to rejoin the McQuinn Center as we had two external grants on collective entrepreneurship in the agri-food sector underway. Both grant proposals drew on her MS thesis. Lucy has completed the bulk of her required coursework in organizational economics, passed the first year qualifiers last May, and contributed to the completion of the two external grants.

Lucy has also taken over responsibility for the 3000-level (primarily juniors) Fundamentals of Entrepreneurship course, which I had taught until three years ago. Her first course evaluations from Fall 2019 were outstanding and she will continue with responsibility for the course for the next two years. Along the way, she has developed an interest in rural entrepreneurship, both as a tool for economic development and as a vocational choice for students she has taught. Many come from profoundly rural counties in Missouri and they seek to return to those areas for career-building. As a "small town girl" herself, Lucy McGowan wants some of her training and PhD program

141 Mumford Hall Columbia, MO 65211

experience tied to regional economic development. It is my hope that part of the ERBC readings and discussions will aid in this quest.

I also support Ms. McGowan's attendance at the boot camp so that she can see the current research threads that are outside her program courses. We do not offer an economics of entrepreneurship course, so she is pursuing seminar courses in the B-School and in neo-institutional economics. The coursework will support a dissertation on the generation and appropriation of entrepreneurial rents. I have a preference for formal modeling and for simulation modeling, particularly ABM. But I am sure that the intensity and breadth of the boot camp will support her professional development in ways that cannot be duplicated on campus and in the McQuinn Center.

I recommend Lucy McGowan for her character and her promise as a scholar of entrepreneurship. She is highly self-directed. She is fearless. That is, she routinely takes on learning that many graduate students would not: network modeling, agent-based modeling, collective action (sociology, economics, and philosophy), theories of power in organizations, and contract theory. Of the dozen PhD students that I have supervised, she has the greatest thirst for scholarship across disciplinary boundaries. Moreover, she has never missed an external or a self-imposed deadline for completing research tasks. Finally, I have the utmost respect for her personal and professional ethics.

For these reasons, I believe that Lucy McGowan will thrive in the boot camp and that you will find her an excellent contributor to the group. I believe she will develop into the kind of scholar in both the research and teaching of entrepreneurship that will reflect well on the ERBC. I have no hesitation whatever in recommending her.

I look forward to learning where the boot camp will lead her in preparation for comprehensive exams and her dissertation topic defense in the next academic year. Thank you for considering her application.

Sincerely,

R. E. Westgren

Randall E. Westgren
Professor and McQuinn Chair