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November 26, 2014

Productivity, Innovation, and Entrepreneurship Program
National Bureau of Economic Research
1050 Massachusetts Ave.
Cambridge, MA 02138

Dear NBER Fellowship Search Committee:

I am applying for the NBER Innovation Policy Fellowship at the National Bureau of Economic Research. I am currently a Ph.D. Candidate in the Department of Public Policy at the University of North Carolina at Chapel Hill and scheduled to defend my dissertation by January 2015. My research focuses on public economics as it relates to innovation, entrepreneurship and economic development.

My dissertation analyzes the impact of state government R&D investments on small business innovation. The first paper identifies and classifies the portfolio of state programs designed to enhance the federal Small Business Innovation Research (SBIR) program. It then employs a diffusion model to assess the antecedent factors associated with states adopting and maintaining an SBIR State Match program, which provides matching funds to the pool of federal Phase I recipients competing for the larger federal Phase II award. The second paper examines the efficacy of the SBIR State Match program through a state-level fixed effects model. The results indicate that the matching funds offer a dual advantage for National Science Foundation participants; these include securing the follow on federal Phase II funding and incentivizing firms to apply for the Phase I program. The third paper employs a difference-in-difference research design, examining outcomes for projects in neighboring states with and without the program. Focusing on SBIR State Match activity for two states – North Carolina and Kentucky – this paper's analysis estimates the marginal effect of the matching funds on Phase II success rates by taking into account variations in the size of the state match.

It is well understood that innovation is a crucial driver of economic growth; this serves as a critical precursor for increasing societal welfare in terms of enhancing prosperity and quality of life. My dissertation research is an effort toward determining what institutions and reward structures are most efficient at producing innovation in a particular context. A sizeable literature has examined federal investment in R&D, but there are disproportionately few studies evaluating the growing number of state government R&D initiatives. This is an oversight because states are valuable policy actors with vested interests in R&D given that the agglomeration economies produced through innovative activity are spatially proximate. My dissertation's examination of the SBIR State Match program in relation to the federal program offers the unique opportunity to

empirically analyze the effects of marginal changes in R&D investment, which has notable policy implications at both the state and federal government levels. In addition, this research offers a new contribution by assessing the impact of R&D investments at the research project level rather than the firm.

In my future research, I continue to investigate issues surrounding R&D, economic development and non-traditional governance structures that comprise the multilevel policy mix. One project will extend the discussion around whether the federal government complements or substitutes private investment to consider a greater range of external sources of support for university R&D – notably sources of state & local and non-profit university R&D investment. For another project, I plan to examine the effect of R&D investments in emerging scholars engaged in basic research. To advance this literature, I intend to examine R&D investments directed towards graduate students rather than more senior scholars. In addition, I intend to build upon my recent work with the U.S. Economic Development Administration where I worked with a team of researchers to put forth a new theoretical model for defining and measuring economic development. Specifically, I am interested in applying the new measures to examine capacity outcomes for innovative cluster-based activity.

During my graduate training, I have had several opportunities to develop skills in the classroom. My approach to teaching and learning reflects my undergraduate education at Reed College, where emphasis was placed on critical thought, creativity, and scholarly practice. In the summer of 2014 I instructed Policy Innovation & Analysis, an undergraduate core course for Public Policy majors, in which students write a policy brief defining a policy problem, reviewing the literature, evaluating alternatives, and making a recommendation. By framing this assignment as an opportunity for students to demonstrate their research capacity to policymakers and prospective employers, I catalyzed them to produce excellent, original work. As a Graduate Research Consultant for undergraduates and as a teaching assistant for an advanced econometrics graduate course, I applied the same approach in working one on one with over a hundred students on their research projects. Teaching provides an opportunity for the instructor to re-engage with the core concepts and methods of the field. I value these experiences; however, I am eager to concentrate on my research before starting an academic position.

Outside of research and teaching, I have worked with a team of emerging scholars to launch the *Journal of Science Policy and Governance*, an online journal that provides a forum for students and emerging scholars to publish policy relevant work. I served as Associate Editor from 2010 – 2014 and Chief Financial Officer overseeing outreach and development in 2013.

The National Bureau of Economic Research, as I understand it, is a rigorous environment that embodies academic excellence and collegiality and places precedence on research focused on entrepreneurship and innovation. This directly aligns with my own research and interests. My professional background working in the public sector, formal training in Public Policy analysis, and research interests related to public innovation and entrepreneurship make me a strong candidate for this position. My initial research interest in these topics stem from my experience working at the National Science Foundation's Social and Economic Sciences Directorate, and over time has extended to the more fundamental question that considers the intersection of institutional organization and the production of new scientific knowledge and economic

growth. I approach this question by examining the role of public institutions in early-stage R&D activity.

I have extensive prior experience working in interdisciplinary settings in addition to working collaboratively with policy professionals. I truly enjoy being a part of a collaborative team. While it is usually a research question that brings scholars and policy professionals together, I believe it is the team's diversity of discipline and expertise that accelerates the project forward. At one level, engaging in scholarship is about exploring new research questions and paradigms, but more fundamentally, I view it as an opportunity to be a part of a diverse intellectual community.

I am enclosing the following materials as part of this application:

- Curriculum vitae
- 3-page research proposal

Please let me know if you would like letters of recommendation. More information on my research is available on my webpage: www.laurenlanahan.com. I will be attending the annual American Economic Association meeting in Boston on January 3 – 5 and would welcome the opportunity to meet with you. For additional information or to schedule an interview, please contact me either via email at llanahan@email.unc.edu or by phone at (919) 608-7196. I look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lauren Lanahan".

Lauren Lanahan
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