Statement of Proposal
Mahdi Eghbali
PhD. Candidate in Economics
The University of Iowa
Henry B. Tippie College of Business

The Efficiency of Federal Funds

Funding programs for entrepreneurs are implemented by governments such as the USA to assist entrepreneurs in raising capital and motivate them to commercialize their startups which, eventually, will contribute to the economy by creating jobs and generating revenue. For instance, Small Business Administration (SBA) guaranteed loan programs (i.e. 7(a) and 504) facilitate access to financing for entrepreneurs while bridging the information asymmetry gap. These mutual loan guarantee programs not only increase the incentive for banks to lending but also share the risk among the public authority, entrepreneurs, and lenders. The question is whether those strategies and policies to finance startups are efficient and effective enough to boost the economy?

This question motivated me since I saw that some funded companies went out of business soon after receiving federal funds. Many economists believe that direct government support of small businesses can assist countries by providing social benefits and accelerating economic growth and development. Some believe that small businesses are more profitable and productive than large businesses (Snodgrass and Biggs, 1996). By contrast, some studies document that small-scale businesses are neither more labor intensive nor better at creating jobs than large-scale companies (Mazum, 1987). Moreover, the net job creation of small businesses is not significant and is often less than the large firms. Although entrepreneurs can benefit an economy, a majority of new businesses have to raise capital in order to implement their new ideas. Nanda and Kerr (2009) emphasize capital as the biggest challenge for entrepreneurs to start and grow their startups. This difficulty might adversely affect the commercialization of new and innovative ideas (Nanda, 2009).

Generally speaking, entrepreneurs have several ways to finance their startups such as: personal wealth, borrowing, venture capital firms, angel investors, and public funds. If venture capitalists find it too risky to invest in startups, they demand more equity in exchange for their risky investment. On the other hand, while entrepreneurs suffer from lack of collateral and credit history, banks and other financial institutes request collateral and charge interest on their loans according to credit score. Federal grants are the most generous funding source for entrepreneurs because they usually do not give up equity and entrepreneurs are not required to repay grants. I assume startups apply for funds since they see the potential to grow and, at the same time, suffer from financial constraints. When an entrepreneur applies for and receives federal funds we assume other financial sources, such as venture capitals, angel investors, friends and family lending, or

bank loans, were not available or accessible. Thus, federal funds are assumed to be the only external financial support available.

While the USA government has 57 departments and agencies and each of them has their own programs for entrepreneurs, I decided to investigate Small Business Administration (SBA) and Small Business Innovation Research (SBIR) programs. In principle, SBIR funds are targeted toward innovative startups, which could not get financing due to the uncertainty surrounding their innovation's outcomes. The longitudinal data sets of funded companies from 1983 to 2017 are available and collected from the SBA and SBIR websites. The first step includes matching the data sets with ReferenceUSA and Dun & Bradstreet (D&B) to acquire financial information of private companies and with Compustat for public companies. I consider the number of employees and revenue as variables to measure the contribution to the economy while controlling for other variables such as: amount of funds received, executive manager gender, year founded, credit score, location of business, budget allocation (i.e. accounting, advertising, insurance, etc.), Standard Industrial Classification (SIC) code, etc. This matching process will categorize funded companies into companies which are still in business (as of 2017) and companies which are out of market because of one of the following reasons: shutting down due to low revenue (voluntarily market exit), exiting when a new product came to the market (forced to exit), bankruptcy, mergers or acquisitions, or the company went public. The first three reasons are indistinguishable in the data, but Thomson Reuters (under Compustat) and SDC terminal data sources will show whether the exit from market was due to mergers or acquisition. Moreover, to track the private companies that went public, the data set will be matched with Compustat-Capital IQ.

As for the control group, access to the Longitudinal Business Database (LBD) at the CPRDC is necessary. The control group will be the registered businesses in the sample period with total number of employees less than 10. This will allow a reasonable comparison between funded companies with the rest of small businesses in the economy. After matching, collecting, and cleansing the target data sets, I plan to apply both Difference-in-Difference estimation and Regression Discontinuity models to measure the return on federal funds. Moreover, an experimental study will investigate the factors of success and failure among funded companies. The goal is to evaluate whether government policies to provide straight funding for entrepreneurs are effective? If so, what is the return to federal funds?

This research will contribute and enrich the Census Bureau Database by providing the detailed financial information on federally funded companies from other sources such as ReferenceUSA and Dun & Bradstreet (D&B). If awarded, $600 will be allocated to purchase a sample data set from ReferenceUSA and Dun & Bradstreet (D&B). Moreover, to complete the matching process, some technical programming is required and need to be financed up to $400. So, I'm requesting total amount of $1000. In addition, to cover other expenses, I have been considering applying for Kauffman Foundation Research grant as well as National Science Foundation (NSF) economics research grant. My goal is to submit the final proposal by the end of 2018.