# Persistence and change of regional entrepreneurial activity: Evidence from the United States

Haifeng Qian, Associate Professor
School of Planning and Public Affairs, University of Iowa
haifeng-qian@uiowa.edu

This research focuses on entrepreneurship in cities from a historic perspective. In particular, we study whether cities in the United States (US) that were more entrepreneurial decades ago have remained so in recent years, and if not, what are the regional sources that underpin such changes. Evidence exists in the European context that regions with historically high entrepreneurial activity often kept their advantage in recent years; still, some regions became more entrepreneurial, while some others turned less so (Andersson and Koster, 2011; Fotopoulos and Storey, 2017; Fritsch and Kublina, 2019). The US has a different history of entrepreneurship, and similar research has not been conducted in the US context. To fill this gap, this research examines the changes of the ranking of US metropolitan statistical areas (MSAs) in terms of entrepreneurial activity between 1980 and 2019, measured by both new firm formation and self-employment rates. In particular, we will identify the group of US metropolitan areas that have leapfrogged in entrepreneurial activity during these four decades. Further, we will identify initial regional conditions or factors that predict such changes based on multivariate regression analysis. As building entrepreneurial ecosystems has been widely adopted as an economic development strategy across the US cities, this research informs regional policy makers the challenges and courses of action that can help their cities develop entrepreneurial competitive advantage in the long term.

Preliminary descriptive statistical analysis based on US census data shows that regional entrepreneurship is temporally persistent in the US, just as in other countries (Fotopoulos and Storey, 2017; Fritsch and Kublina, 2019), in terms of both the self-employment rate (measured by the number of non-agricultural self-employed workers per 1,000 labor force) and the business startup rate (measured by number of new business establishments per 1,000 employment). The 1980 self-employment rate is highly correlated with the 2015-19 self-employment rate across 377 metropolitan areas (Pearson coefficient: 0.749; Spearman rank coefficient: 0.673). Such correlation is even stronger for the startup rate measure (Pearson coefficient: 0.812; Spearman rank coefficient: 0.817).

Despite the high persistence, some metropolitan areas have significantly leapfrogged in their national ranks. Among the top 20 leapfrogging MSAs by gains in the self-employment rate ranking between 1980 and 2015-19 include large metro areas such as New Orleans, Chicago, Las Vegas, Washington DC, Charlotte, New York, Atlanta, Baltimore, and Detroit. These cities moved up in the national ranking at least by 150 spots. Similarly, large metro areas such as Charlotte, St. Louis, Chicago, New York, and Los Angeles are among the top 10 leapfrogging MSAs by gains in the startup rate ranking between 1978-82 and 2015-19. These results show that large cities were in advantageous positions in improving their entrepreneurial performance during the past for decades in the US.
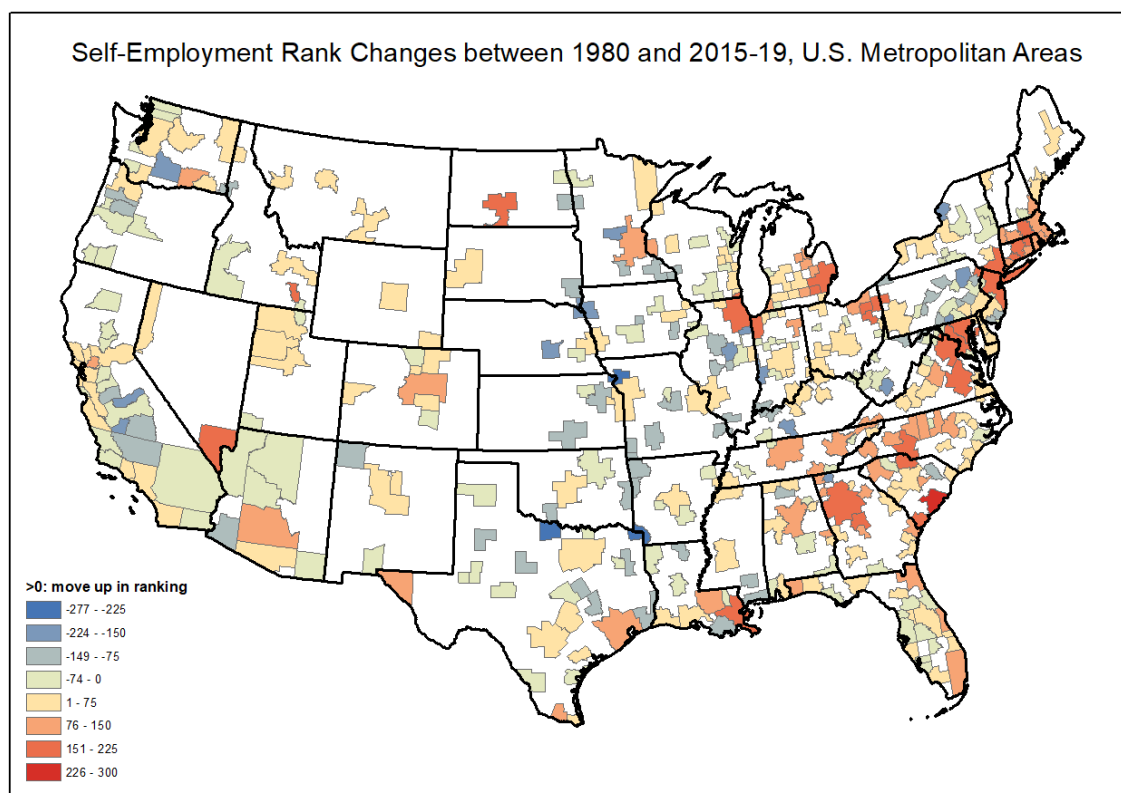
Map 1: Self-employment rank changes between 1980 and 2015-19, U.S. metropolitan areas
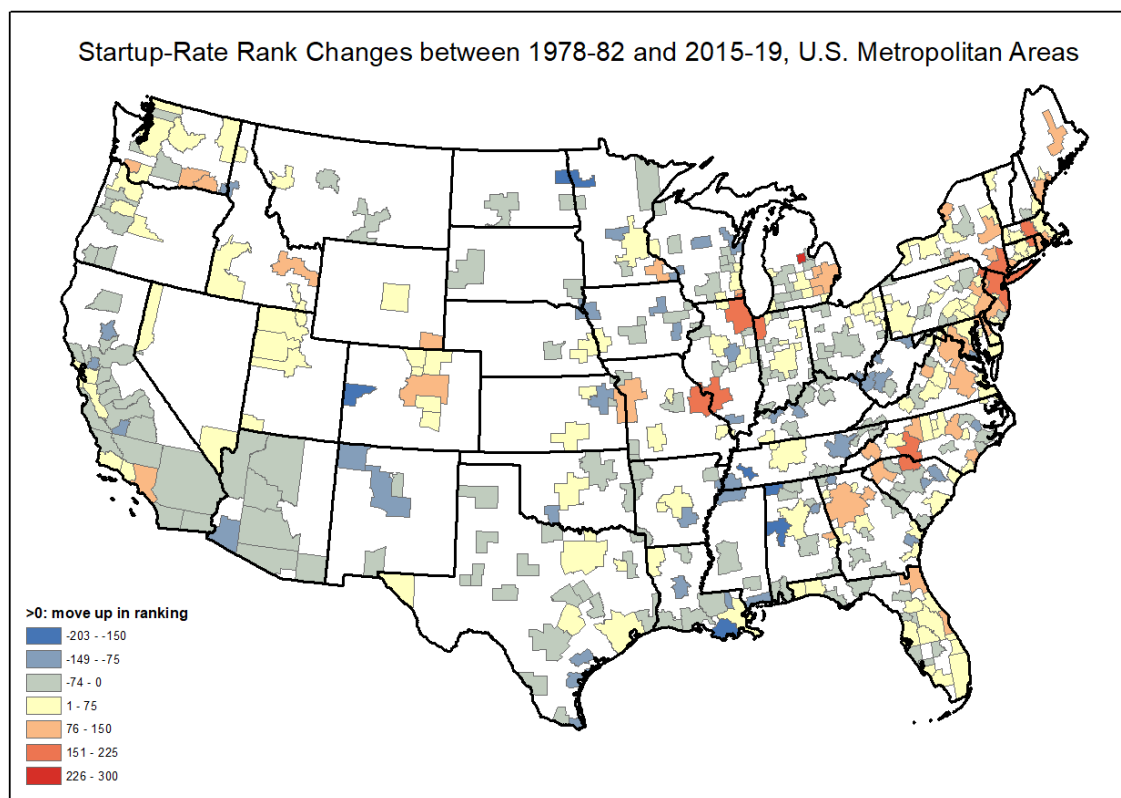
Map 2: Startup-rate rank changes between 1978-82 and 2015-19, U.S. metropolitan areas

Map 1 above shows that the leapfrogging MSAs measured by gains in the self-employment rate ranking between 1980 and 2015-19 are disproportionately observed in the Atlantic coastal states and the mountain west states. The plummeting MSAs by the same measure are disproportionately observed in American heartland states.

According to Map 2, the leapfrogging MSAs measured by gains in the startup rate ranking between 1978-82 and 2015-19 are disproportionately observed in the Atlantic coastal states and the Midwestern states. The plummeting MSAs by the same measure are disproportionately observed in the Southern states.

The next step is to conduct regression analysis to identify regional factors predicting metro rank changes. The dependent variable is a rank mobility index (Fotopoulos and Storey, 2017) measured by the change of a MSA in national ranking (either by the self-employment rate or the startup rate) standardized by the total number of MSAs. Explanatory variables will include a large array of demographic, social, and economic indicators, such as city size, population growth, homeownership, human capital, immigrants, employment, industrial structure, social capital, and quality of life. Given the nature of the dependent variable, quantile regression methods will be used.

The regression analysis will shed light on regional policies or practices to grow entrepreneurial ecosystems in a competitive US national environment.

References:

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