

## New Business Clustering in U.S. Counties, 1990–2006

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### Purpose

Economic developers in regions across the United States often want to support entrepreneurial activity, but find it difficult both to develop suitable prescriptions and to put them into practice. Analysis of case studies has identified a promising pattern of economic clusters (agglomerations). Creating or supporting economic clusters is a possible means of supporting entrepreneurship.

### Overall Findings

The study finds that entrepreneurial activity often concentrates geographically. The level of entrepreneurial activity in one county seems to reinforce the level in nearby counties. Aligning the development goals and activities of a group of neighboring counties may be a necessary condition for encouraging entrepreneurial activity in any given county.

### Highlights

- There were nearly 5 single-unit establishment births per 1,000 workers during the study period within a range of zero and 28.49 births per 1,000 workers.
- Given the dominance of retail trade in the U.S. economy, it is not surprising that this industry sector has the highest rate of new firm births (1.06 births per 1,000 workers), followed closely by the local market industries (1.03 births per 1,000 workers).
- As expected, large counties had the highest levels of entrepreneurial activity, with Los Angeles, Cook (Chicago), and New York counties at the top.
- Analysis of the counties with the highest rates of firm births per 1,000 workers in each given

sector suggests that the nation's interior and northwest counties—especially in states like Colorado, Utah, and Washington, among others—have the highest levels of entrepreneurial activity per person. This is consistent with the westward migration of population over the last two decades.

- The mapping and spatial analysis indicate that entrepreneurial activity concentrates geographically. The entrepreneurial lows of the nation's Rust Belt states and the entrepreneurial highs of the Rocky Mountain regions are evident, a pattern that appears to be the result of changes in county population.
- The spatial analysis shows several pockets of start-up activity, including manufacturing in the Pacific Northwest; retail trade and local market industries in the Rocky Mountain states; high technology industries in California, Massachusetts, and North Carolina; extractive industries in Texas, Oklahoma, and Wyoming; business services in New York, Washington, DC, and Florida; and distributive industries in the plains states.
- The econometric findings indicate that the high technology sector is unique. The sector proves the exception in the relationship between the rate of new firm births and changes in population, the creation of new knowledge, as reflected in patents per worker, and the educational attainment of the county population. The fascination of scholars and policymakers with places like Silicon Valley, Boston's Route 128, and North Carolina's Research Triangle is deserved.
- The business services sector is similar to high technology in some respects. The high correlation between the firm birth rates in these two

sectors and the evidence that both rely on educated workforces implies a close link. It may be that the formation of new business services firms occurs partly as a response to high technology entrepreneurial activity.

- New knowledge and economic growth appear to stimulate different types of entrepreneurial activities. Counties with access to an educated workforce and a local research and development (R&D) infrastructure favor entrepreneurial activity in no other sector than high technology.
- The findings suggest that the level of entrepreneurial activity in one county seems to reinforce the level in nearby counties.

### Scope and Methodology

The report uses data on county-level births and deaths from 1990 to 2006 produced by the U.S. Census Bureau's Statistics of U.S. Businesses and funded by the U.S. Small Business Administration, Office of Advocacy. The births and deaths are mapped using spatial data analysis tools to show to what extent new firms concentrate. In particular, the analysis tools provide a statistical test for the geographic clustering of entrepreneurial activity and allow preparation of maps showing the location of clustering.

The paper also uses econometric methods that account for the spatial autocorrelation of the data to explore many of the regional determinants of new firm formation at the county level. The model's variables included unemployment rates, educational levels, agglomeration density, and population variables.

This report was peer reviewed consistent with the Office of Advocacy's data quality guidelines. More information on the process is available from the director of economic research at [advocacy@sba.gov](mailto:advocacy@sba.gov) or (202) 205-6533.

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