

The Influence of R&D Expenditures on New Firm Formation and Economic Growth

by BJK Associates, 2002. [27 pages]
Maplewood, NJ 07040
under contract no SBAHQ-00-M-0491

Purpose

Economists have long argued that innovation leads to economic growth, and many studies have explored the small business linkage between the two. This paper explores the spillover effects from university research and development (R&D), and more precisely, whether university R&D activity influences the rate of local new firm formations and economic growth.

Overall Findings

The study demonstrates that university R&D expenditures were significantly related to new firm formations in the labor market surrounding the universities. The authors found this relationship to be statistically significant for five years beyond the initial R&D outlay, albeit less and less so as time elapsed. The findings document how government and private sector R&D expenditures made through research universities contribute to economic growth via the number of resulting new startups.

Highlights

- Utilizing labor market area data, the authors analyzed the impact of R&D on communities for the entire nation, rather than selected geographic regions.
- University R&D promoted higher new firm birth rates. R&D spending was strongly related to growth rates at the labor market level.

- The researchers discovered that R&D achieved the greatest impact right after initial R&D expenditures. Significant impact on the number of new firms averaged five years.

- Labor market areas with larger average establishment sizes tended to have fewer firm startups. The number of establishments (or competitors) also negatively affected the firm birth rate.

Scope and Methodology

- The number of firm births from 1990 to 1999 was obtained from the Longitudinal Establishment and Enterprise Microdata (LEEM) file at the U.S. Census Bureau's Center for Economic Studies.

- R&D expenditure data were derived from the National Science Foundation's (NSF) annual survey, which includes Zip codes for university laboratories.

- Researchers relied on NSF data containing information on Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) grants.

- The following Census Bureau data sources were used: County Business Patterns, the U.S. Census of Population, and U.S. Census Annual Surveys.

- Employment information was obtained from the Bureau of Labor Statistics.

- The authors converted data into labor market areas.

Ordering Information

The full text of this report and summaries of other studies performed under contract to the U.S Small Business Administration's Office of Advocacy are available on the Internet at: www.sba.gov/advo/research. Printed copies are available for purchase from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Tel. (800) 553-6847
TDD: (703) 487-4639
www.ntis.gov
Order number: PB2003-100698

To receive email notices of new Advocacy research, press releases, regulatory communications, and publications, including the latest issue of *The Small Business Advocate* newsletter, visit <http://web.sba.gov/list> and subscribe to the appropriate Listserv.