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# Rural Manufacturing Resilience: Factors Associated with Plant Survival, 1996-2011

Sarah A. Low

## What Is the Issue?

In the rural (nonmetropolitan) private sector in 2011, manufacturing provided 13 percent of jobs and 20 percent of personal earnings—almost twice the jobs and three times the earnings that production agriculture provided. Rural manufacturing employment was approximately equal to that of the rural retail trade and the rural health care/social assistance sectors in 2011. While the U.S. manufacturing industry has become more productive, it has exhibited a declining employment share for decades and is under strong competitive pressure. However, to the communities in which they are located, existing plants provide relatively well-paying jobs. A better understanding of the factors affecting rural manufacturers' survival may help businesses, communities, and policymakers retain, or even expand, manufacturing jobs in rural America.

## What Did the Study Find?

Between 1996 and 2011, over half (55 percent) of a nationally representative sample of manufacturing plants survived (i.e., still had paid employees). Of those, independent plants were more likely to survive (59 percent) than multi-unit plants (50 percent), and rural plants were slightly more likely to survive than those in metropolitan counties (57 percent versus 53 percent).

Higher rural dependence on manufacturing, coupled with higher survival rates for rural plants, suggests that survival of existing manufacturing plants is especially important to rural communities; 28.5 percent of rural counties had manufacturing-dependent economies (a quarter of earnings come from manufacturing) during much of the study period. In these communities, a plant closure will reduce local jobs and earnings directly, while the multiplier effect may further depress local demand and income.

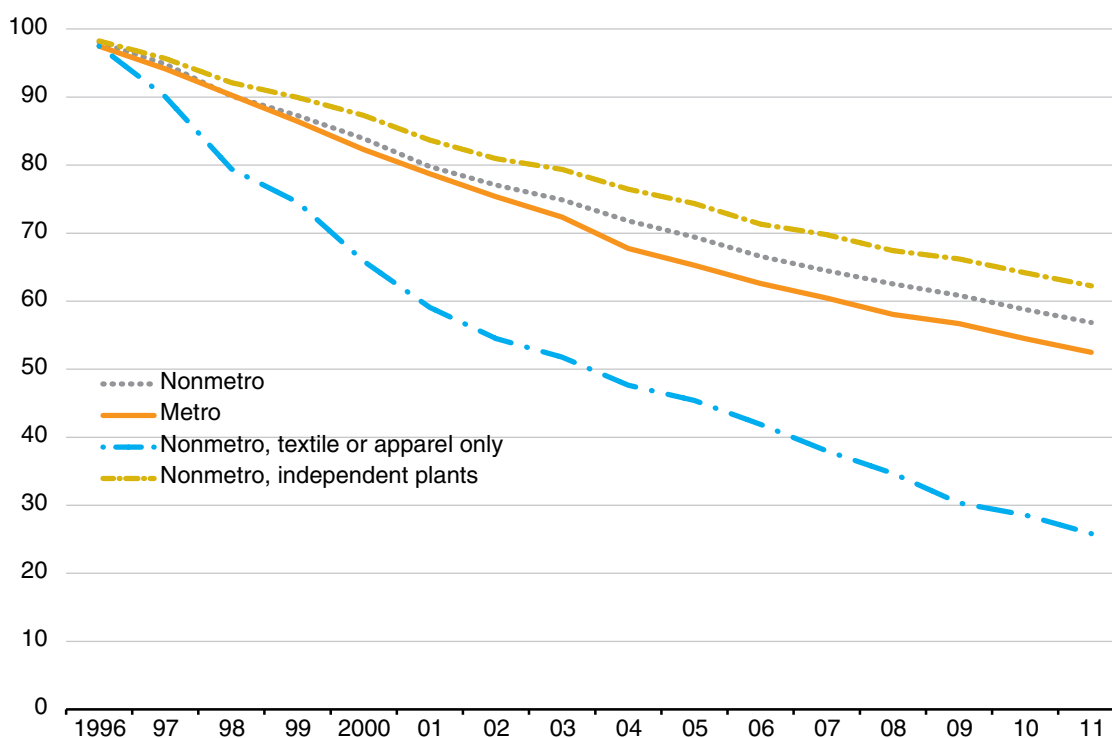
Looking more specifically at rural plants, the analysis found that:

- Independent manufacturing plants were 35 percent more likely to survive than plants that were part of a multi-unit firm (i.e., branch plants or headquarters). This finding is counter-intuitive because States and regions have long tended to put more effort into recruiting or retaining branch plants than supporting locally based entrepreneurial, independent manufacturing plants.

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## Annual survival rates for manufacturing establishments, 1996-2011

Percent of plants surviving since study began



Source: USDA, Economic Research Service calculations using the 1996 ERS Rural Manufacturing Survey and establishment-level Quarterly Census of Employment and Wages from the U.S. Dept. of Labor, Bureau of Labor Statistics.

- Smaller, independent manufacturing plants were more likely to survive—an independent plant with 100 employees was 9 percent more likely to survive than an independent plant with 200 employees, all else being equal.
- Survival rates for independent manufacturing plants were highest in the Northeast and Midwest.
- Survival rates were significantly lower (25.8 percent) for rural textile mills and apparel product manufacturers (versus a 57-percent overall survival rate).
- Fifteen percent of independent plants and 13 percent of multi-unit plants indicated that obtaining sufficient capital was a major problem—these plants were significantly less likely to survive than plants indicating access to capital was a minor problem or not a problem.

### How Was the Study Conducted?

Manufacturing plants surveyed in the ERS 1996 Rural Manufacturing Survey (RMS) were linked to unemployment insurance records collected quarterly for the Bureau of Labor Statistics. Linking the two data sets enabled studying plant survival over a 15-year period (1996-2011) that includes two recessions and declining employment in U.S. manufacturing. The RMS provides qualitative information on plants' characteristics, perceived access to financial capital, and involvement in economic development policies. Statistical analysis called survival analysis is used to assess the relative contribution of plant- and county-level factors on a plant's probability of survival.