

The Impact of International Competition on Small-Firm Exit in U.S. Manufacturing

Robert Feinberg, American University, Washington, D.C., 20016
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This econometric study uses Statistics of U.S. Businesses (SUSB) data to examine the impact of trade on small manufacturers. As global trade increases and currency exchange rates fluctuate, concerns about their impact on small U.S. manufacturers increase. Small manufacturers, by the nature of their scale of operations, are less able to insulate themselves from foreign competition than large manufacturers. Although not without costs, large manufacturers have greater leeway in managing the effects of international competition: they can move production offshore, sign long-term commodity contracts in foreign currencies, or use other tactics to weather global shifts.

Overall Findings

Increased international pressures in the form of currency exchange rates lead to increased exit rates among very small manufacturers (those with fewer than 20 employees). Slightly bigger manufacturers (20-499 employees) are less sensitive to changing conditions in the international marketplace. High-tech industries are more insulated from international pressures than low-tech industries are.

Highlights

- At the national level, exit rates among overall small manufacturers showed little fluctuation between 1990 and 2004. They had large variations across firm sizes and industries, however. Exit rates of firms with fewer than 10 employees hovered around 14 percent from 1990 to 2004, around 7 percent for firms with 10-19 employees, and around

5 percent for firms with 20-99 employees and 100-499 employees. Apparel firms with fewer than 10 employees had the highest exit rate, at 22.3 percent; while the exit rate was lowest for firms in the beverage/tobacco industry with 100-499 employees, at 2.9 percent.

- The determinants of exit generally differed by firm size category between 1990 and 2004, but there were some consistent factors. Mirroring conventional wisdom, growth in the overall economy reduced exit, while increases in labor costs increased firm exits.
 - Consumer goods industries had higher rates of exit among small manufacturers.
 - In low-tech industries where import penetration is significant, a strong dollar leads to an increased likelihood of exit for small manufacturing firms with fewer than 20 employees.
 - For the smallest size class of manufacturers studied (firms with 1-9 employees), the impact of exchange rate effects were greater in the 1990s than in the 2000s.
 - Changes in an industry's import share were not statistically significant for firms with 20-499 employees; it was negative but not consistently statistically significant for firms with 1-19 employees across the two time periods of analysis, the 1990s and 2000s.
 - With the results showing some differences between the decades of the 1990s and 2000s, effects of international competition seem to be changing over time. More disaggregated data would be necessary to evaluate this properly, however.

Scope and Methodology

This study determines international competition impacts from 1990 to 2004 on the survival of small manufacturers by industry using econometric models. Firm size categories of 1-9, 10-19, 20-99, and 100-499 employees were evaluated. Establishment exits (or business location exits) by employment size of firm were used as a proxy for firm exits (which includes all business locations). This is very accurate for small size categories (which are largely one-location firms), but breaks down as the firm size increases.¹

Dependent variables included exchange rates, imports as a share of an industry's goods, research and development intensity by industry, large firm expansions, wage growth (to proxy input cost trends), and a dummy variable on whether the industry sells primarily consumer goods or durable goods. Some dependent variables were lagged one year to indicate causation of exit rates instead of correlation with them. The U.S. Census Bureau's Statistics of U.S. Businesses (SUSB), which is partially funded by the Office of Advocacy, was a primary source. In addition, sources included the New York Federal Reserve Board and the National Science Foundation. SUSB switched industry codes from SIC to NAICS in 1998, forcing an analysis of two separate time periods.

This report was peer reviewed consistent with the Office of Advocacy's data quality guidelines. More information on this process can be obtained by contacting the director of economic research at *advocacy@sba.gov* or (202) 205-6533.

¹ Almost all (99.9 percent) of establishment exits in manufacturing firms with fewer than 10 employees are firm exits. (Essentially, these are one-establishment firms.) This figure was 98.3 percent for firms with 10-19 employees, 85.3 percent for firms with 20-99 employees and 29.8 percent for firms with 100-499 employees.

Ordering Information

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

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