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# Measures of Job Flow Dynamics in the U.S. Economy

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## Purpose

This research project was designed to overcome previous shortcomings in data and methodology and measure the rate of job creation and job destruction throughout the economy by firm size, age, and industry sector.

## Scope and Methodology

This report uses the new Longitudinal Establishment and Enterprise Microdata (LEEM) file to investigate gross and net job flows for 1990 to 1995. The LEEM file is unique in that it includes information on nearly every nonfarm establishment (separate location) and enterprise (firm comprising one or more establishments) over a multi-year period. Job flows consist of job creation by new and growing firms, job destruction by firms that shrink or close, and job reallocation as a firm changes size class. The LEEM file is the first nationwide high-quality longitudinal database for both manufacturing and nonmanufacturing businesses that is suitable for measuring gross job flows throughout the United States. The file is housed at the Center for Economic Studies at the Census Bureau and is available to sworn Census agents upon approval of their research proposals.

## Highlights

- Job reallocation (the sum of job creation and destruction) was very high: 78 percent for the U.S. economy as a whole for the five-year period.
- Job reallocation varied substantially by major industry. Rates of 90-95 percent occurred in construction; mining; finance, insurance and real estate; and agricultural services. Manufacturing had, by far, the lowest rate, 60 percent. Rates of 77-83 percent occurred in the remaining industries: retail trade; wholesale trade; transportation, communications and public utilities; and services.
- Over a single year, 1994 to 1995, the highest reallocation rates, 40-45 percent, occurred in construction, mining and agricultural services. Manufacturing had a 21 percent rate. Other industries clustered around the all-industry rate of 30 percent.
- These rates indicate that 1 in 6 jobs was newly created during this year (in which employment in the entire file increased by 3.6 percent), and 1 in 7 jobs was destroyed. Thus, gross job flows (the 30 percent reallocation rate) are very large in comparison with net changes (the 3.6 percent increase in overall employment).
- The five-year changes by industry are only 2 to 2.5 times the annual change rates, suggesting that much of the change in numbers of jobs was not part of a continuing long-term pattern of growth or shrinkage by those establishments.
- Net job creation is negatively related to the initial size of establishments, as are each of the gross flows—job creation, destruction and reallocation. In other words, as establishment size increases, both the net job creation rate and all gross flow rates decline sharply,

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except for the largest size class (establishments with 5000+ employees).

- Very small establishments (1-4 employees) create jobs at much higher gross rates than larger establishments. When establishments are classified by initial size, job destruction rates at very small establishments are only slightly higher than those of larger establishments, leaving their net job creation rates far higher (18 percent vs. 3.6 percent for all establishments in 1994 to 1995).
- When classified by the mean of 1994 and 1995 employment, very small establishments have much higher job destruction rates, leaving their net job creation rates only slightly above average (4.4 percent).
- In 1994 about 23 percent of establishments, with over 50 percent of employment, belong to multi-unit firms. About 800,000, or 13 percent, of workers in 1-4 employee establishments actually worked for larger firms. Of the 19 million workers in 5-19 person establishments, more than 5.4 million (28 percent) worked for larger enterprises.
- An analysis of job flows by age of establishment shows that only establishments that started in 1994 added jobs over the next year; all others lost more jobs than they created. Gross job creation rates declined strongly with establishment age—from 80 percent for establishments started in 1994 to 8 percent to those started before 1978. Job reallocation—creation plus destruction—declined from 97 percent for establishments started in 1994 to 17 percent for the oldest establishments.
- A regression analysis of single-unit firms shows that gross job flows decline with age, after controlling for establishment size. Age generally has a positive, but rather small, impact on net job change. However, this result is less consistent across industries and size classification methods (initial vs. mean size, establishment vs. firm) than for gross flows.
- Conversely, gross job flows in single-unit firms decline with establishment size, after controlling for age, but the results vary for net job changes.
- Among multi-unit firms, firm size does little to explain the differences in either gross or net job flows, after controlling for age and establishment size.
- Single establishments are consistently much more sensitive to differences in age than are multi-unit establishments.
- A study by Davis and Haltiwanger found a positive relationship between net growth and mean establishment size. These results confirm that there is generally a positive and statistically significant relationship between net growth (excluding that from births) and mean establishment size, after controlling for age. However, using initial firm size classification reverses the signs on the coefficients for establishment size.

## Ordering Information

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