



## The Tortoise Revises the Hare

Since the last issue of *National Economic Trends*, payroll or establishment survey employment—one of the most closely watched economic statistics—has undergone its annual benchmark revisions. As the chart shows, the most recent revision (57,000) was trivial, but the previous revision (542,000) amounted to more than one-sixth of the employment growth between March 1994 and March 1995. Given the prominence of the payroll data, it is important to know why large discrepancies sometimes arise.

The Bureau of Labor Statistics (BLS) measures employment in three ways. First, it surveys households and asks whether the residents are employed. Second, it surveys employers (establishments) and asks how many people they have on their payrolls. Third, it assembles data from unemployment insurance (UI) tax forms that must be sent to state UI offices by every employer covered by the UI program. The process of benchmarking is intended to reconcile the two employer-based estimates by using the slow—but very accurate—UI employment “tortoise” (ES-202 data) to revise the quickly available—but relatively error-prone—establishment survey “hare.”

Paradoxically, it is mostly the tortoise’s fault that the hare is inaccurate. BLS decides which establishments to survey based on the UI records, but drawing a sample in this way means that the payroll survey will miss many new employers whose paperwork has not yet found its way into the UI records. Without adjustment, therefore, the payroll employment estimates will be too low.

BLS handles this problem by using a statistical model and other information to estimate a “bias adjustment factor” for each month. The bias adjustment is essentially an estimate of how many jobs are created each month in new establishments but missed by the sampling procedure. Bias adjustment factors are not necessary with the

data coming from UI records because, when they are finally complete, they contain data from every employer in the UI system.

Each spring, the *previous* year’s March payroll employment estimates are revised to be consistent with that month’s UI data, as well as various other data on employers who are not covered by UI reporting requirements. The chart shows the effects of the 1995 and 1996 benchmarks. For most industries, one-twelfth of the March revision is added to not seasonally adjusted (NSA) estimates for the previous April, two-twelfths to May, and so on. Therefore, for large benchmark revisions like March 1995, the overall revisions between benchmarks (April 1994 to February 1995) appear wedge-shaped. Because the March 1996 revision was so small, the exceptions to this procedure (notably the “eating and drinking places” industry) dominate the revisions, so no wedge shape is visible in the chart between April 1995 and February 1996.

Starting with April 1996 estimates, BLS incorporated new information into the bias adjustments for employment estimates (these months will get their final revisions a year from now). The net effect of all of the revisions was to lower the February 1997 NSA estimate by 54,000.

—Joe Ritter

