Consult ALFRED™, our new source of vintage economic data, at research.stlouisfed.org/tips/alfred/.

## Survey Says...

ach month, the Bureau of Labor Statistics (BLS) publishes two employment numbers—household ✓ and payroll. Household employment is calculated from the Current Population Survey (CPS), which the Census Bureau conducts by collecting data from approximately 60,000 households each month. Payroll employment is calculated from the Current Employment Statistics (CES) survey, which the BLS and State Employment Security Agencies conduct by collecting data from approximately 400,000 establishments each month. Essentially, the CPS counts the number of employed people, whereas the CES survey counts the number of nonagricultural jobs. Differences between the two measures have been highlighted recently, as they provide conflicting assessments of the extent of the recovery in employment. To that end, we examine the BLS's attempt to explain the differences.

The accompanying chart traces the differing paths of payroll employment and household employment (the two solid lines) for the past decade. Before the 1990s, the two series moved nearly in unison and the gap between them held fairly steady. During the 1990s, the series began to converge as household employment grew by 5.4 percentage points less than payroll employment grew. From 2000 to 2003, however, the gap widened when payroll employment declined by 1.4 percent and household employment rose, slightly, by 0.6 percent. Since then, the two series have moved relatively in sync.

In an attempt to reconcile the household and payroll employment levels, the BLS recently created an adjusted household employment series—represented by the dashed line in the chart.<sup>2</sup> For official household employment numbers, the BLS uses the same population estimate throughout the year. But each January, new population estimates are incorporated into household employment estimates, occasionally causing the series to jump at the start of a new year.

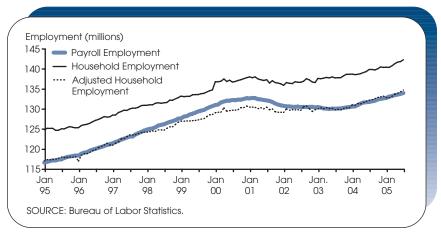
To create the adjusted series, the BLS first employs a smoothing method to revise household data based on updated population estimates for January 2000, 2003, and 2004, thus eliminating the spikes.<sup>3</sup> The BLS further modifies

this new series to match more closely the definition of employment used by the CES survey by eliminating agriculturally related workers, the unincorporated self-employed, unpaid family workers, private household workers, and workers on unpaid absences. Finally, the number of (non-agricultural) workers who hold multiple jobs is added. The resulting adjusted household series is much closer to the payroll series, but a noticeable gap between those two levels remains for the period between 1998 and 2003.

A complete explanation for the differences remains elusive. The BLS notes that part of the discrepancy might be due to factors that are difficult to measure. For instance, in estimating payroll employment, the BLS adjusts for new births and deaths of businesses, perhaps imperfectly. In addition, workers who change jobs within the reference week will be counted twice in the CES survey, even though they concurrently hold no more than one job. The BLS also points out that workers who are paid "off the books" show up in the household employment number but not in the payroll number. The BLS has difficulty counting those two types of workers, among others. Despite the discrepancy, the BLS emphasizes that one must look at both series for a complete picture of the employment situation.

## —Kristie M. Engemann and Michael T. Owyang

<sup>&</sup>lt;sup>3</sup> Di Natale, Marisa L. "Creating Comparability in CPS Employment Series." Bureau of Labor Statistics release. December 12, 2003.



Views expressed do not necessarily reflect official positions of the Federal Reserve System.

<sup>&</sup>lt;sup>1</sup> Growth rates are simple rates calculated from annual data.

<sup>&</sup>lt;sup>2</sup> Bureau of Labor Statistics release. "Employment from the BLS Household and Payroll Surveys: Summary of Recent Trends." August 5, 2005.