

## **Reports That Maine Is Losing Jobs Are Based on Imprecise Data**

Several recent news articles and editorials portray a negative employment situation that has developed over the last two years in Maine. An opinion piece declares, “16,000 Maine jobs vanish” since mid-2013. A front-page headline proclaims, “bad news lurks in falling jobless rate,” with the article noting, “Maine’s shrinking labor force appears to be a key factor driving the decline in the state’s unemployment rate.” Most of these articles cite the imbalance in the structure of our population, with thousands more people in their 50s and 60s approaching retirement than youths who will enter the workforce to replace them in the years ahead.

It is true that Maine faces serious challenges not only from an aging labor force, but also from downsizings and closures of forest-products industries — paper mills in particular — with significant ripple effects throughout certain regions of the state. Despite these challenges, it is not correct to claim that the state, as a whole, has begun losing jobs. Rather, there has been relatively steady job growth since 2010.

The conclusions about job loss in the media were based on imprecise estimates that have a wide margin of error and are subject to significant revisions over many years. Indeed, a look at the data a year or several years later sometimes provides a different indication of employment trends than preliminary estimates provide.

### **The Data Sets Explained**

On a monthly basis, two programs collect information on employment in the United States: the Current Employment Statistics survey, known as the “payroll survey,” and the Current Population Survey, known as the “household survey.” Employment estimates from both programs are produced by the U.S. Bureau of Labor Statistics.

In Maine, the payroll survey collects the number of jobs from about 3,900 employer locations; those locations comprise 8 percent of nonfarm employers and 32 percent of all nonfarm wage and salary jobs. The higher representation of jobs is because many large employers are included.

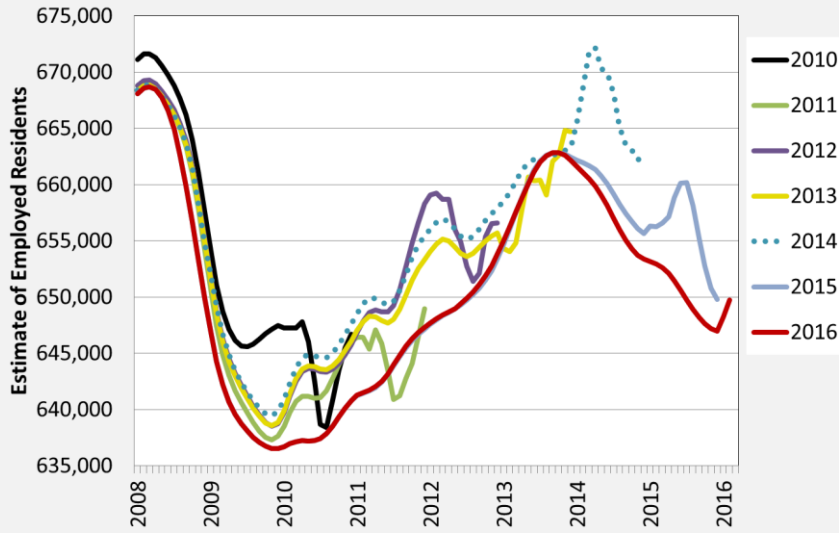
The household survey collects information on the employment status of people age 16 and over from approximately 500 households, which is just 0.1 percent of all households and population. The Bureau of Labor Statistics then applies labor force participation and employment ratios from the survey, as well as population projections, to an economic model to produce estimates of the size of the labor force, the number of employed, and the number of unemployed.

Population projections are revised annually and again every ten years following each decennial Census of Population. From year to year, those revisions can fluctuate by a few thousand people; over the course of a decade, the variance could exceed 10,000. Revisions to population estimates can have a large impact on employment estimates in the household survey.

The articles concluding employment in Maine has been declining are drawn from estimates based on the household survey.

### **Revisions to Preliminary Employment Estimates Change in an Observable Pattern**

### Resident employed estimates as of each year ending



Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics program.

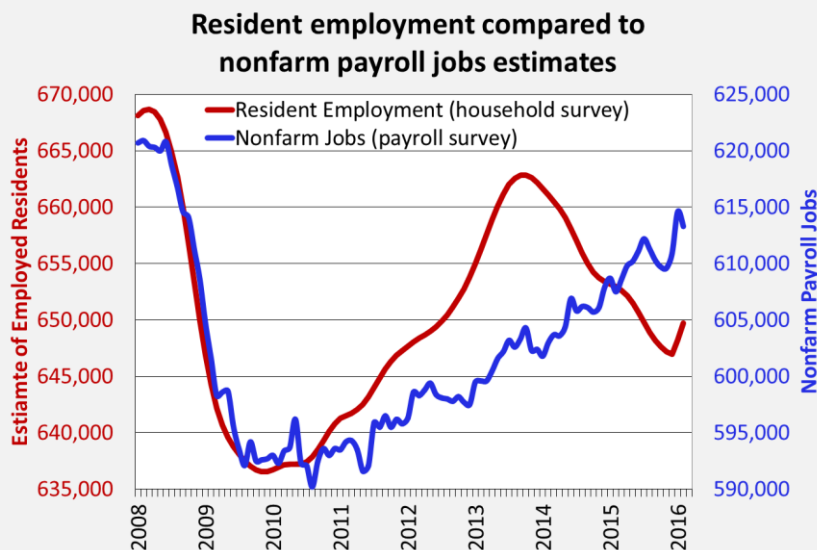
The first chart shows the large revisions to household survey-based employment estimates since 2010. Current official estimates indicate employment increased steadily from the end of 2009 until the fall of 2013, before steadily declining through the end of 2015 (red line). This provides a very different picture of employment trends than official estimates indicated each year from 2010 to 2014.

For example, as of the end of 2010, the story was that the employment recovery began early

in 2009, then faltered with a sharp drop and equally sharp recovery in 2010 (black line). Estimates in 2011 indicated the sharp decline of 2010 did not occur, but that a sharp decline and recovery occurred in 2011 (green line). Estimates in 2012 indicated there was no sharp decline in either 2010 or 2011, but there was one in 2012 (purple line). Estimates in 2014 indicated employment reached a new all-time high in April of that year (dotted line). Current official estimates now indicate that employment was more than 12,000 lower that month and peaked seven months earlier—in September 2013.

The point is that, with each year of revisions to household survey-based estimates, the story about employment trends changes. We can anticipate that, as of the end of each of the next several years, official estimates are likely to provide a different indication than they do now. Therefore, analysts, reporters, and others should use caution when evaluating employment trends from this data set.

### More Reliable Payroll Data Reveals a Different Pattern



Sources: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Employment Statistics programs.

The payroll survey's much larger representation (32% compared to 0.1%) provides a far more reliable indication of the employment situation. In addition, estimates of payroll jobs are revised each year, benchmarked to a complete count of wage and salary jobs collected through the unemployment insurance tax filings that most employers must file each quarter. With a relatively short delay, payroll jobs estimates are replaced with reliable, hard data, and revisions tend to be much smaller.

The second chart shows estimates of employed residents of Maine from the household survey compared to payroll jobs reported by employers in the state through February 2016. The payroll job count is more volatile from month to month, but it shows a clear trend of growth since 2010. Today, Maine is approaching six years of sustained job growth.

The aging of our population is a real issue that has been constraining workforce and economic growth for more than a decade. Within a few years we may see net job losses from more people retiring than young people entering the workforce—but we are not there yet.