



Pennsylvania's Jobs Data Reports: Caution Advised

A few weeks ago the Department of Labor and Industry released July employment data for the state. According to the report, Pennsylvania had added 66,500 non-farm jobs between July 2014 and July 2015—a fairly good showing of just over one percent growth. On September 1st, the Department released jobs data for the state's 18 metro areas that are made up of 35 counties, 16 micropolitan areas (16 counties) and the 16 other counties not included in the metro or micro categories.

Non-farm job growth over the twelve months from July 2014 to July 2015 was very robust in several metro areas including Pittsburgh (2.5 percent), Harrisburg-Carlisle (2.9 percent), Scranton-Wilkes Barre (3.6 percent), Lancaster (2.1 percent), and Reading (1.6 percent). Most other metro areas registered twelve month gains generally in the one percent range with Johnstown, Williamsport, and Lebanon posting small declines.

Interestingly, the 18 metro areas posted a total twelve month increase of 92,800 non-farm jobs. That is 26,300, or 40 percent, more than the state's reported total gain. Does that mean the other 32 counties not in the 18 metro areas suffered declines sufficient enough to make up the 26,300 higher number than the state total? As it turns out, the answer is no. In fact, the other 32 counties posted a twelve month combined rise of 7,700 jobs. That brings the total for all counties and metro areas to 100,500, 51 percent above the reported state total—far too large to be discounted as an anomaly. While the jobs data from the micropolitan areas and sixteen other counties are not seasonally adjusted, that should not affect the analysis since we are comparing July to July.

Is the state non-farm job increase too low, or is the combined labor market total too high—or is it some combination of both? Either way the size of the gap indicates some serious issues with job counting estimates.

What are possible explanations for the gap? It could be a number of things but likely it is in sampling design and collection issues and assumptions made about the arithmetical adjustments. For instance, we know from previous recent experience that large twelve month jumps such as the ones reported for Pittsburgh and Scranton-Wilkes Barre often get revised downward to show much smaller gains.

Consider the growth by industry category in the metro areas posting the largest twelve month increase in non-farm jobs. The large 3.6 percent jump in jobs in Scranton-Wilkes Barre was led by an eight percent surge in Health and Education sector employment over the July 2014 to July 2015 period. Possible, but realistically this is not an accurate measurement. Then too, Professional and Business services employment spiked by ten percent. It could happen but there should be some plausible explanation of gains of that magnitude. Finally, Retail employment was up seven percent during the twelve months. It is a virtual certainty that gain will be revised downward.

In Pittsburgh, where non-farm jobs climbed a very robust 2.5 percent over the twelve months ending in July of this year, Leisure and Hospitality employment surged by eight percent, led by limited seating eating places which jumped ten percent. This sector has been notorious in recent years for posting out-sized gains in initial reporting that have to be revised downward. The Professional and Technical services sector reported a six percent increase. Again possible, but we simply do not know from the available data which industry subsectors account for the gains, thus confirmation of the growth will not come until after the revisions are completed next spring.

Finally, it is noteworthy that the Harrisburg-Carlisle metro area, with its 2.9 percent rise in non-farm jobs, was led by a stunning 20 percent jump in Education services employment and a seven percent pickup in eating and drinking establishment jobs. Neither of these are credible numbers and downward revisions are a virtual certainty. Gains across many sectors in the two percent or better range were also in play.

This excursion into the details of the job gains in these three metro areas is done to point out the volatility in small area sampling where variety in sizes of firms by industry is less than in the state as a whole. Errors are bound to work their way into the final estimates where “blow up factors” are used to go from sample levels to aggregate industry levels. And of course the data are self-reported by the employers so that small errors in their reports can lead to mistaken estimates for the industry.

By way of contrast, the statewide growth in the sectors showing outsized gains in these three metro areas is far more subdued. For example, Professional and Business services statewide posted a moderate 1.1 percent rise—well below the numbers posted in Scranton-Wilkes Barre and Pittsburgh; food and drinking services was up three percent but well below the Harrisburg gain of 7.8 percent. Likewise, the state’s 1.9 percent increase in Leisure and Hospitality employment was far behind Pittsburgh’s reported rise of eight percent. Nor was the statewide growth of 1.4 percent in Health and Education jobs in the same ballpark with Scranton-Wilkes Barre’s eight percent or Harrisburg’s 20 percent.

These few examples illustrate an important cause of the big difference in state non-farm job growth and the metro area gains over the twelve months between July 2014 and July 2015. The temptation is to blame inaccurate estimates of local jobs. Normally, the bigger state sample will produce a more accurate picture than the smaller metro and county samples. In that case, it is reasonable to expect major downward revisions in some metro

and micropolitan employment growth when the new figures are released early next year. But that having been said, one wonders if there is not a systematic bias toward over-estimating metro area employment.

In any event, all this points out, once again, the need to treat the initial releases of monthly jobs data with some skepticism. Indeed, sometimes more than one year of rebenchmarking of data is necessary before the Department of Labor settles on what it believes to be accurate employment figures.

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