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Recent County Employment Data Appear to be Contrived

As we have written in previous *Policy Briefs*, the Pittsburgh metropolitan statistical area (MSA) experienced strong employment growth in 2011 (as measured by the establishment survey), especially in the final quarter. While the data for the first part of 2012 showed a slowdown, the MSA still showed positive growth. The question arises, how did the counties that make up the MSA fare during the last couple of years?

Household employment data (establishment data are not available at the county level) reflects the number of persons reporting themselves to be working during a given month. The table below shows the year-to-year changes in household employment for counties that comprise the Pittsburgh MSA for the first five months of 2012.

Percentage Change to Household Employment

	Allegheny	Armstrong	Beaver	Butler	Fayette	Washington	Westmoreland
Jan. 2011- Jan. 2012	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Feb. 2011- Feb. 2012	1.19	1.19	1.19	1.19	1.19	1.19	1.19
Mar. 2011- Mar. 2012	2.01	2.01	2.01	2.01	2.01	2.01	2.01
Apr. 2011- Apr. 2012	2.05	2.05	2.05	2.05	2.05	2.05	2.05
May 2011- May 2012	1.86	1.86	1.86	1.86	1.86	1.86	1.86

The statistics in the table are quite remarkable. All of the year-over-year percentage changes for all counties are identical in each month. Is this just a strange coincidence? To answer that question we examined household employment in counties in three other MSAs; Philadelphia, Cincinnati, and Cleveland. The same pattern of year-over-year growth changes appears in all three MSAs.

The Pennsylvania counties in the Philadelphia MSA are Bucks, Chester, Delaware, Montgomery, and Philadelphia. The percentage change to year-over-year household employment from January 2011 to January 2012 was -0.706 for all five counties. All five counties also posted the same year-over-years changes in February (-0.157), March (0.563), April (0.637), and May (0.821).

A similar situation played out with the Cleveland and Cincinnati metropolitan statistical areas where all of the counties had the same year-over-year changes to household employment levels for the first part of 2012.

Returning to the Pittsburgh MSA, we found the year-over-year percentage changes to the household employment levels from 2010 to 2011 to be identical for all of the counties. However, the year-over-year percentage changes for 2009-2010 were not identical. It appears that the phenomenon only occurs with the employment data reported from 2010 until 2012. In fact it does not happen with the other household survey data, specifically the labor force and unemployment data.

Nor does it happen with counties that are not part of an MSA. We also looked at five other Pennsylvania counties, Bradford, Greene, Jefferson, Potter, and Tioga, which are not part of an MSA. The year-over-year change to household employment data for January 2011-2012 in Bradford (-0.173), Greene (2.104), Jefferson (0.598), Potter (0.577), and Tioga (5.244) were all different. This only makes the case of the counties within MSAs even more suspect.

So, what are we to make of this seemingly anomalous set of results for the counties in the MSA? The logical explanation is that the monthly survey for the MSA does not include a large enough sample from each county to produce statistically reliable estimates. As a result, the Labor Department simply takes the year ago month-to-month percentage change for the MSA sample and applies it to all counties. Note the Pittsburgh MSA changes were January (0.33), February (1.19), March (2.01), April (2.05), and May (1.86), precisely the same percentages for each county. The likelihood that all counties would have exactly the same year-to-year employment changes month after month and be the same as the MSA is just too low to credit.

The Labor Department's reports do not show the changes in percentage terms for the counties, only the employment numbers for the month. Thus, unless an analyst had a reason to look at the household employment changes for each county on a year-to-year basis, the Labor Department's methodology would never be uncovered. Surely, there are no legitimate justifications for reporting numbers that are clearly contrived. It would be far better for them to admit they do not have reliable estimates. But then they could not report monthly county unemployment rates.

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