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Statewide and Regional Employment Growth in Ohio in 2015

This article is an annual update of Ohio employment growth, based on newly-released 2015 employment totals at the national, state, and county level. These allow a comparison of growth among Ohio's metropolitan areas and rural regions.

The April 8, 2016, issue of *On the Money* (Vol. 131, No. 31) reported on newly-issued data for the U.S., states, and metropolitan areas showing employment growth through the end of 2015. While this release gave an early view of 2015 employment growth, the employment totals used to undertake that analysis are estimates, and those for recent months are subject to relatively significant revision. Nor does the data set used in that article include the county data necessary to analyze the performance of regions statewide. The data source used here, the Quarterly Census of Employment and Wages (QCEW), is somewhat less timely, but it does include county data. Also, the employment totals here are counts of employment rather than estimates, so it is accurate as presented and not subject to any significant revision.[1]

Statewide Trends

Ohio and U.S. employment reached bottom in December 2009, six months after the end of the recession, with Ohio's total nonfarm employment at 4.88 million. That month's employment level was its lowest since December 1993. U.S. employment that month reached a level not seen since September 1999.

Figure 1 on the next page compares net Ohio employment growth to U.S. growth from that 2009 trough through December 2015. Employment is expressed in this chart on an index basis with the December 2009 level set to 100.0; consequently the chart shows cumulative state and national employment growth since then. As the graph shows, Ohio's employment tracked slightly above the U.S. average before slowing relative to national growth in mid-2012. As of December 2015, Ohio employment had increased 426,000 from its low point – a gain of 8.8 percent versus 10.9 percent at the national level.

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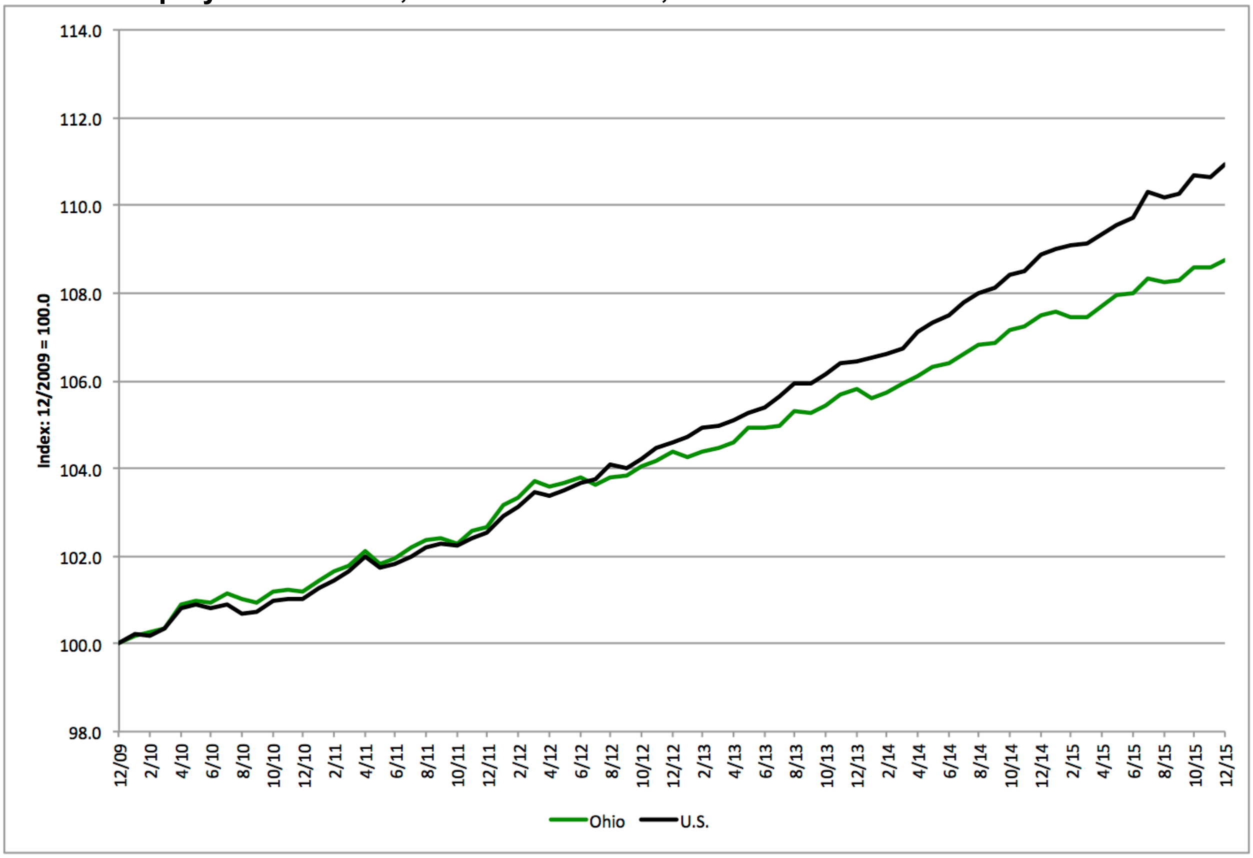
[1] However, Regionomics' annual updates of the factors used to produce seasonally-adjusted employment totals can change those totals slightly.

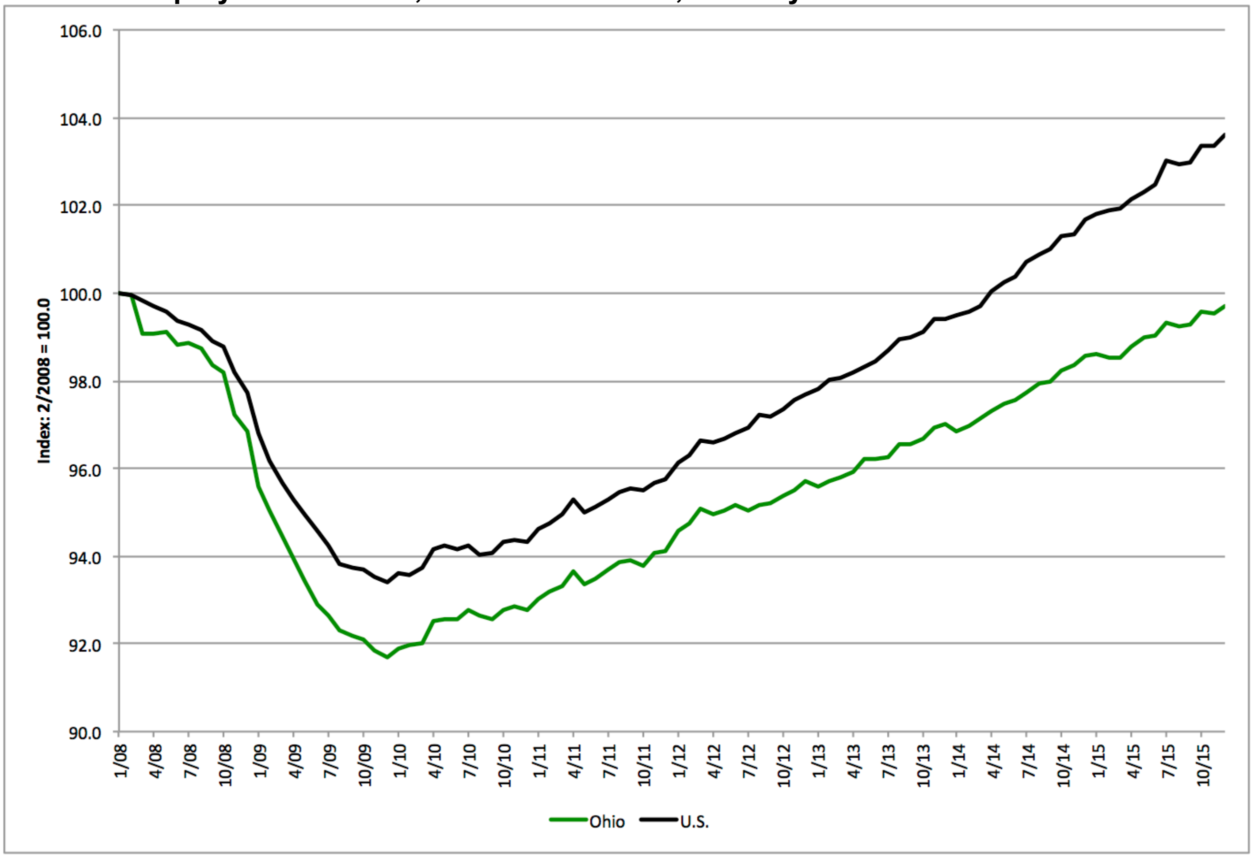
Figure 1
Employment Growth, Ohio and the U.S., December 2009 – December 2015



Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics, seasonally adjusted by Regionomics.

Figure 2 shows state and national progress in recovering the jobs lost in the 2007-2009 recession. This is accomplished by charting cumulative net changes since January 2008, the month that U.S. employment peaked. Using this as a benchmark month understates Ohio's recession losses somewhat: Ohio employment peaked in May 2007 and the state had already lost 10,600 jobs by the following January. The U.S. suffered total losses of nearly nine million jobs in the recession, 6.6 percent of the total. Since then, however, the nation has recovered all those losses and then some: employment in December 2015 stood 3.6 percent above its pre-recession level. Ohio has had a much deeper hole out of which to climb. The 441,800 jobs lost between May 2007 and January 2010 represented a loss of 8.3 percent; since employment turned, Ohio has made back 94.2 percent of that loss.

Figure 2
Employment Growth, Ohio and the U.S., January 2008 – December 2015



Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics, seasonally adjusted by Regionomics.

Table 1 on the next page uses the same QCEW data as in Figures 1 and 2, but shifts to annual averages. This table compares employment percentage changes by nonfarm industry sector in Ohio to changes at the national level since the beginning of the recovery and over the past year. As shown in the table, Ohio's total employment growth was slower than average during both 2010-2015 and 2014-2015, confirming the results of Figure 1. Because the sectors are listed in order of employment size, those listed first generally have the largest impact on total growth. It is important to note, however, that annual growth rate comparisons are not as precise as monthly trends: annual growth rates are a function not only of this year's trend, but of last year's as well.

With few exceptions, industry sector employment growth has been slower than average. This is true for the largest sector, education and health services. This sector includes only private education; public school, college, and university employment is included in government. Consequently, 89 percent of the 873,729 jobs in this sector are in healthcare and social assistance. While the hospitals in Ohio's largest cities have an excellent reputation and are drawing increasing numbers of patients from outside Ohio, many healthcare providers serve only a local market. As reported in the June 10, 2016 issue of *On the Money* (Vol. 131, No. 35), population growth is slow in nearly all regions of Ohio, with more than half of the 13 regions tracked in these articles in outright decline. That poses challenges for locally-serving industries: with a lack of growth in the market, the industry's growth is likewise limited. This is the key problem for a number of Ohio's industries.

Table 1
Annual Employment Changes by Sector, Ohio and the U.S., 2010-2015 and 2014-2015

Sector	Share of Ohio emp., 2015	2010-2015		2014-2015	
		Ohio	U.S.	Ohio	U.S.
Total nonfarm	100.0%	7.1%	9.1%	1.4%	2.1%
Education and health services	16.6%	6.4%	13.0%	1.7%	2.5%
Professional and business services	13.6%	14.7%	17.3%	0.9%	2.8%
Government	13.4%	-4.5%	-2.0%	0.1%	0.7%
Manufacturing	13.0%	10.6%	7.0%	1.7%	1.1%
Retail trade	10.9%	3.5%	8.0%	0.8%	1.9%
Leisure & hospitality	10.3%	13.6%	16.0%	2.4%	3.2%
Financial activities	5.2%	4.0%	5.7%	1.9%	2.0%
Wholesale trade	4.5%	8.9%	7.5%	1.5%	1.0%
Construction	3.8%	18.5%	17.0%	2.4%	5.1%
Transportation and warehousing	3.4%	16.8%	16.6%	5.4%	4.7%
Other services	2.9%	2.8%	-1.0%	1.0%	1.7%
Information	1.4%	-7.7%	1.8%	-1.3%	0.8%
Natural resources & mining	0.6%	21.1%	11.2%	-0.2%	-3.5%
Utilities	0.4%	-3.8%	0.4%	5.4%	0.8%

Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.

The professional and business services sector accounts for 715,790 jobs statewide. This includes a broad swath of the economy, including non-medical professional offices, such as accountants, attorneys, architects, and engineers; research and development services; marketing and public relations; corporate headquarters; administrative support services including all temporary employment; and waste services. Employment growth had generally been keeping pace with the national average but slowed significantly in 2015. The slowdown in growth was felt across the sector.

The government sector suffered employment declines both nationally and in Ohio during the early years of the recovery, with employment declining at all levels – federal, state, and local. The trend has reversed nationally over the past two years and has at least stabilized in Ohio.

The crucial manufacturing sector represents a bright spot in the state's employment growth picture, with stronger-than-average growth in each year of the recovery. This stands in marked contrast to the years before the recession, when employment declined by double-digit percentages both nationally and in Ohio. Seasonally-adjusted employment totals calculated by Regionomics show that Ohio's manufacturing employment growth began in November 2009 and totaled more than 76,000 jobs through December 2015. The central role of manufacturing in the Ohio economy means that it is a key reason for the strength or weakness of the economies of the state and its regions.

The very weak performance of the retail sector is no doubt a function of the state's slow population growth. This is one of the sectors generally serving a localized market, and as discussed above, if that market is growing slowly or declining, individual retailers can grow only at the expense of their competitors. Much of leisure and hospitality faces the same burden, with recreational facilities and restaurants also catering to a local market. Hotels are a different story, of course, and to the extent that state and regional efforts at attracting tourism and convention business – especially those from out of state – are successful, growth prospects for these businesses are much brighter.

Both Ohio's transportation and warehousing and wholesale trade sectors outperformed the U.S. in 2015. These are two links in the distribution chain, although wholesale trade is something of a hybrid. Some businesses in the sector are captive distributors for individual manufacturers and retailers, while others sell primarily larger goods to commercial and industrial end users. The long-standing role of Ohio as a distribution hub and the large concentration of manufacturers needing shipment companies to access the supply chain make these important sectors.

Regional Trends

Ohio's economy consists of a number of distinct urban and rural regional economies, each with different economic characteristics and economic performance. Thus, this survey of Ohio's employment growth must examine the pace of growth at a regional level. Figure 3 maps the 13 regions that have been repeatedly analyzed in these articles – the six largest Metropolitan Statistical Areas (MSAs) and seven others including smaller MSAs and rural areas.

Figure 3
Ohio Regions

Northwest | Toledo MSA | West North Central | Cleveland MSA | Akron MSA
Northeast | West | Columbus MSA | East North Central | Dayton MSA
Cincinnati MSA | South | Southeast

Table 2 shows the employment growth of these 13 regions over the course of the recovery and in 2015, with U.S. growth presented for comparison. The state's total employment includes nearly 108,000 jobs that are not assigned to any county. These unallocated jobs have increased by 42,700 since 2010. This causes the performance of individual regions to be understated, and may or may not distort comparisons of the regions' relative performance. Also shown in Table 2 are the employment and growth statistics for the six other Ohio-based MSAs and the entire Cincinnati MSA, including three counties in Indiana and seven counties in Kentucky as well as the five Ohio counties whose employment is shown in the top panel of the table. The Weirton-Steubenville and Youngstown MSAs also cross state lines. Weirton-Steubenville includes one county in Ohio and two in West Virginia, while Youngstown includes two counties in Ohio and one in Pennsylvania.

Table 2
Employment Growth of Ohio Regions and MSAs, 2010-2015 and 2014-2015

	Employment, 2015		Percentage changes	
Area	**Number**	**% of Ohio**	**2010-2015**	**2014-2015**
United States	**139,488,190**	**---**	**9.1%**	**2.1%**
Ohio*	**5,183,462**	**100.0%**	**7.1%**	**1.4%**
Large MSAs	**3,688,334**	**71.2%**	**6.9%**	**1.7%**
Akron MSA	313,849	6.1%	5.3%	1.4%
Cincinnati MSA (Ohio counties)	788,547	15.2%	6.5%	1.9%
Cleveland MSA	990,869	19.1%	4.3%	0.8%
Columbus MSA	956,811	18.5%	11.4%	2.4%
Dayton MSA	354,564	6.8%	4.9%	1.7%
Toledo MSA	283,694	5.5%	7.1%	2.0%
Small MSAs and rural	**1,388,736**	**26.8%**	**4.8%**	**0.8%**
Northwest	70,760	1.4%	6.8%	0.7%
West North Central	211,228	4.1%	1.9%	0.7%
East North Central	111,300	2.1%	9.8%	3.1%
Northeast	454,482	8.8%	4.0%	0.0%
West	274,333	5.3%	7.5%	1.3%
South	141,850	2.7%	1.9%	1.0%
Southeast	124,783	2.4%	5.4%	0.8%
Other MSAs				
Canton MSA	164,881	3.2%	6.9%	-0.1%
Cincinnati MSA (total)	1,005,853	n/a	6.6%	1.9%
Lima MSA	50,019	1.0%	1.4%	0.4%
Mansfield MSA	50,614	1.0%	-0.1%	-0.5%
Springfield MSA	48,587	0.9%	2.9%	-0.7%
Weirton-Steubenville MSA	38,987	n/a	-4.8%	-0.8%
Youngstown MSA	215,442	n/a	1.6%	0.0%

*Includes 107,851 positions (2.1% of the total) whose specific location within Ohio is unknown.
Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.

Economic performance does indeed differ significantly among the regions. All of the large MSAs but Columbus and Toledo underperformed the Ohio average since 2010. While none of the large MSAs except Columbus exceeded the national average growth in 2015, all but Cleveland equaled or exceeded the 2015 state average. The picture is much bleaker for the smaller MSAs analyzed in the bottom panel of Table 2. Only Lima managed any growth in 2015, and Mansfield and Weirton-Steubenville had fewer jobs in 2015 than they did when the expansion began.

Employment growth in the regions including the small MSAs and rural areas was also weak, with the notable exception of the East North Central region. This region's five-year growth exceeded the national average, while its growth in 2015 was the best in the state, exceeding both the national average and the Columbus MSA.

Sector Employment Growth at the Regional Level

The following tables show regional employment and employment changes in the four largest sectors statewide: education and health services, professional and business services, government, and manufacturing. These tables have the same basic format as Table 2, except that the second data column shows the sector's location quotient within each region. The location quotient is a measure of employment concentration. It is the percentage of total regional employment in a given sector divided by the percentage of total employment in that sector nationally. Thus, a location quotient greater than one indicates a sector with a greater-than-average concentration in the area. Note that U.S. location quotients are always 1.00 by definition: these are the national employment percentage divided by itself.

Table 3 analyzes education – again, private education only – and health services. This sector's location quotients are generally higher in the MSAs than in the more rural regions because healthcare providers in the larger urban areas serve both patients in their own area and patients from outlying communities requiring more specialized treatment. The high location quotients in the South and Southeast are likely due to the lack of larger cities nearby. The location quotient in Columbus is less than one, but this is understated because the employees of The Ohio State University Wexner Medical Center are classified in state government, and the data are not available to reassign them.

Employment growth varies widely among the regions, with the large MSAs as a class outperforming the other regions. Among these MSAs, all but Cleveland and Toledo exceeded the Ohio average growth in 2015; these two MSAs suffered employment declines. Note, however, that the Ohio portion of the Cincinnati MSA outperformed the MSA as a whole; in contrast to the total MSA, employment growth in the Ohio counties exceeded the national average. Among the other regions, only the Northwest and the Southeast enjoyed growth exceeding the state average. Youngstown was the only small MSA to achieve growth greater than the state average.

Table 3
Education and Health Services Employment Growth in Ohio Regions, 2010-2015 and 2014-2015

Area	Employment, 2015		Percentage changes	
	Number	Location quotient	2010-2015	2014-2015
United States	21,078,627	1.000	13.0%	2.5%
Ohio	873,729	1.100	6.4%	1.7%
Large MSAs	638,231	1.126	7.7%	1.4%
Akron MSA	53,195	1.106	7.0%	1.9%
Cincinnati MSA (Ohio counties)	133,845	1.102	7.7%	2.5%
Cleveland MSA	189,620	1.256	4.5%	-0.3%
Columbus MSA	145,136	0.981	18.0%	3.2%
Dayton MSA	67,511	1.239	5.9%	1.5%
Toledo MSA	48,924	1.119	-2.4%	-0.8%
Small MSAs and rural	229,277	1.084	1.9%	-0.3%
Northwest	8,931	0.830	2.0%	1.1%
West North Central	31,388	0.976	-0.9%	-0.3%
East North Central	16,759	0.966	6.4%	0.1%
Northeast	83,201	1.211	1.1%	-0.3%
West	39,303	0.936	0.5%	0.0%
South	27,243	1.259	8.9%	1.1%
Southeast	22,452	1.181	0.0%	1.5%
Other MSAs				
Canton MSA	31,113	1.249	3.5%	-1.1%
Cincinnati MSA (total)	156,483	1.035	7.9%	1.4%
Lima MSA	10,347	1.369	-5.6%	-1.1%
Mansfield MSA	7,959	1.041	-5.0%	-0.5%
Springfield MSA	8,461	1.152	-4.1%	0.3%
Weirton-Steubenville MSA	8,267	1.202	3.3%	-0.5%
Youngstown MSA	41,429	1.027	-1.4%	1.9%

Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.

The professional and business services analysis is shown in Table 4. This employment is focused in the large MSAs, particularly Akron, Cincinnati, and Columbus. Professional and business service establishments tend to cluster in larger cities from which they can serve a regional market. Many regional growth rates were well below the national average in 2015, leading to Ohio's relatively slow employment growth in the sector. Exceptions include Dayton and Toledo among the large MSAs, the Northwest, West, South and Southeast regions, and Springfield and Weirton-Steubenville among the smaller MSAs.

Table 4
Professional and Business Services Employment Growth in Ohio Regions
2010-2015 and 2014-2015

	Employment, 2015		Percentage changes	
Area	**Number**	**Location quotient**	**2010-2015**	**2014-2015**
United States	19,600,558	1.000	17.3%	2.8%
Ohio	715,790	0.969	14.7%	0.9%
Large MSAs	574,522	1.090	12.9%	0.9%
Akron MSA	49,899	1.116	8.0%	1.2%
Cincinnati MSA (Ohio counties)	133,536	1.183	9.1%	0.3%
Cleveland MSA	140,230	0.999	12.0%	-0.5%
Columbus MSA	168,480	1.224	19.5%	1.4%
Dayton MSA	47,076	0.929	8.5%	2.9%
Toledo MSA	35,301	0.868	15.6%	4.2%
Small MSAs and rural	102,539	0.521	11.5%	0.2%
Northwest	3,310	0.331	22.2%	-3.0%
West North Central	12,754	0.427	-0.3%	2.8%
East North Central	6,805	0.422	2.8%	-0.9%
Northeast	39,209	0.422	2.6%	-4.5%
West	24,007	0.615	29.1%	5.0%
South	8,842	0.439	31.4%	5.6%
Southeast	7,612	0.431	20.0%	4.1%
Other MSAs				
Canton MSA	13,433	0.580	1.6%	0.9%
Cincinnati MSA (total)	158,802	1.129	10.8%	0.6%
Lima MSA	4,608	0.656	25.0%	1.4%
Mansfield MSA	5,036	0.708	-3.0%	-1.0%
Springfield MSA	4,631	0.678	22.4%	4.5%
Weirton-Steubenville MSA	1,764	0.322	-2.3%	2.7%
Youngstown MSA	20,963	0.692	3.3%	-5.3%

Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.

Table 5 analyzes government. Note that the Columbus government location quotient is only 1.01, less than in Dayton and much less than in the South and Southeast. The Dayton MSA is home to Wright-Patterson Air Force Base, giving the region a federal government location quotient of 2.54 – indicating that federal government employment is 2.5 times what would be expected in a region the size of Dayton. The small population of the South and Southeast leads to many counties, municipalities and townships serving relatively few residents. Columbus, on the other hand, is one of the largest cities in the U.S. to serve as a state capital, so even though the state government location quotient is 1.77, the sector as a whole does not dominate the region's economy nearly to the extent that it does in regions anchored by smaller capital cities.

All five-year government employment growth rates are negative and all except Columbus have suffered larger declines than the two percent nationwide decline over that period. The news from the 2015 employment changes is somewhat better: some of these are slightly positive and most suggest that the rates of decline have at least slowed. Albeit marginal, the statewide 0.1 percent growth was the first positive year-over-year change since the recovery began.

Table 5
Government Employment Growth in Ohio Regions, 2010-2015 and 2014-2015

Area	Employment, 2015		Percentage changes	
	Number	Location quotient	2010-2015	2014-2015
United States	21,186,592	1.000	-2.0%	0.7%
Ohio	705,854	0.884	-4.5%	0.1%
Large MSAs	501,836	0.881	-4.3%	-0.1%
Akron MSA	39,050	0.808	-8.8%	-2.2%
Cincinnati MSA (Ohio counties)	86,427	0.708	-5.4%	0.1%
Cleveland MSA	128,936	0.850	-5.8%	0.2%
Columbus MSA	150,350	1.011	-1.3%	0.2%
Dayton MSA	57,817	1.055	-5.1%	-0.3%
Toledo MSA	39,256	0.893	-2.1%	-0.5%
Small MSAs and rural	200,874	0.948	-5.7%	0.0%
Northwest	10,347	0.956	-5.6%	-0.7%
West North Central	30,401	0.941	-6.8%	0.3%
East North Central	14,682	0.842	-7.0%	-1.0%
Northeast	60,325	0.874	-4.9%	0.2%
West	33,167	0.786	-5.6%	-0.7%
South	27,797	1.309	-8.7%	-0.1%
Southeast	24,155	1.264	-2.1%	-0.3%
Other MSAs				
Canton MSA	19,321	0.771	-4.8%	-1.0%
Cincinnati MSA (total)	114,311	0.752	-5.1%	0.1%
Lima MSA	5,932	0.781	-8.8%	-0.4%
Mansfield MSA	7,504	0.976	-6.8%	-1.4%
Springfield MSA	6,936	0.940	-2.2%	-0.5%
Weirton-Steubenville MSA	5,547	0.937	-8.9%	0.2%
Youngstown MSA	27,786	0.849	-6.1%	-0.9%

Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.

Table 6 reports employment, concentration, and growth of manufacturing. Of all the regions in Table 6, only Central Ohio's concentration is below the national average and the Southeast is the only other region with an employment concentration less than 25 percent greater than the U.S – i.e., a location quotient less than 1.25. The smaller regions and smaller MSAs are generally more manufacturing-focused than the large MSAs; of all six major MSAs, only Toledo's location quotient is greater than the 1.48 state average. This is because large tracts of relatively inexpensive land are more readily available in less-populous regions.

As reported in both Table 1 and Table 6, manufacturing was the only one of the four large sectors with year-over-year employment growth greater than the national average. This has been the case throughout the expansion. The regions outside the major metros as a group enjoyed higher employment growth in 2015 than did the large MSAs. Among the large MSAs, the lack of growth in Akron and Cleveland is especially troubling. On the other hand, growth was greater than the statewide average in Cincinnati (both the Ohio portion and the total MSA) and much higher than average in Toledo. All of the other regions except the Northeast exceeded the statewide year-over-year growth, and the Northeast was only marginally less than the statewide average. However, the Canton and Youngstown MSAs shared the sluggish growth felt in the two other northeastern MSAs. Of the other smaller MSAs, Weirton-Steubenville was the only region to suffer a net loss (68 jobs) while growth was greater than the state average in Lima, Mansfield, and Springfield.

Table 6
Manufacturing Employment Growth of Ohio Regions, 2010-2015 and 2014-2015

Area	Employment, 2015		Percentage changes	
	Number	Location quotient	2010-2015	2014-2015
United States	12,290,293	1.000	7.0%	1.1%
Ohio	685,968	1.481	10.6%	1.7%
Large MSAs	408,167	1.235	9.6%	1.5%
Akron MSA	39,997	1.426	7.1%	0.2%
Cincinnati MSA (Ohio counties)	88,803	1.254	7.4%	2.8%
Cleveland MSA	124,211	1.412	6.6%	0.2%
Columbus MSA	71,572	0.829	10.7%	0.7%
Dayton MSA	39,905	1.256	11.6%	1.1%
Toledo MSA	43,679	1.713	22.9%	5.7%
Small MSAs and rural	276,912	2.244	12.1%	2.2%
Northwest	21,365	3.404	15.9%	3.6%
West North Central	48,873	2.607	8.9%	2.1%
East North Central	31,633	3.127	20.0%	2.6%
Northeast	72,037	1.799	9.6%	1.6%
West	72,679	2.969	21.5%	3.7%
South	18,707	1.482	-3.9%	3.1%
Southeast	11,618	1.048	20.0%	4.1%
Other MSAs				
Canton MSA	28,075	1.933	14.1%	0.0%
Cincinnati MSA (total)	112,205	1.272	9.6%	3.1%
Lima MSA	8,848	2.008	14.7%	4.3%
Mansfield MSA	9,684	2.171	11.2%	2.1%
Springfield MSA	6,666	1.557	9.2%	2.1%
Weirton-Steubenville MSA	5,438	1.583	-14.6%	-1.2%
Youngstown MSA	30,504	1.607	7.8%	0.1%

Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics.