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Ohio's Industry Sector Employment Growth

As reported in previous editions of *On the Money*, Ohio's employment growth has failed to keep pace with the national average in recent years. These earlier articles have broken employment down by region, showing strengths and weaknesses geographically.

This article takes a different perspective: exploring relative employment growth statewide by industry sector. Some of these issues were discussed to some extent both statewide and regionally in the August 12, 2016, issue (Vol. 131, No. 39). However, a state-level analysis allows a much more detailed look at the sectors behind the weaker-than-average growth than is possible in a regional view. The standard warning definitely applies, however: employment growth in Ohio differs significantly among regions.

This analysis makes use of the same data source use in most of these articles: the Quarterly Census of Employment and Wages (QCEW) from the U.S. Bureau of Labor Statistics. New totals were released in September for January, February, and March 2016, so these are included. All totals are seasonally adjusted by Regionomics.

As the name implies, the QCEW is a count of employment rather than an estimate, and the data include 98 percent of all payroll employment. However, two cautionary notes are necessary. The first is that the counts for the most recent three months are preliminary and subject to slight correction. The second is that there are occasional breaks in the series that result in sudden large increases or decreases in employment in individual sectors. These breaks always occur in January and are apparently the result of reclassification of specific employment.

Table 1 on page 2 reports employment by sector and each sector's share of total employment both in Ohio and nationally. The sectors with the largest employment are most important in determining the total trend, while those that account for a larger share of employment than at the national level – such as manufacturing – influence the difference between statewide and national trends.

Table 1
Total Ohio Employment by Sector and Percentage of Total Employment
Ohio and U.S., March 2016 (Seasonally Adjusted)

Sector	Employment	Percentage of total	
		Ohio	U.S.
Total nonfarm employment	5,326,743	100.00%	100.00%
Natural resources and mining	27,991	0.53%	1.34%
Construction	212,180	3.98%	4.73%
Manufacturing	686,621	12.89%	8.70%
Wholesale trade	236,036	4.43%	4.15%
Retail trade	578,340	10.86%	11.20%
Transportation, warehousing, and utilities	202,246	3.80%	3.72%
Information	72,294	1.36%	1.97%
Financial activities	282,277	5.30%	5.59%
Professional and business services	721,785	13.55%	14.07%
Education and health services	887,071	16.65%	15.18%
Leisure and hospitality	553,468	10.39%	10.93%
Other services	156,680	2.94%	3.08%
Federal government	77,095	1.45%	1.97%
State government	128,825	2.42%	3.23%
Local government	503,398	9.45%	9.88%
Unclassified	434	0.01%	0.26%

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

The remainder of this article consists of brief discussions of the relative performance of each sector. The discussion is followed by charts comparing Ohio and U.S. employment growth for each sector discussed beginning in January 2010 – the approximate month in which employment growth resumed after the recession. Employment is expressed in all charts on an index basis with the January 2010 level set to 100.0; consequently the charts show cumulative state and national employment growth for each sector since the beginning of 2010. In all charts, Ohio employment is in green and U.S. employment is in black.

Total Employment (Figure 1)

Total Ohio employment tracked slightly above the U.S. average through March 2012, when net growth for Ohio was 3.5 percent compared to 3.2 percent for the U.S. Since then, Ohio's employment has increased 5.6 percent in Ohio and 7.6 percent nationwide. For the entire six years, Ohio's employment has increased 9.3 percent (451,457 jobs) and 11.1 percent in Ohio.

The discussions below suggest that two factors were largely the cause of this pattern: (1) growth in manufacturing much faster than average early in the expansion and much slower recently; and (2) Ohio's slow population growth that limits the growth potential of a number of industry sectors.

Mining and Natural Resources (Figure 2)

The exploration of Ohio's shale oil and gas reserves began in earnest in 2010. As Figure 2 shows, there was a high rate of employment growth both in Ohio and nationally through late 2014 when the industry hit the wall of slumping resource prices. Employment growth through the end of the boom was 30.6 percent (7,083 jobs), close to half again the 21 percent U.S. growth. The subsequent decline amounted to 3,027 positions. The state's decline was 9.8

percent, slightly less than the 10.6 percent national average, and Ohio's net employment growth remains well ahead of average for the entire six-year period. Despite this growth, however, the concentration of Ohio's mining and natural resources employment is still only 40 percent of the national average (the 0.53 percent state employment share divided by the 1.34 percent national share).

Manufacturing (Figure 3)

Manufacturing is a linchpin of the state's economy, with an employment concentration 48 percent greater than average. As a result, manufacturing employment growth has an outside impact on Ohio's total employment growth. This impact was especially helpful in maintaining employment growth through June 2012: Ohio manufacturers added 49,000 jobs to Ohio's economy during that 30-month period, one out of every four net new Ohio jobs. Growth slowed somewhat subsequently and stalled in 2015.

This lack of employment growth was not because of a lack of growth in output, however. Year-over-year growth in the Gross Domestic Product (GDP) of Ohio's manufacturers was 1.4 percent in 2015, slightly more than the national average. Manufacturers here and elsewhere have been using technology to make their workers more productive. This same substitution of capital for labor resulted in a 19 percent decrease in Ohio's manufacturing employment between 2001 and 2007 while GDP increased more than 12 percent. This implies that manufacturing employment may begin to decline again, further decreasing Ohio's relative employment growth. In any case, the manufacturing employment growth between 2010 and 2014 was the first sustained manufacturing employment increase in Ohio since 1993-1995 and the longest sustained increase since the 1960s.

Wholesale Trade (Figure 4)

Wholesale trade consists of businesses that distribute goods either to retailers or to other businesses for their own use. Thus, a wholesale business could be a captive warehouse of a manufacturer or a retail chain,¹ a distributor of a certain type of good, or a business selling machinery, equipment, or supplies not generally purchased by households. Wholesale trade, along with freight transportation, is an important component of Ohio's supply chain linking producers and consumers. Both wholesale and transportation have a higher-than-average concentration in Ohio, thanks to the state's location close to the majority of consumers in North America and the well-developed road, rail, and air network allowing goods to flow into, through, and out of Ohio quickly and efficiently.

As apparent in Figure 4, Ohio's wholesale sector stumbled in 2010 but then grew at a much faster-than-average rate subsequently. Net growth from the beginning of 2011 through March 2016 was 9.9 percent (21,200 jobs) in Ohio compared to 6.8 percent nationwide.

Retail Trade (Figure 5)

Figure 5 makes clear that retail is one of Ohio's most significantly underperforming sectors, which is of concern because Table 1 indicates that it is also one of the state's larger sectors, with nearly 11 percent of total employment. The problem with retail is Ohio's slow population growth. Population increased only 0.7 percent between 2010 and 2015 compared to 4.1 percent nationwide. Excluding the Columbus MSA, population declined 0.4 percent over that period. Most retail serves a local market, and if the market is not growing, neither can retail.

¹ Employment is classified by place of business, not by firm, so the personnel at a retailer's headquarters are classified in business services, those working in its warehouses are in wholesale trade, and those in its stores are in retail trade.

Online shopping has posed a significant challenge to traditional retail, but also provides an opportunity. Retailers who can compellingly distinguish their offerings from those of their competitors can attract customers far outside of Ohio. Further, the Amazon distribution facilities under development in the Columbus area will likely be classified as non-store retail, but even the 2,000 jobs in these facilities will not be sufficient to alter the basic trend.

Transportation and Utilities (Figure 6)

Transportation includes movement of both people and freight, so this sector is also partially a component of Ohio's supply chain focus. Warehousing is an important part of transportation. These include large distribution facilities that resemble those in wholesale trade. If a distribution facility provides services to only one company it is classified in wholesale trade, while those open to multiple users are part of transportation. The utilities component refers only to private-sector utilities operating facilities, not city water and sewer services nor the headquarters operations such as American Electric Power, First Energy, or Columbia Gas of Ohio. Consequently, the employment of the utilities component is less than 10 percent of the total.

Transportation and utilities has closely tracked the national average: Ohio's growth has been 17.5 percent (21,789 jobs) compared to 17.8 percent nationally.

Information (Figure 7)

Information is a relatively small sector with less than 1.4 percent of Ohio employment and two percent of U.S. employment. The sector includes publishing of newspapers, books, directories, greeting cards, and software; motion picture and sound recording industries; broadcasting; telecommunications; data processing; website hosting; news syndicates; and private-sector libraries and archives.

Information employment has declined in Ohio while stabilizing and slightly increasing at the national level. This U.S. growth ended a steady 15-year decline as the internet upended traditional publishing business models and online businesses themselves were buffeted by rapid change. Between January 2010 and March 2016, Ohio employment declined 9.2 percent while U.S. employment increased 1.7 percent. Most subsectors underperformed the averages in Ohio, with the exception of data processing and hosting. This subsector, which accounts for fewer than 10 percent of Ohio information jobs, increased 22 percent nationally, but 39 percent in Ohio.

Financial Activities (Figure 8)

Financial activities include banking, financing, insurance, real estate, and all forms of renting and leasing (which is financing in the sense that it allows one to obtain the use of an asset without buying it). This sector's employment in Ohio has tracked slightly below the national average throughout the expansion. (The sudden decline in January 2012 and sudden increase in January 2016 was likely a temporary employment reclassification.) Ohio employment growth was 5.8 percent (15,356 jobs) versus 6.2 percent nationwide.

Professional and Business Services (Figure 9)

Professional and business services is a large sector composed of three major subsectors:

- Professional and technical services: non-medical professional offices such as attorneys, accountants, architects, engineers, designers, information technology professionals, and marketing and public relations firms.
- Management of companies and enterprises: corporate and regional headquarters.
- Administrative and support and waste services: office, administrative, and business support services, such as document services, call centers, credit bureaus, and collection agencies;

all temporary employment regardless of where housed; security services; exterminating, janitorial, and landscaping services; and waste collection and remediation.

As Figure 9 shows, professional and business services employment growth was equal to or slightly above the national average until 2015, when growth slowed significantly. Examination of annual growth of the subsectors reveals that growth has been slow in the professional and technical component since the expansion began. This component represents 35 percent of the sector total in Ohio. Average employment during 2015 was 5.3 percent higher than that during 2010, while U.S. employment was up 15.6 percent.

The slowdown in the sector was due to slowing growth in the other two components. The management of companies subsector accounts for 19.5 percent of sector employment and has an employment concentration in Ohio 68 percent greater than average. Employment in 2015 was 29 percent higher than in 2010 while U.S. employment was only 18.5 percent higher. However, growth in Ohio between 2014 and 2015 was only half the national average. Similarly, growth in the administrative and support and waste component (45.5 percent of the total) was slightly greater than average through 2014, but only 40 percent of average in 2015. This last point may not be entirely bad news. Because temporary employment is such a large factor in administrative and support services, part of the slowdown may be due to temporary employees being hired permanently and being reclassified in the industry in which they are employed.

Education and Health Services (Figure 10)

The education component of the education and health services sector includes only private schools, colleges, and universities; employment in public schools is classified in government. Consequently, this subsector accounts for less than 11 percent of sector employment in Ohio. Another 12 percent of the sector's employment is social assistance, including individual and family services, housing and food relief agencies, and child daycare centers. Health services comprise 77 percent of total sector employment.

Even neglecting the unexplained jump in U.S. employment in January 2013, Ohio's growth has been far less than average. For the entire six years, U.S. employment increased 15.9 percent while Ohio employment rose 8.6 percent. Since January 2013, U.S. growth has been 7.0 percent compared to Ohio growth of 4.7 percent. Despite the presence of renowned hospitals in Ohio's major cities drawing patients from far outside Ohio, much of healthcare serves a local market with relatively limited growth imposed by the limited growth of the market.

Leisure and Hospitality (Figure 11)

The leisure and hospitality sector includes arts, entertainment, and recreation services; hotels, motels, and other accommodation; and restaurants, bars, and other food services. As has been the case with several other sectors, growth in the early years of the recovery kept pace with the national average but then began to lag. Here, however, the weakness in Ohio was solely during 2014, with state employment growth of 1.7 percent versus the 2.9 percent national average. Since January 2015, state growth has been marginally greater than the national average (3.9 percent versus 3.8 percent). For the entire expansion, Ohio gained 17.4 percent (82,000 jobs) while the U.S. gained 19.9 percent.

Other Services (Figure 12)

As the name implies, this is a catch-all sector for industries that do not fit anywhere else. Major components include repair and maintenance; personal services such as beauty salons, weight reduction centers, funeral homes, and cemeteries; dry cleaning and laundry services; religious

organizations; grant-making organizations; social advocacy organizations; civic, professional, and social organizations; labor unions; and employees of private households.

Ohio's growth in other services employment has been far less than average. Net growth for the entire period was five percent compared to 11.2 percent nationally. For the period beginning in January 2012 (after the jump in U.S. employment) Ohio growth was four percent versus the national average of 7.1 percent. The weakness in Ohio growth extended to all subsectors. Once again, these are businesses serving a primarily local market, so Ohio's weak population growth is probably to blame.

Government (Figures 13, 14, and 15)

Taken together, federal, state, and local government comprise one of the larger industry sectors with 13.3 percent of Ohio employment and 15.1 percent of U.S. employment. Government employment is generally relatively stable, increasing less than average in expansions and decreasing less than average in contractions. In this expansion, however, government employment has been in gradual decline, decreasing four percent in Ohio and 1.4 percent nationwide.

As shown in Figure 13, federal government spiked in early 2010 with the administration of the decennial Census. This effort created approximately 17,000 temporary jobs in Ohio and 540,000 nationwide – a welcome development during a period when the post-recession employment growth was just beginning. Other than this, federal employment in the early years of the recovery continued a gradual decline that had begun around 1990. Federal employment began increasing slightly beginning in mid-2014 both nationally and in Ohio. It remains to be seen how long this employment growth continues and how far it goes. On balance, federal employment lost 3.1 percent nationally and 5.1 percent in Ohio.

The state government chart in Figure 14 is very choppy for Ohio – a result of the 2012 shift from quarters to semesters among the state's public colleges and universities that were not already on a semester system. This disrupted the seasonal employment pattern and created problems for the adjustment model. In any case, the state trend seems to have tracked above the national trend early in the recovery and more closely recently. Employment in state governments nationwide fell 1.2 percent between January 2010 and March 2016.

Public schools opening earlier nationwide seems to be causing problems in the seasonal adjustment of national employment in local governments as well (Figure 15). Local government employment in Ohio declined about five percent between 2010 and 2013, due at least in part to the large reductions in the Local Government Fund by the General Assembly in an effort to balance the state budget. The disbursements to local governments have since stabilized and so has employment. However, local government employment in Ohio has not increased recently as it has elsewhere. The six-year net decline has been 4.8 percent in Ohio and 1.1 percent nationwide.

Figure 1
Total Employment Growth, January 2010-March 2016

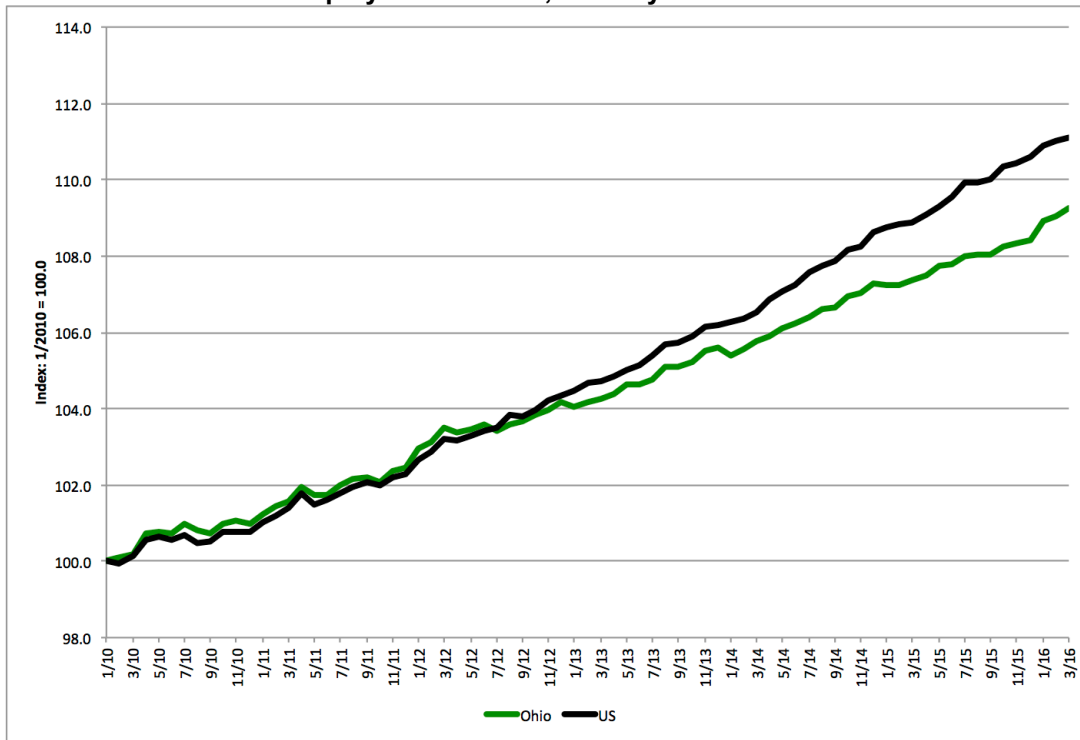
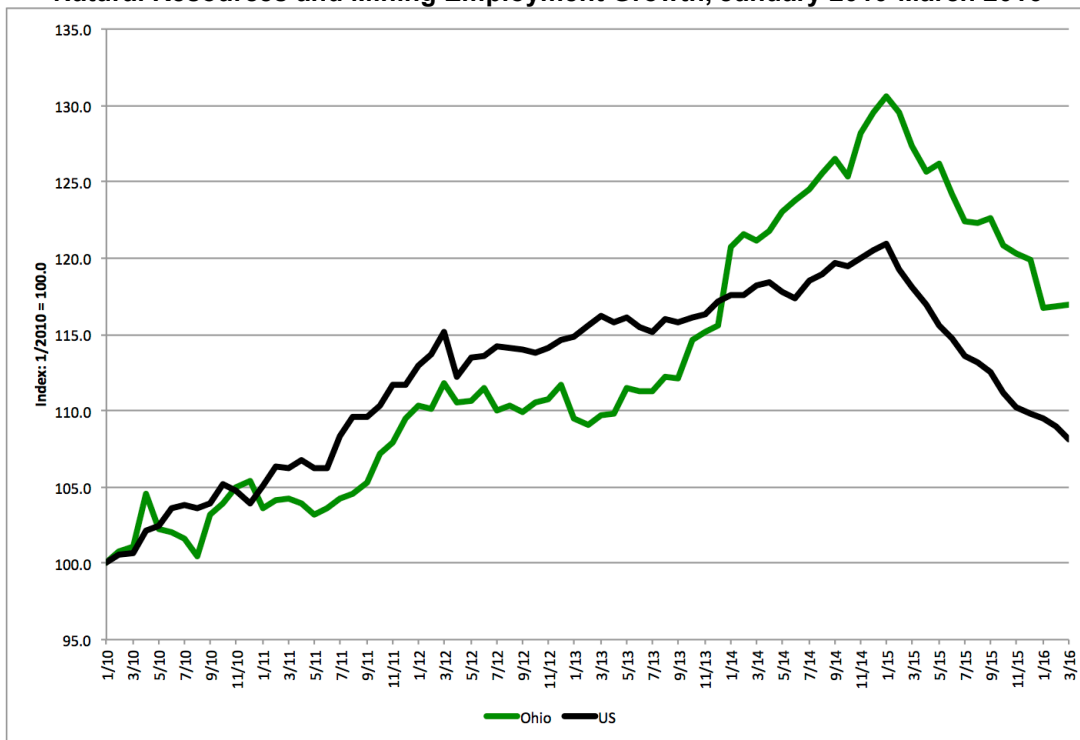


Figure 2
Natural Resources and Mining Employment Growth, January 2010-March 2016



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

Figure 3
Manufacturing Employment Growth, January 2010-March 2016

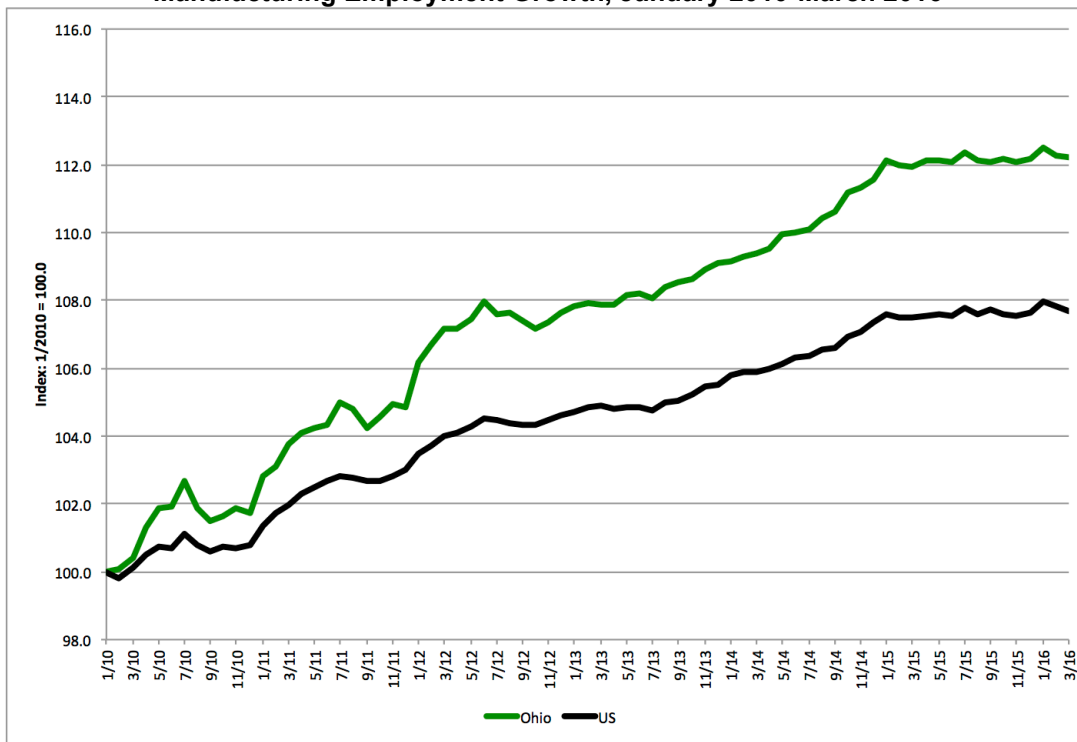
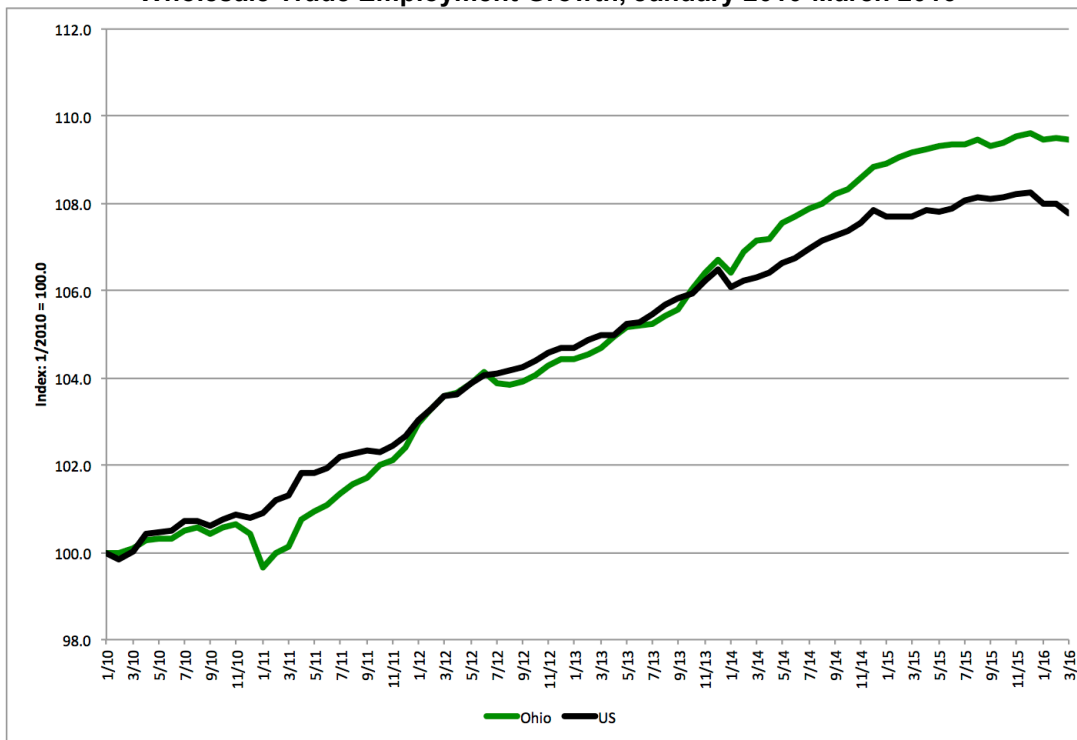


Figure 4
Wholesale Trade Employment Growth, January 2010-March 2016



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

Figure 5
Retail Trade Employment Growth, January 2010-March 2016

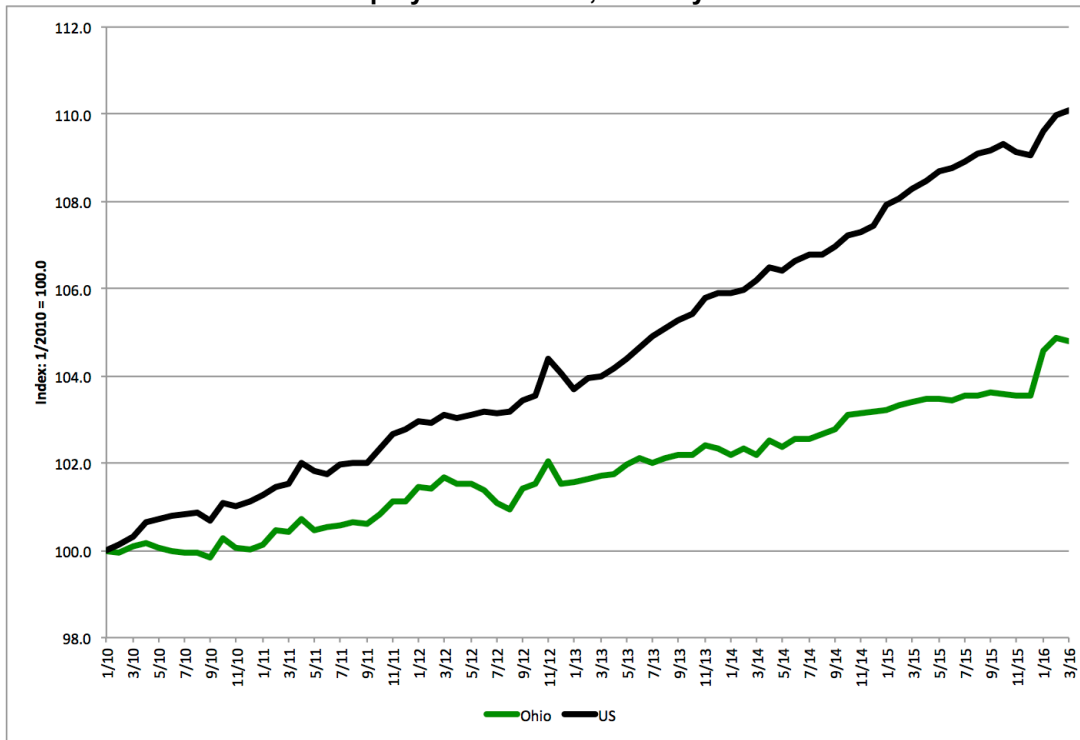
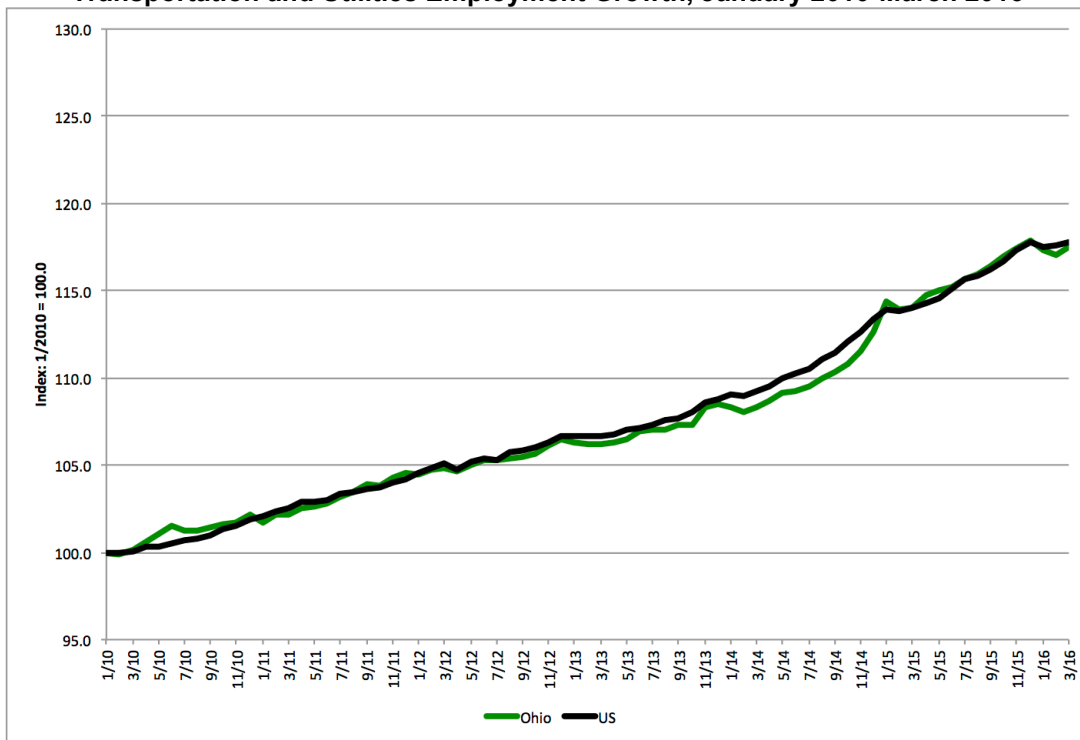


Figure 6
Transportation and Utilities Employment Growth, January 2010-March 2016



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

Figure 7
Information Employment Growth, January 2010-March 2016

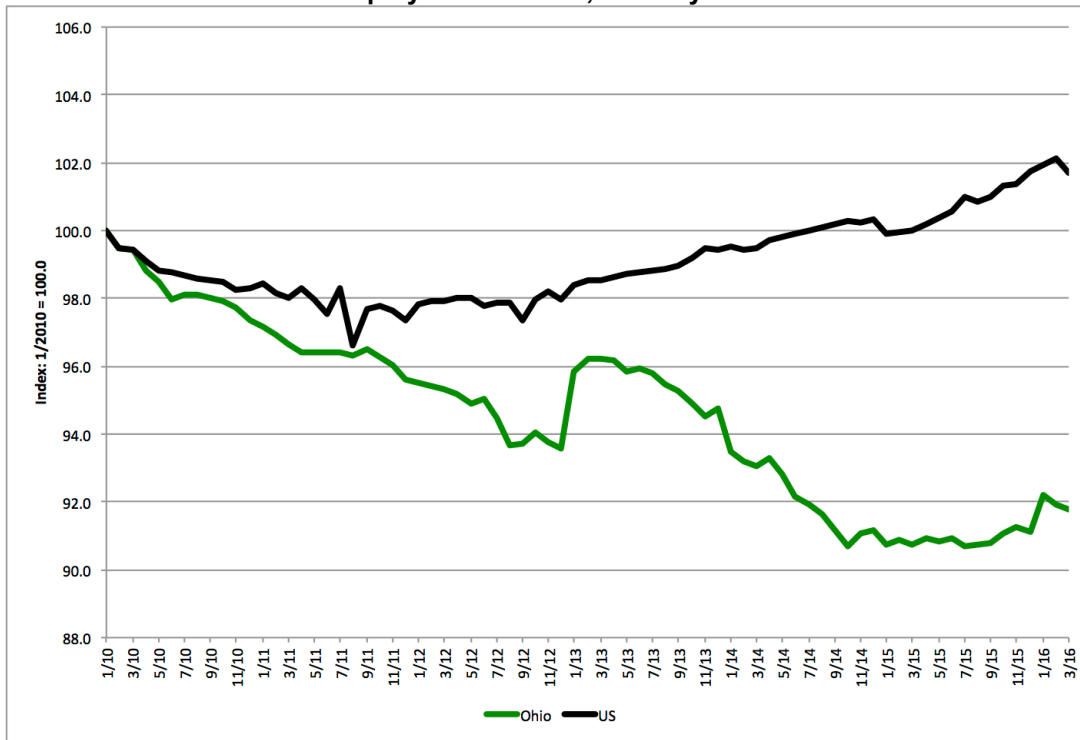
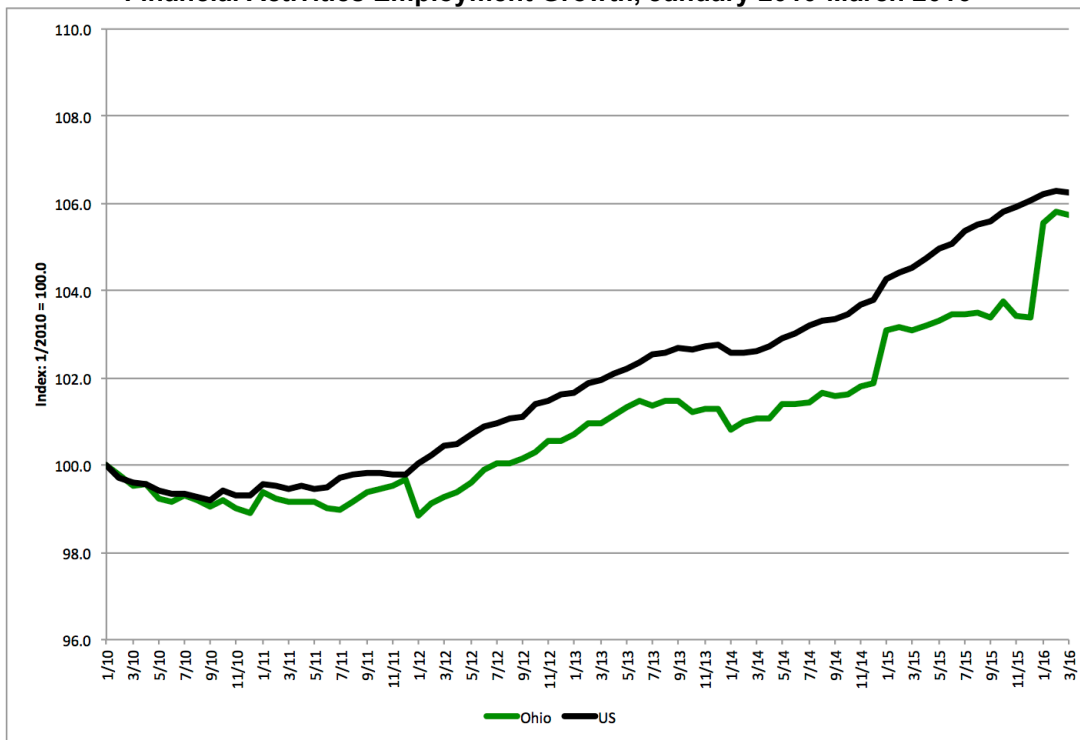


Figure 8
Financial Activities Employment Growth, January 2010-March 2016



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

Figure 9
Professional and Business Services Employment Growth, January 2010-March 2016

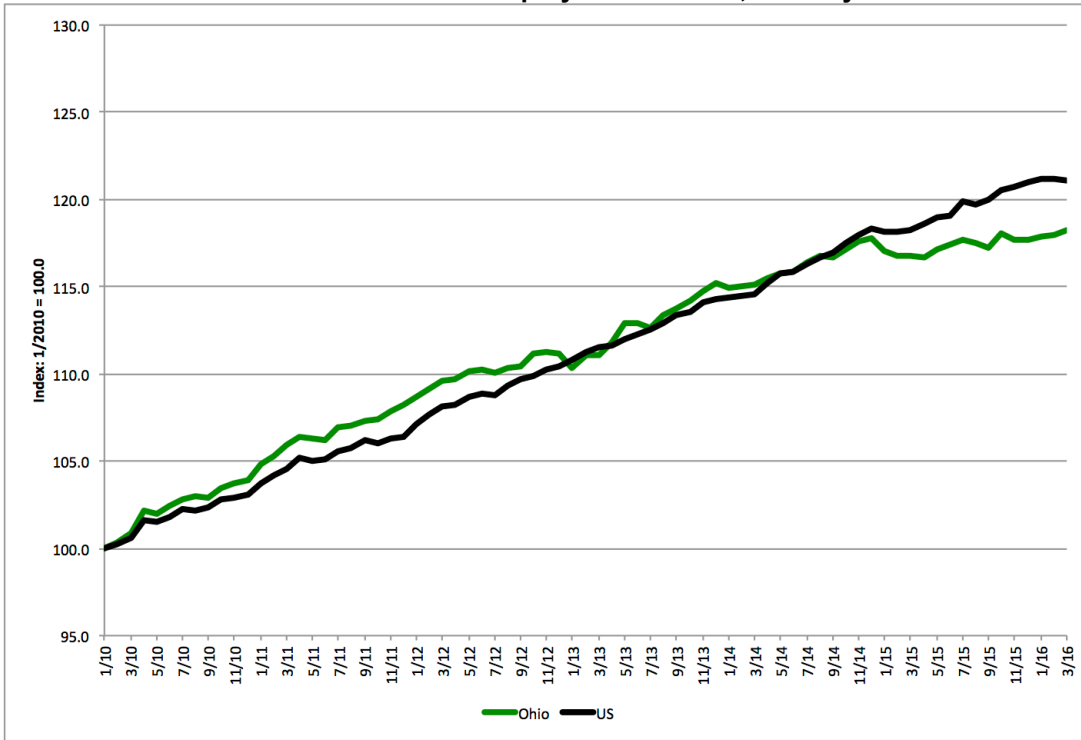
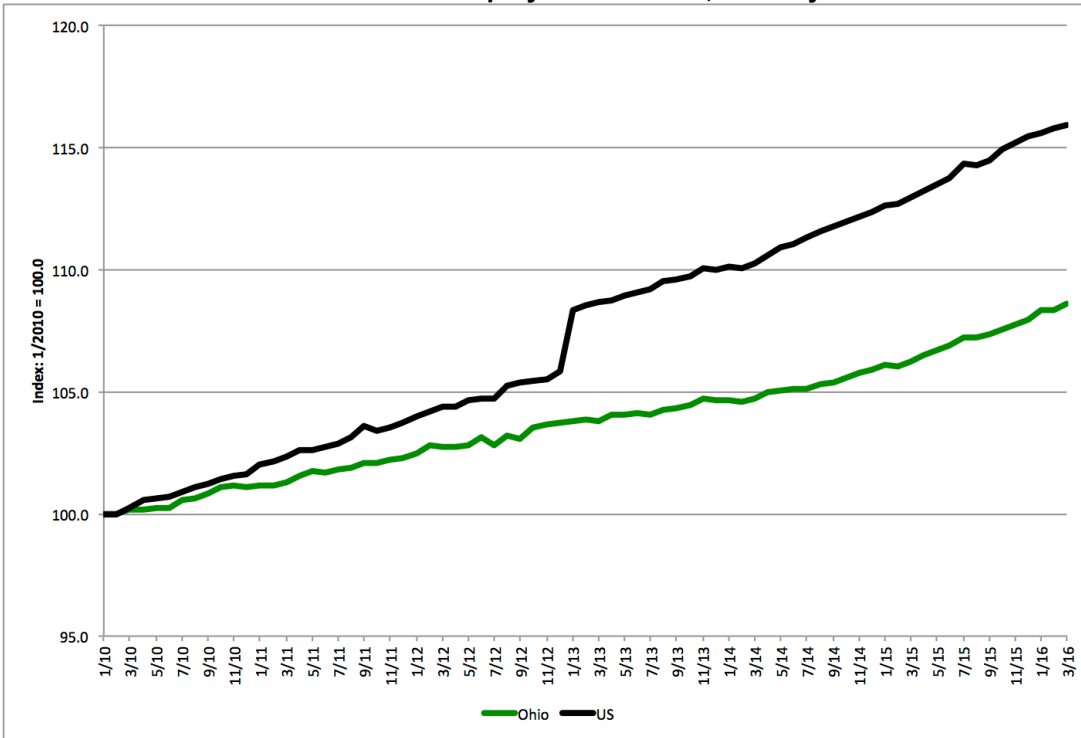


Figure 10
Education and Health Services Employment Growth, January 2010-March 2016



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

Figure 11
Leisure and Hospitality Services Employment Growth, January 2010-March 2016

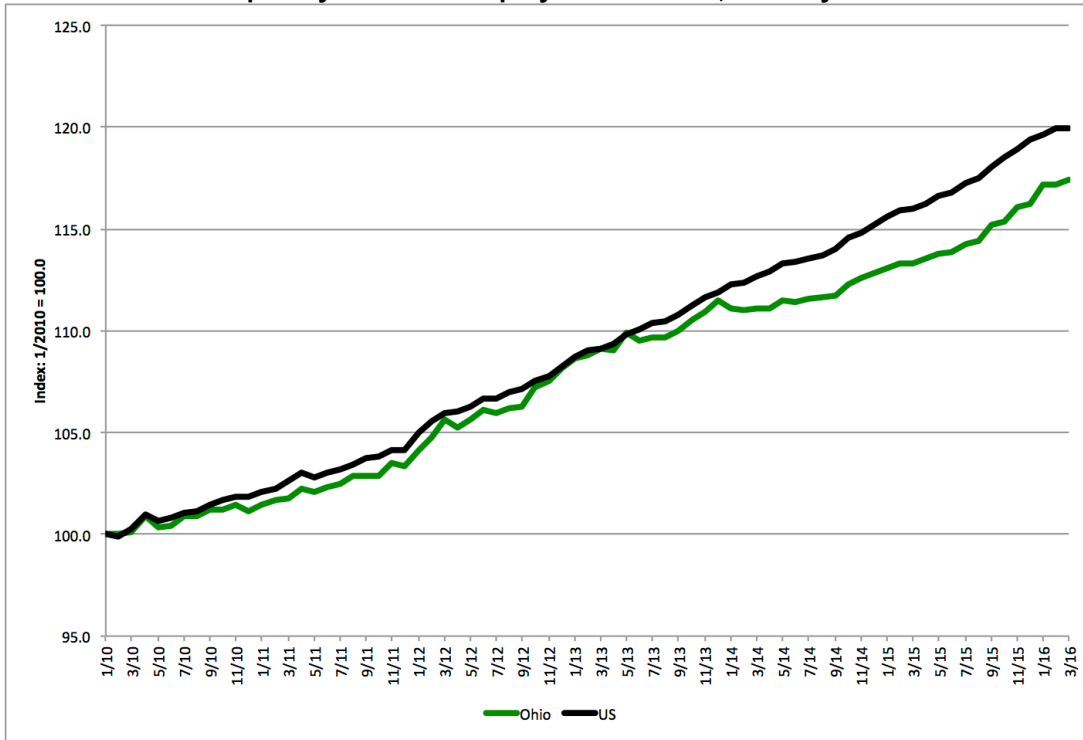
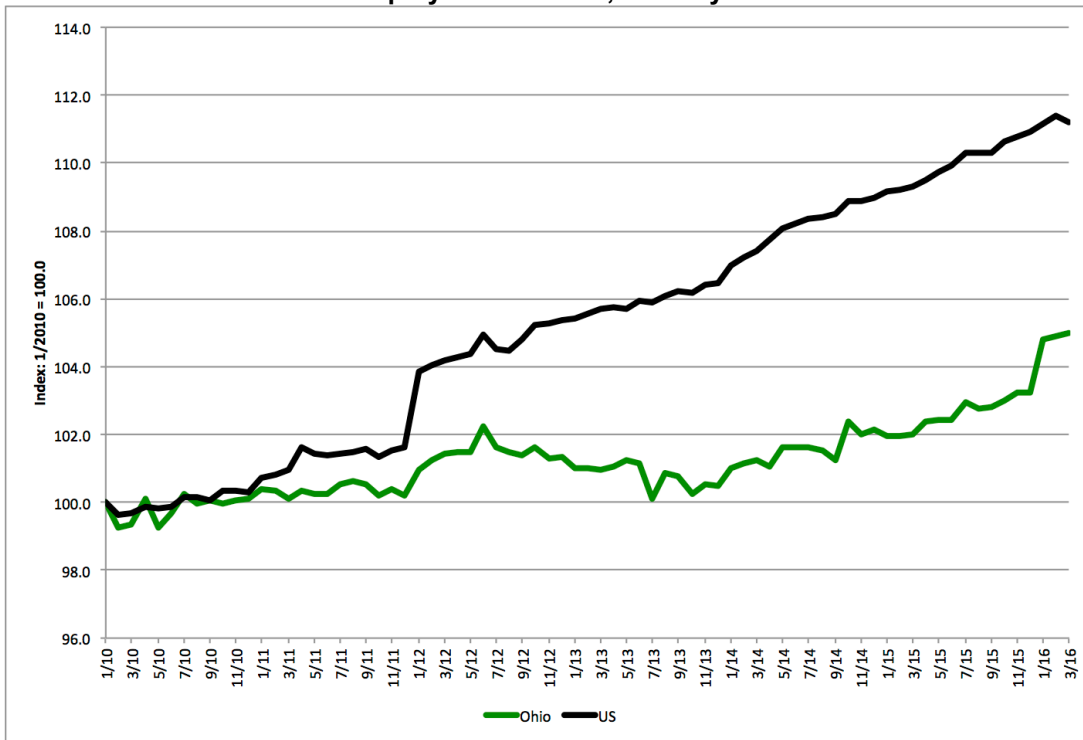


Figure 12
Other Services Employment Growth, January 2010-March 2016



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

Figure 13
Federal Government Employment Growth, January 2010-March 2016

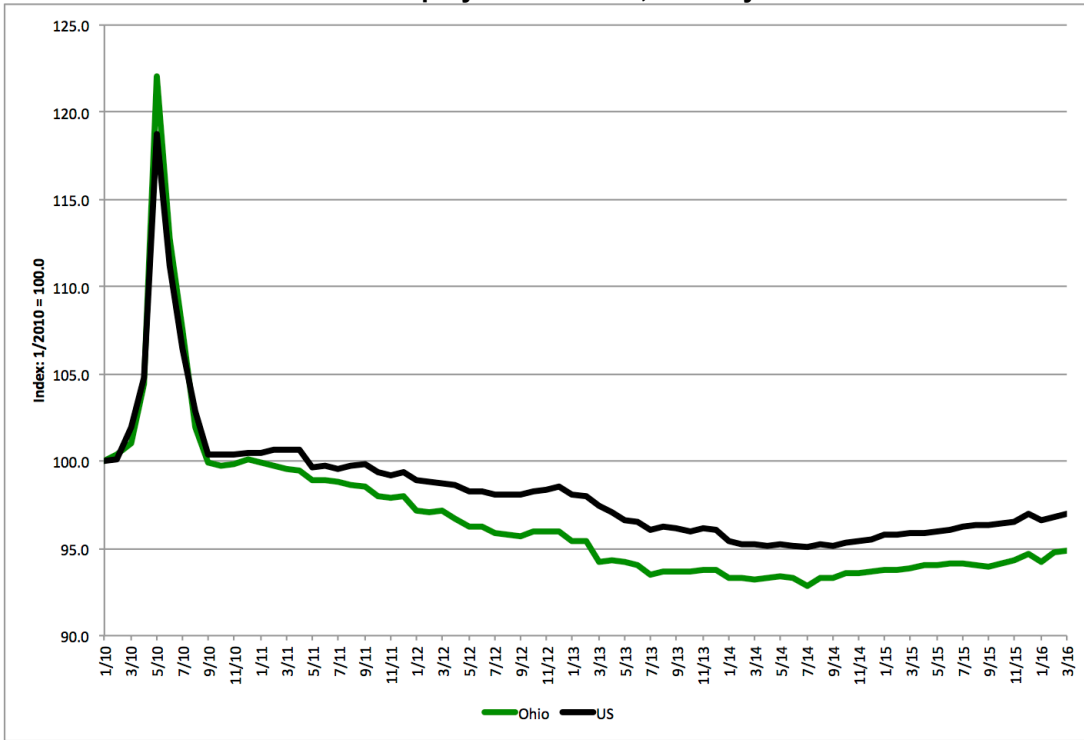
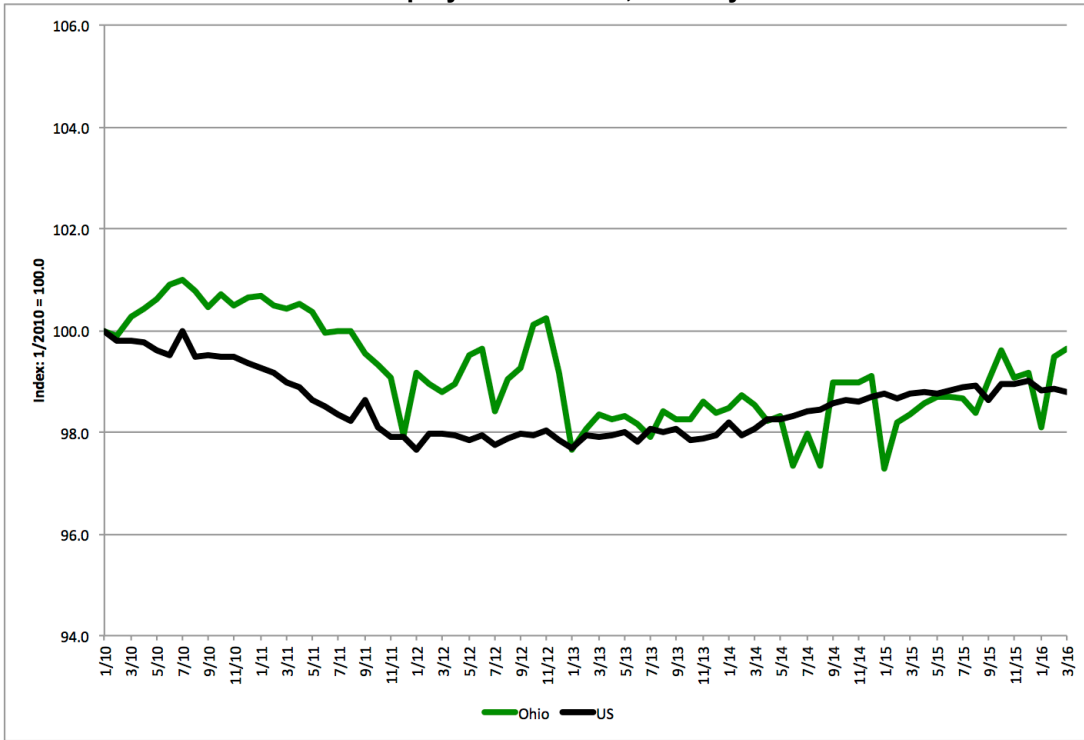
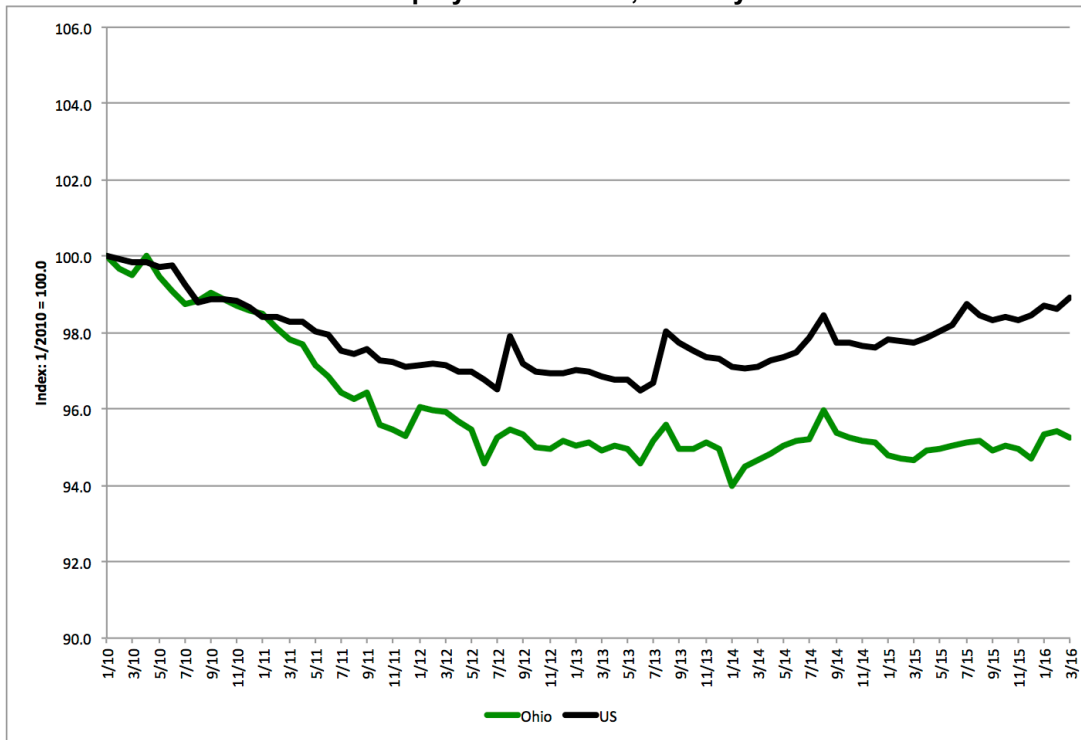


Figure 14
State Government Employment Growth, January 2010-March 2016



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

Figure 15
Local Government Employment Growth, January 2010-March 2016



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

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